

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.  
Lakefield - Ontario - KOL 2H0  
Phone: 705-652-2000 FAX: 705-652-6365

LR Report : CA15457-JAN17

**Method Descriptions**

Parameter	SGS Method Code	Reference Method Code
Mercury by CVAAS	ME-CA-[ENV]SPE-LAK-AN-004	EPA 7471A/EPA 245
Metals in Soil - Aqua-regia/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-005	EPA 3050/EPA 200.8
Metals in Soil - ICP-OES	ME-CA-[ENV]SPE-LAK-AN-002	EPA 3050/EPA 200.7



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CE Filters

LR Report : CA15457-JAN17

## Quality Control Report

Inorganic Analysis											
Parameter	Reporting Limit	Unit	Method Blank	LCS / Spike Blank						Matrix Spike / Reference Material	
				RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							Low	High		Low	High
				%							
<i>Mercury by CVAAS - QCBatchID: EHG0029-JAN17</i>											
Mercury	0.0005	µg/Filter	< 0.0005	ND	20	92	80	120	86	70	130
Mercury	0.05	ug/g	< 0.05	ND	20	92	80	120	86	70	130
<i>Metals in Soil - Aqua-regia/ICP-MS - QCBatchID: EMS0091-JAN17</i>											
Antimony	0.2	µg/Filter	< 0.2	ND	20	103	70	130	71	70	130
Antimony	0.8	µg/g	<0.8	ND	20	103	70	130	71	70	130
Arsenic	0.2	µg/Filter	< 0.2	15	20	99	70	130	100	70	130
Arsenic	0.5	µg/g	< 0.2	15	20	99	70	130	100	70	130
Barium	0.01	µg/Filter	< 0.01	1	20	100	70	130	110	70	130
Barium	0.01	µg/g	<0.01	1	20	100	70	130	110	70	130
Beryllium	0.008	µg/Filter	< 0.008	8	20	99	70	130	118	70	130
Beryllium	0.02	µg/g	<0.02	8	20	99	70	130	118	70	130
Boron	0.02	µg/Filter	0.02	18	20	94	70	130	83	70	130
Boron	1	µg/g	< 0.02	18	20	94	70	130	83	70	130
Cadmium	0.002	µg/Filter	< 0.002	1	20	100	70	130	97	70	130
Cadmium	0.02	µg/g	<0.02	1	20	100	70	130	97	70	130
Chromium	0.04	µg/Filter	< 0.04	2	20	100	70	130	129	70	130
Chromium	0.5	µg/g	<0.5	2	20	100	70	130	129	70	130
Cobalt	0.004	µg/Filter	< 0.004	0	20	96	70	130	90	70	130
Cobalt	0.01	µg/g	<0.01	0	20	96	70	130	90	70	130
Copper	0.04	µg/Filter	< 0.04	1	20	96	70	130	106	70	130
Copper	0.1	µg/g	<0.1	1	20	96	70	130	106	70	130
Lead	0.01	µg/Filter	< 0.01	2	20	99	70	130	114	70	130
Lead	0.1	µg/g	<0.1	2	20	99	70	130	114	70	130
Manganese	0.01	µg/Filter	< 0.01	0	20	103	70	130	103	70	130
Manganese	0.1	µg/g	<0.1	0	20	103	70	130	103	70	130
Molybdenum	0.01	µg/Filter	< 0.01	6	20	93	70	130	88	70	130
Molybdenum	0.1	µg/g	<0.1	6	20	93	70	130	88	70	130
Nickel	0.1	µg/Filter	< 0.1	1	20	109	70	130	120	70	130
Nickel	0.1	µg/g	<0.1	1	20	109	70	130	120	70	130
Selenium	0.04	µg/Filter	< 0.04	ND	20	101	70	130	99	70	130
Selenium	0.7	µg/g	< 0.04	ND	20	101	70	130	99	70	130
Silver	0.01	ug/g	<0.01	0	20	99	70	130	116	70	130
Strontium	0.02	µg/Filter	< 0.02	4	20	98	70	130	105	70	130
Strontium	0.02	µg/g	<0.02	4	20	98	70	130	105	70	130
Thallium	0.004	µg/Filter	< 0.004	1	20	95	70	130	130	70	130



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**CE Filters**

**LR Report : CA15457-JAN17**

Inorganic Analysis											
Parameter	Reporting Limit	Unit	Method Blank	RPD		LCS / Spike Blank		Matrix Spike / Reference Material			
				Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)		
						Low	High		Low	High	
				%							
Thallium	0.02	µg/g	<0.02	1	20	95	70	130	130	70	130
Tin	0.01	µg/Filter	< 0.01	4	20	101	70	130	88	70	130
Tin	0.5	µg/g	<0.5	4	20	101	70	130	88	70	130
Titanium	0.04	µg/Filter	< 0.04	2	20	96	70	130	NV	70	130
Titanium	0.1	µg/g	<0.1	2	20	96	70	130	NV	70	130
Uranium	0.002	ug/g	<0.002	2	20	98	70	130	101	70	130
Vanadium	0.01	µg/Filter	< 0.01	1	20	100	70	130	101	70	130
Vanadium	3	µg/g	<3	1	20	100	70	130	101	70	130
Zinc	0.7	µg/g	< 2	0	20	97	70	130	117	70	130
Zinc	2	µg/Filter	<0.7	0	20	97	70	130	117	70	130
<i>Metals in Soil - ICP-OES - QCBatchID: ESG0087-JAN17</i>											
Aluminum	0.5	µg/Filter	< 0.5	1	20	94	80	120	97	70	130
Aluminum	1	µg/g	< 0.5	1	20	94	80	120	97	70	130
Calcium	1	µg/Filter	<0.1	0	20	94	80	120	104	70	130
Calcium	1	µg/g	<0.1	0	20	94	80	120	104	70	130
Iron	0.3	µg/Filter	0.0363	0	20	94	80	120	99	70	130
Iron	0.3	µg/g	0.0363	0	20	94	80	120	99	70	130
Magnesium	0.1	µg/Filter	<0.01	0	20	94	80	120	104	70	130
Magnesium	0.1	µg/g	<0.01	0	20	94	80	120	104	70	130
Phosphorus (total)	3	µg/Filter	<0.2	0	20	94	80	120	107	70	130
Phosphorus (total)	3	µg/g	<0.2	0	20	94	80	120	107	70	130
Potassium	0.3	µg/Filter	<0.1	1	20	99	80	120	112	70	130
Potassium	0.3	µg/g	<0.1	1	20	99	80	120	112	70	130
Sodium	1	µg/Filter	<0.03	1	20	93	80	120	101	70	130
Sodium	1	µg/g	<0.03	1	20	93	80	120	101	70	130
Sulphur	3	µg/Filter	<0.1	0	20	97	80	120	107	70	130
Sulphur	3	µg/g	<0.1	0	20	97	80	120	107	70	130
<i>Metals in Soil - ICP-OES - QCBatchID: ESG0095-JAN17</i>											
Iron	0.3	µg/Filter	<0.01	1	20	99	80	120	100	70	130
Iron	0.3	µg/g	<0.01	1	20	99	80	120	100	70	130

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20-July-2017

**Golder Associates Limited**

Attn : Kristin Salzsauler

Suite 200 - 2920 Virtual Way, Vancouver  
 , V5M 0C4  
 Phone: 905-567-4444, Fax:905-567-0166

**Date Rec. :** 20 January 2017  
**LR Report:** CA15458-JAN17  
**Reference:** 159-515-2282

**Copy:** #2

# CERTIFICATE OF ANALYSIS

## Final Report

Sample ID	Sample Date & Time	Total Organic Carbon µg/Filter	Total Carbon (total) Inorganic Carbon µg/Filter	Total Kjeldahl Nitrogen as N µg/Filter	Total Ammonia+Ammonium (N) as N µg/Filter	Total Organic Carbon %
1: Analysis Start Date		24-Jan-17	24-Jan-17	24-Jan-17	24-Jan-17	24-Jan-17
2: Analysis Start Time		11:22	11:22	09:47	08:56	11:22
3: Analysis Approval Date		24-Jan-17	24-Jan-17	31-Jan-17	31-Jan-17	01-Feb-17
4: Analysis Approval Time		13:15	13:15	16:49	16:59	10:23
5: MP-1-A	Date:N/A	4210	< 4	4210	339	45
6: C-1-A	Date:N/A	5220	< 4	5220	171	24
7: MP-1-B	Date:N/A	4380	< 4	4340	632	50
8: C-1-B	Date:N/A	5230	< 4	5230	149	24
9: MP-1-C	Date:N/A	3450	< 4	3450	474	53
10: C-1-C	Date:N/A	4940	< 4	4940	154	22
11: MP-2-A	Date:N/A	2680	< 4	2680	297	25
12: C-2-A	Date:N/A	5320	< 4	5320	157	23
13: MP-2-B	Date:N/A	2620	< 4	2620	343	49
14: C-2-B	Date:N/A	5290	< 4	5290	163	27
15: MP-2-C	Date:N/A	3090	< 4	3090	393	52
16: C-2-C	Date:N/A	5060	< 4	5070	150	< 20
18: MP-3-A	Date:N/A	2490	< 4	2490	304	26
19: C-3-A	Date:N/A	5280	< 4	5280	173	23
20: MP-3-B	Date:N/A	2630	< 4	2630	341	48
21: C-3-B	Date:N/A	5270	< 4	5280	161	23
22: MP-4-A	Date:N/A	2530	< 4	2530	287	29
23: C-4-A	Date:N/A	5270	< 4	5280	146	27
24: MP-4-B	Date:N/A	2350	< 4	2350	269	27
25: C-4-B	Date:N/A	5330	< 4	5220	150	< 20

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LR Report : CA15458-JAN17

Sample ID	Total Carbon (total)		Total Kjeldahl Ammonia+Ammonium (N)	
	Inorganic Carbon %	%	Nitrogen as N %	%
1: Analysis Start Date	24-Jan-17	24-Jan-17	24-Jan-17	24-Jan-17
2: Analysis Start Time	11:22	11:22	08:56	10:00
3: Analysis Approval Date	01-Feb-17	01-Feb-17	01-Feb-17	01-Feb-17
4: Analysis Approval Time	11:34	11:34	11:33	11:31
5: MP-1-A	< 0.005	0.557	0.04	< 0.01
6: C-1-A	< 0.005	3.69	0.12	0.02
7: MP-1-B	< 0.005	0.564	0.08	< 0.01
8: C-1-B	< 0.005	3.69	0.10	0.02
9: MP-1-C	< 0.005	0.419	0.06	< 0.01
10: C-1-C	< 0.005	3.46	0.11	0.02
11: MP-2-A	< 0.005	0.356	0.04	< 0.01
12: C-2-A	< 0.005	3.76	0.11	0.02
13: MP-2-B	< 0.005	0.340	0.04	< 0.01
14: C-2-B	< 0.005	3.62	0.11	0.02
15: MP-2-C	< 0.005	0.383	0.05	< 0.01
16: C-2-C	< 0.005	3.49	0.10	< 0.01
18: MP-3-A	< 0.005	0.326	0.04	< 0.01
19: C-3-A	< 0.005	3.73	0.12	0.02
20: MP-3-B	< 0.005	0.346	0.04	< 0.01
21: C-3-B	< 0.005	3.74	0.11	0.02
22: MP-4-A	< 0.005	0.333	0.04	< 0.01
23: C-4-A	< 0.005	3.73	0.10	0.02
24: MP-4-B	< 0.005	0.312	0.04	< 0.01
25: C-4-B	< 0.005	3.70	0.11	< 0.01

*Deanna Edwards*  
 Deanna Edwards, B.Sc, C.Chem  
 Project Specialist  
 Environmental Services, Analytical

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**Method Descriptions**

Parameter	SGS Method Code	Reference Method Code
Ammonia by SFA	ME-CA-[ENV]SFA-LAK-AN-007	SM 4500
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-019	ASTM E1915-07A
Carbon/Sulphur	NA	ASTM E1915-07A
Total Kjeldahl Nitrogen by SFA	ME-CA-[ENV]SFA-LAK-AN-001	SM 4500-N C/4500-NO3- F



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**GF Filters**

**LR Report : CA15458-JAN17**

## Quality Control Report

Inorganic Analysis												
Parameter	Reporting Limit	Unit	Method Blank	RPD		Acceptance Criteria		LCS / Spike Blank		Matrix Spike / Reference Material		
				%	%	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)		
							Low	High		Low	High	
<i>Ammonia by SFA - QCBatchID: SKA0193-JAN17</i>												
Ammonia+Ammonium (N)	0.01	%	<0.01	0	10	97	90	110	96	75	125	
Ammonia+Ammonium (N)	20	as N µg/Filt	<0.01	0	10	97	90	110	96	75	125	
<i>Ammonia by SFA - QCBatchID: SKA0202-JAN17</i>												
Ammonia+Ammonium (N)	20	as N µg/Filt	<0.01	ND	10	92	90	110	NV	75	125	
<i>Carbon/Sulphur - QCBatchID: ECS0048-JAN17</i>												
Carbon (total)	0.005	%	< 0.005	1	20				104	70	130	
Total Inorganic Carbon	0.005	%	< 0.005	1	20				104	70	130	
Total Inorganic Carbon	4	µg/Filter	< 4	1	20				104	70	130	
Total Organic Carbon	0.005	%	< 0.005	1	20				104	70	130	
Total Organic Carbon	4	µg/Filter	< 4	1	20				104	70	130	
<i>Carbon/Sulphur - QCBatchID: ECS0050-JAN17</i>												
Carbon (total)	4	µg/Filter	<4	2	20				104	70	130	

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20-July-2017

**Golder Associates Limited**

Attn : Kristin Salzsauler

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**Date Rec. :** 24 March 2017  
**LR Report:** CA15597-MAR17  
**Reference:** 159-515-2282

**Copy:** #2

# CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Approval Date	4: Analysis Approval Time	5: MP7A	6: C7A	7: MP7B	8: C7B
Sample Date & Time					Date:N/A	Date:N/A	Date:N/A	Date:N/A
Silver [ug/g]	13-Apr-17	11:00	20-Jul-17	08:41	0.05	0.08	0.05	0.73
Uranium [ug/g]	13-Apr-17	11:00	20-Jul-17	08:41	0.068	0.008	0.11	0.008
Mercury [ug/g]	13-Apr-17	08:53	13-Apr-17	09:00	< 0.05	< 0.05	< 0.05	< 0.05
Aluminum [ug/g]	13-Apr-17	10:55	13-Apr-17	13:31	450	41	740	41
Arsenic [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	1.0	0.8	1.0	< 0.5
Barium [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	6.9	1.8	7.9	1.0
Beryllium [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	< 0.02	< 0.02	0.02	< 0.02
Boron [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	2	1	3	2
Calcium [ug/g]	13-Apr-17	10:55	13-Apr-17	13:31	190	120	170	100
Cadmium [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	< 0.02	< 0.02	< 0.02	< 0.02
Cobalt [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	0.39	0.05	0.51	0.05
Chromium [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	5.2	3.0	5.9	3.3
Copper [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	7.9	8.8	5.4	4.9
Iron [ug/g]	13-Apr-17	10:55	13-Apr-17	13:31	4000	280	5600	230
Potassium [ug/g]	13-Apr-17	10:55	13-Apr-17	13:31	87	50	82	44
Magnesium [ug/g]	13-Apr-17	10:55	13-Apr-17	13:31	41	22	40	22
Manganese [ug/g]	13-Apr-17	11:00	17-Apr-17	11:24	170	7.2	190	3.2
Molybdenum [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	0.1	< 0.1	0.1	< 0.1
Sodium [ug/g]	13-Apr-17	10:55	13-Apr-17	13:31	110	55	120	57
Nickel [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	3.1	1.9	2.7	2.4
Lead [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	1.0	0.6	1.2	0.5
Phosphorus (total) [ug/g]	13-Apr-17	10:55	13-Apr-17	13:31	69	23	70	14
Sulphur [ug/g]	13-Apr-17	10:55	13-Apr-17	13:31	200	89	200	92
Selenium [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	< 0.7	< 0.7	< 0.7	< 0.7
Antimony [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	< 0.8	< 0.8	< 0.8	< 0.8
Tin [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	1.1	1.2	1.0	1.4
Strontium [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	1.0	0.49	1.0	0.42

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**LR Report : CA15597-MAR17**

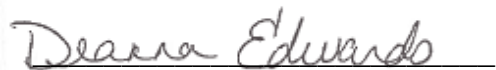
<b>Analysis</b>	<b>1: Analysis Start Date</b>	<b>2: Analysis Start Time</b>	<b>3: Analysis Approval Date</b>	<b>4: Analysis Approval Time</b>	<b>5: MP7A</b>	<b>6: C7A</b>	<b>7: MP7B</b>	<b>8: C7B</b>
Thallium [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	0.06	< 0.02	0.04	< 0.02
Titanium [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	12	3.0	13	1.3
Vanadium [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	< 3	< 3	< 3	< 3
Zinc [ug/g]	13-Apr-17	11:00	13-Apr-17	15:42	21	7.8	18	6.0

<b>Analysis</b>	<b>9: MP7C</b>	<b>10: C7C</b>	<b>11: MP8A</b>	<b>12: C8A</b>	<b>13: MP2008A</b>	<b>14: C2008A</b>	<b>15: MP1008A</b>	<b>16: C1008A</b>
Sample Date & Time	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A
Silver [ug/g]	0.06	0.21	0.05	0.06	0.04	0.04	0.02	< 0.01
Uranium [ug/g]	0.13	0.012	0.57	0.021	0.60	0.027	< 0.002	< 0.002
Mercury [ug/g]	< 0.05	< 0.05	0.08	< 0.05	0.09	< 0.05	< 0.05	< 0.05
Aluminum [ug/g]	920	92	5800	260	5300	290	22	14
Arsenic [ug/g]	1.2	< 0.5	16	1.2	15	0.9	< 0.5	< 0.5
Barium [ug/g]	6.9	1.2	49	1.8	43	1.8	0.27	0.23
Beryllium [ug/g]	0.03	< 0.02	0.22	< 0.02	0.18	< 0.02	< 0.02	< 0.02
Boron [ug/g]	2	2	1	< 1	3	2	2	2
Calcium [ug/g]	150	90	350	68	340	66	44	34
Cadmium [ug/g]	< 0.02	< 0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.02	< 0.02
Cobalt [ug/g]	0.51	0.05	3.5	0.16	3.5	0.16	0.04	0.02
Chromium [ug/g]	7.5	3.1	17	3.3	18	3.5	3.0	3.4
Copper [ug/g]	6.4	5.0	8.6	4.1	9.2	4.7	3.7	2.5
Iron [ug/g]	6600	410	48000	1000	46000	1000	150	35
Potassium [ug/g]	69	39	180	21	170	27	12	11
Magnesium [ug/g]	44	16	310	16	280	15	6.7	6.0
Manganese [ug/g]	180	7.0	1100	27	870	27	1.8	1.3
Molybdenum [ug/g]	0.1	< 0.1	0.3	< 0.1	0.3	< 0.1	< 0.1	< 0.1
Sodium [ug/g]	120	55	72	66	86	67	120	57
Nickel [ug/g]	2.4	1.5	6.5	1.6	6.5	1.8	1.7	1.8
Lead [ug/g]	310	20	6.1	1.8	4.5	0.7	0.3	0.2
Phosphorus (total) [ug/g]	72	13	240	10	230	13	3.2	< 3
Sulphur [ug/g]	190	87	130	89	140	90	150	74
Selenium [ug/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Antimony [ug/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Tin [ug/g]	2.0	1.7	0.8	1.2	0.8	1.4	0.8	1.4
Strontium [ug/g]	0.84	0.38	2.0	0.33	2.2	0.35	0.15	0.14
Thallium [ug/g]	0.03	< 0.02	0.05	< 0.02	0.04	< 0.02	< 0.02	< 0.02
Titanium [ug/g]	18	3.4	86	5.8	88	6.4	0.5	0.3
Vanadium [ug/g]	< 3	< 3	13	< 3	13	< 3	< 3	< 3
Zinc [ug/g]	18	7.8	11	3.8	22	5.6	3.3	2.6

**SGS Canada Inc.**

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LR Report : CA15597-MAR17



*Deanna Edwards*  
**Deanna Edwards, B.Sc, C.Chem**  
**Project Specialist**  
**Environmental Services, Analytical**

**SGS Canada Inc.**

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LR Report : CA15597-MAR17

**Method Descriptions**

Parameter	SGS Method Code	Reference Method Code
Mercury by CVAAS	ME-CA-[ENV]SPE-LAK-AN-004	EPA 7471A/EPA 245
Metals in Soil - Aqua-regia/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-005	EPA 3050/EPA 200.8
Metals in Soil - ICP-OES	ME-CA-[ENV]SPE-LAK-AN-002	EPA 3050/EPA 200.7



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CE Filters

LR Report : CA15597-MAR17

## Quality Control Report

Parameter	Reporting Limit	Unit	Method Blank	Inorganic Analysis									
				Duplicate				LCS / Spike Blank				Matrix Spike / Reference Material	
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
									Low	High		Low	High
<i>Mercury by CVAAS - QCBatchID: EHG0015-APR17</i>													
Mercury	0.05	ug/g	<0.05			ND	20	90	80	120	91	70	130
<i>Metals in Soil - Aqua-regia/ICP-MS - QCBatchID: EMS0044-APR17</i>													
Antimony	0.8	ug/g	<0.8			ND	20	100	70	130	105	70	130
Arsenic	0.5	ug/g	<0.5			ND	20	104	70	130	103	70	130
Barium	0.01	ug/g	<0.01			8	20	102	70	130	99	70	130
Beryllium	0.02	ug/g	<0.02			ND	20	100	70	130	100	70	130
Boron	1	ug/g	<1			11	20	100	70	130	102	70	130
Cadmium	0.02	ug/g	<0.02			ND	20	104	70	130	108	70	130
Chromium	0.5	ug/g	<0.5			2	20	107	70	130	107	70	130
Cobalt	0.01	ug/g	<0.01			12	20	105	70	130	107	70	130
Copper	0.1	ug/g	<0.1			4	20	106	70	130	98	70	130
Lead	0.1	ug/g	<0.1			3	20	103	70	130	100	70	130
Manganese	0.1	ug/g	<0.1			2	20	105	70	130	108	70	130
Molybdenum	0.1	ug/g	<0.1			ND	20	106	70	130	105	70	130
Nickel	0.1	ug/g	<0.1			3	20	105	70	130	103	70	130
Selenium	0.7	ug/g	<0.7			ND	20	99	70	130	98	70	130
Silver	0.01	ug/g	<0.01			ND	20	105	70	130	101	70	130
Strontium	0.02	ug/g	<0.02			5	20	107	70	130	104	70	130
Thallium	0.02	ug/g	<0.02			ND	20	101	70	130	109	70	130
Tin	0.5	ug/g	<0.5			0	20	98	70	130	105	70	130
Titanium	0.1	ug/g	<0.1			ND	20	107	70	130	102	70	130
Uranium	0.002	ug/g	<0.002			ND	20	102	70	130	NV	70	130
Vanadium	3	ug/g	<3			ND	20	106	70	130	106	70	130
Zinc	0.7	ug/g	<0.7			0	20	108	70	130	97	70	130
<i>Metals in Soil - Aqua-regia/ICP-MS - QCBatchID: EMS0063-APR17</i>													
Manganese	0.1	ug/g	< 0.1			ND	20	104	70	130	NV	70	130
<i>Metals in Soil - ICP-OES - QCBatchID: ESG0038-APR17</i>													
Aluminum	1	ug/g	<1			2	20	96	80	120	88	70	130
Calcium	1	ug/g	<1			2	20	96	80	120	100	70	130
Iron	0.3	ug/g	<0.3			4	20	97	80	120	103	70	130
Magnesium	0.1	ug/g	<0.1			9	20	97	80	120	94	70	130
Phosphorus (total)	3	ug/g	<3			ND	20	96	80	120	100	70	130
Potassium	0.3	ug/g	<0.3			2	20	96	80	120	108	70	130
Sodium	1	ug/g	<1			1	20	97	80	120	102	70	130
Sulphur	3	ug/g	<3			0	20	95	80	120	101	70	130

**SGS Canada Inc.**

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20-July-2017

**Golder Associates Limited**

Attn : Kristin Salzsauler

Suite 200 - 2920 Virtual Way, Vancouver  
 , V5M 0C4  
 Phone: 905-567-4444, Fax:905-567-0166

**Date Rec. :** 24 March 2017  
**LR Report:** CA15598-MAR17  
**Reference:** 159-515-2282

**Copy:** #2

# CERTIFICATE OF ANALYSIS

## Final Report

Sample ID	Sample Date & Time	Total Organic Carbon %	Total Inorganic Carbon %	Carbon (total) %	Total Kjeldahl Nitrogen as N %	Ammonia+Ammonium (N) %
1: Analysis Start Date		27-Mar-17	27-Mar-17	27-Mar-17	29-Mar-17	28-Mar-17
2: Analysis Start Time		15:06	15:06	12:34	07:54	18:25
3: Analysis Approval Date		27-Mar-17	27-Mar-17	27-Mar-17	31-Mar-17	03-Apr-17
4: Analysis Approval Time		15:50	15:50	15:50	09:49	14:44
5: MP7A	Date:N/A	0.500	< 0.005	0.486	0.06	< 0.01
6: C7A	Date:N/A	3.94	< 0.005	3.86	0.11	< 0.01
7: MP7B	Date:N/A	0.675	< 0.005	0.663	0.10	< 0.01
8: C7B	Date:N/A	4.07	< 0.005	3.97	0.11	0.02
9: MP7C	Date:N/A	0.492	< 0.005	0.477	0.06	< 0.01
10: C7C	Date:N/A	3.75	< 0.005	3.66	0.10	< 0.01
11: MP8A	Date:N/A	0.257	< 0.005	0.252	0.02	< 0.01
12: C8A	Date:N/A	3.53	< 0.005	3.44	0.09	0.01
13: MP2008A	Date:N/A	0.261	< 0.005	0.257	0.03	< 0.01
14: C2008A	Date:N/A	3.84	< 0.005	3.77	0.08	< 0.01
15: MP1008A	Date:N/A	0.121	< 0.005	0.106	0.02	< 0.01
16: C1008A	Date:N/A	4.06	< 0.005	3.97	0.10	0.01

Deanna Edwards, B.Sc, C.Chem  
 Project Specialist  
 Environmental Services, Analytical

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LR Report : CA15598-MAR17

**Method Descriptions**

Parameter	SGS Method Code	Reference Method Code
Ammonia by SFA	ME-CA-[ENV]SFA-LAK-AN-007	SM 4500
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-019	ASTM E1915-07A
Carbon/Sulphur	NA	ASTM E1915-07A
Total Kjeldahl Nitrogen by SFA	ME-CA-[ENV]SFA-LAK-AN-001	SM 4500-N C/4500-NO3- F



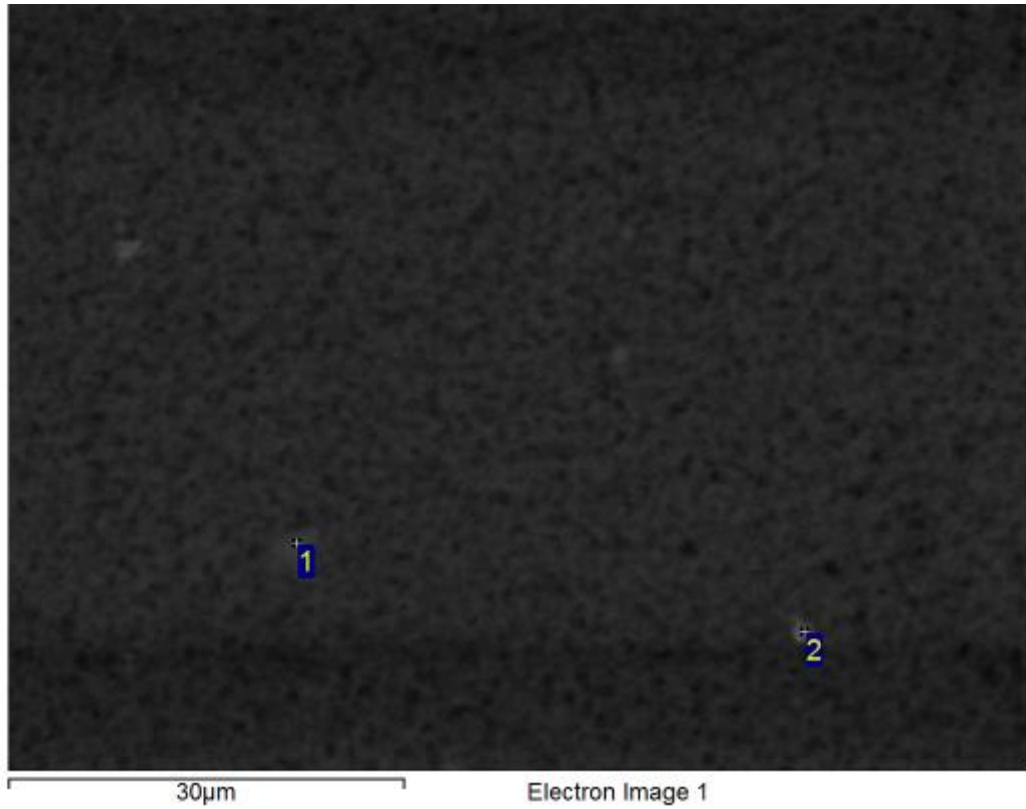
**SGS Canada Inc.**  
 P.O. Box 4300 - 185 Concession St.  
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 Phone: 705-652-2000 FAX: 705-652-6365

**GF Filters**

**LR Report : CA15598-MAR17**

## Quality Control Report

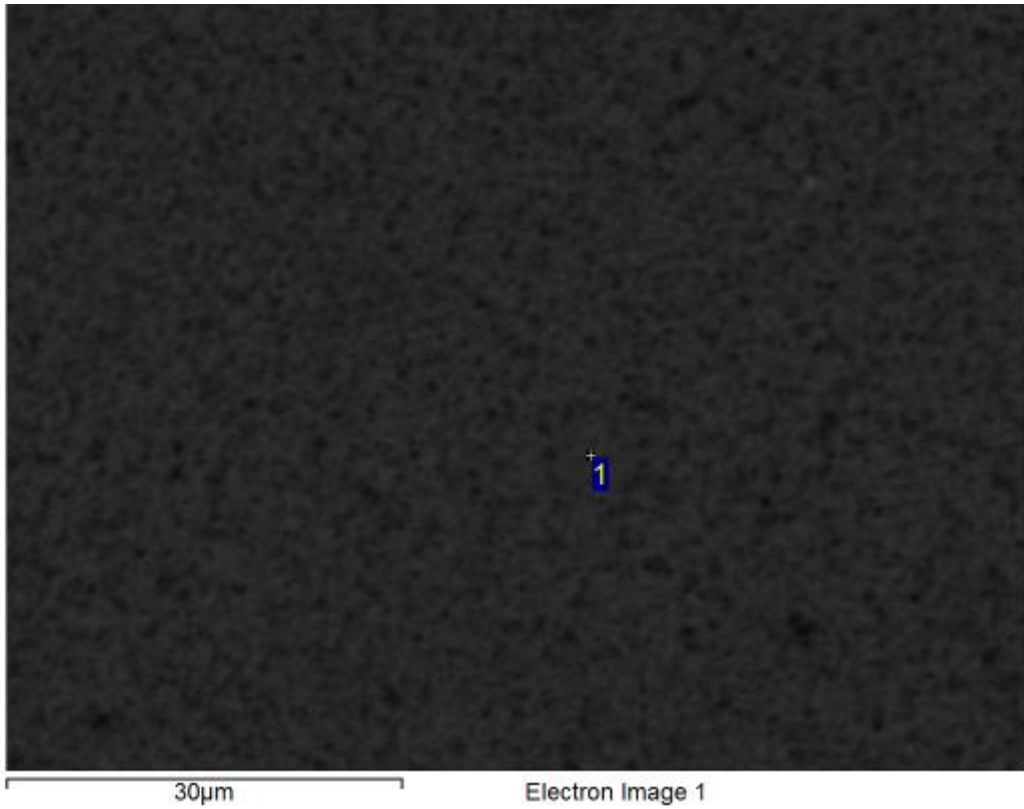
Inorganic Analysis											
Parameter	Reporting Limit	Unit	Method Blank	RPD		Spike Recovery (%)	LCS / Spike Blank		Spike Recovery (%)	Matrix Spike / Reference Material	
				RPD	Acceptance Criteria		Recovery Limits (%)			Recovery Limits (%)	
					%	Low	High	Low	High		
<i>Ammonia by SFA - QCBatchID: SKA0230-MAR17</i>											
Ammonia+Ammonium (N)	0.01	%	<0.01	0	10	97	90	110	96	75	125
<i>Carbon/Sulphur - QCBatchID: ECS0042-MAR17</i>											
Total Inorganic Carbon	0.005	%	N/A	N/A	20				N/A	70	130
Total Organic Carbon	0.005	%	N/A	N/A	20				N/A	70	130
<i>Carbon/Sulphur - QCBatchID: ECS0044-MAR17</i>											
Carbon (total)	0.005	%	<0.005	0	20				104	70	130



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	Mineral ID
1	Blank Filter
2	Blank Filter

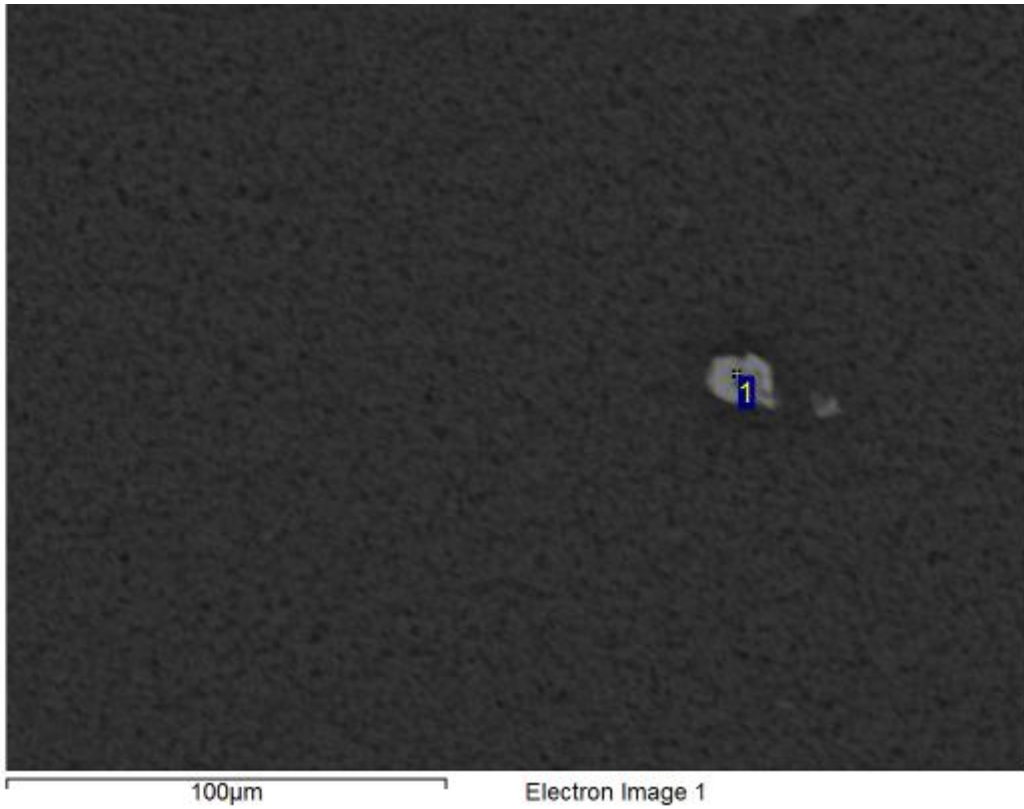
Analysis was conducted on as-received sample.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	Mineral ID
1	Blank Filter

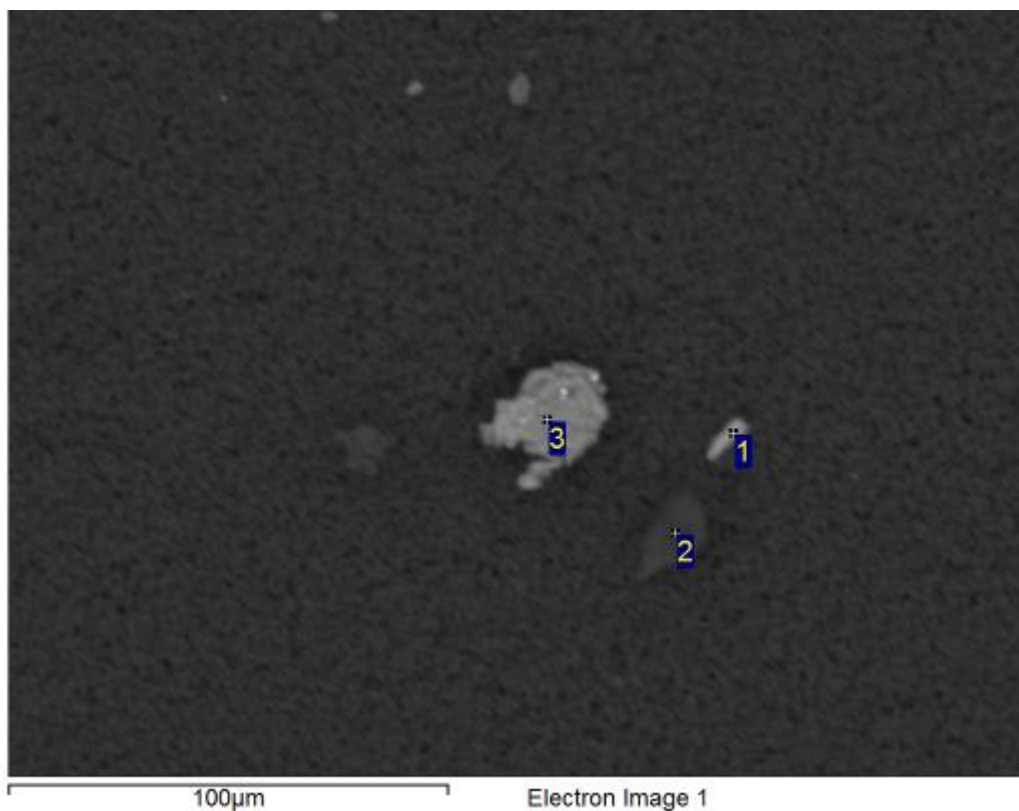
Analysis was conducted on as-received sample.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	K	Total	Mineral ID
1	48.1	0.3	9.0	29.9	12.6	100.0	K-Feldspar

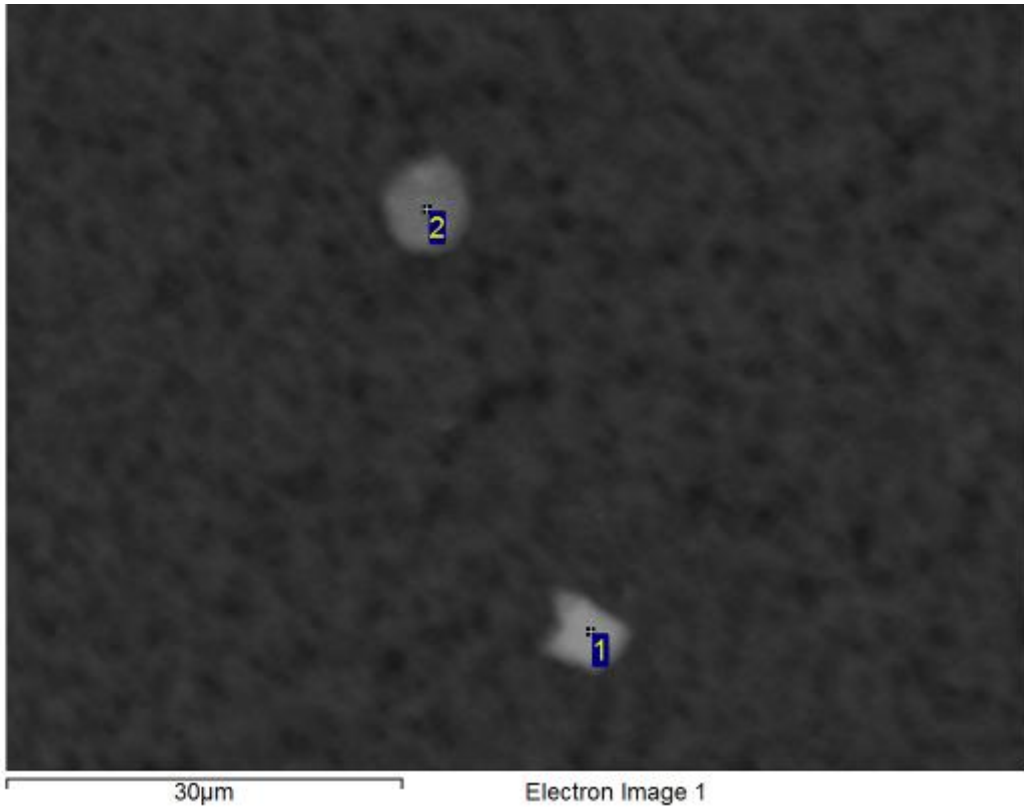
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	Fe	Cu	Zr	Total	Mineral ID
1	58.7	6.2	9.0	9.3	13.0	0.3	3.6	100.0	Unknown
2	100.0							100.0	Organic
3	16.5	2.3	79.6	1.6				100.0	Al Oxide

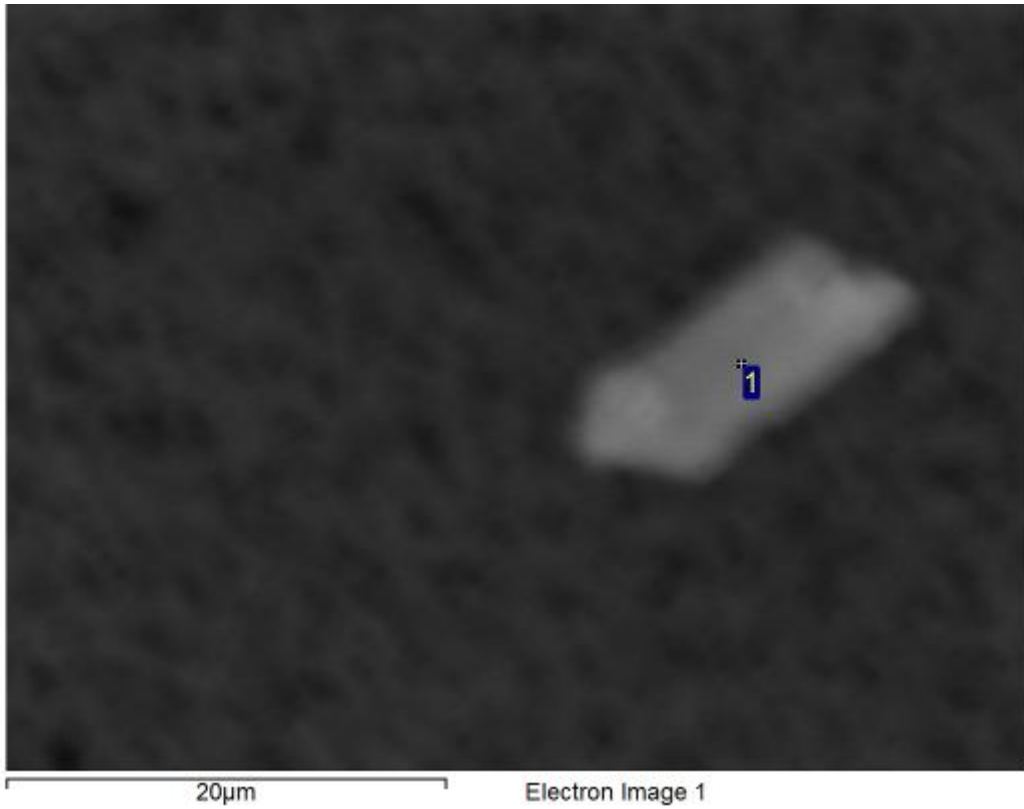
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	Ca	Ti	Fe	Total	Mineral ID
1	56.8	0.7	5.1	5.2	16.8	5.9	0.2	9.2	100.0	???
2	39.0					0.4		60.6	100.0	Fe Oxide

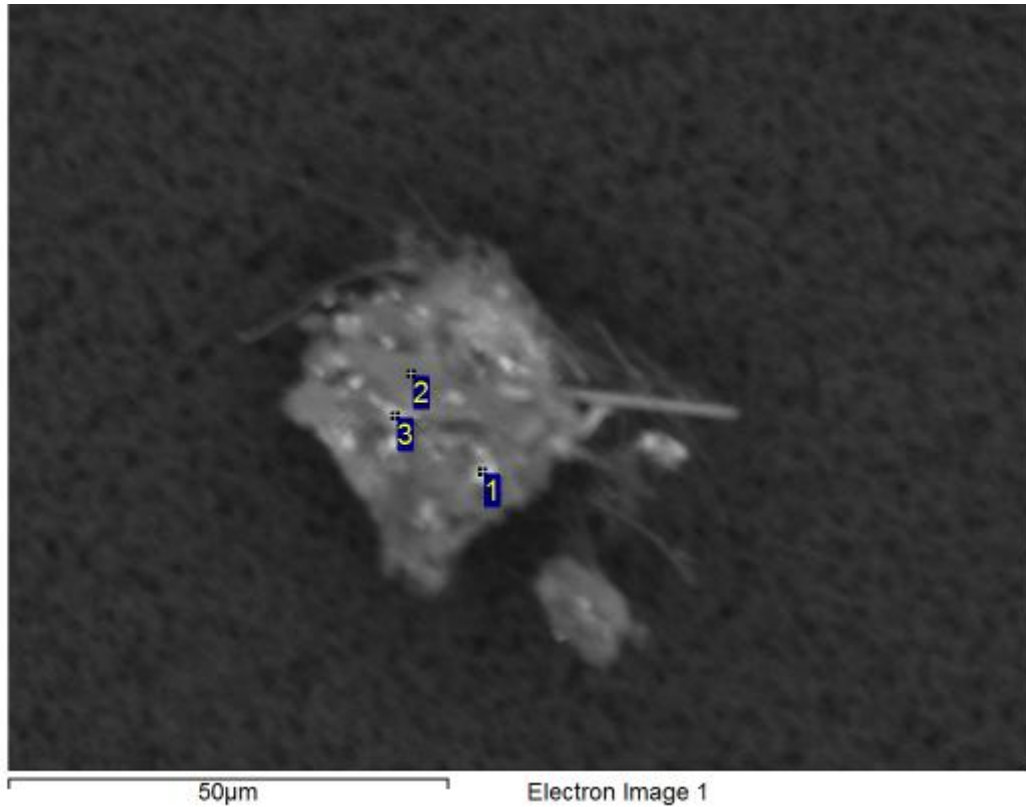
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Fe	Total	Mineral ID
1	62.8	15.4	17.0	1.5	3.2	100.0	Mica

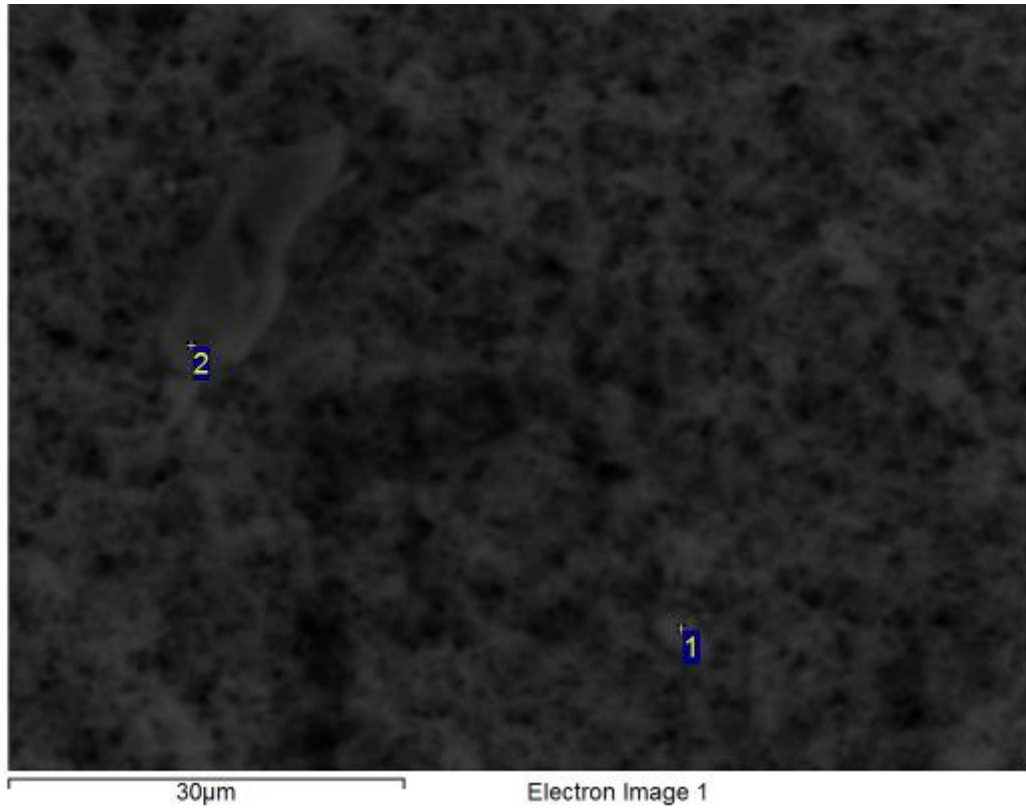
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	53.3			7.6	5.6	0.1			33.4	100.0	Kaolinite/Fe Oxide
2	57.6	0.6	0.3	11.8	12.8	2.2		0.4	14.3	100.0	Mica
3	45.8			8.3	6.6	0.4	0.4	0.3	38.2	100.0	Kaolinite/Fe Oxide

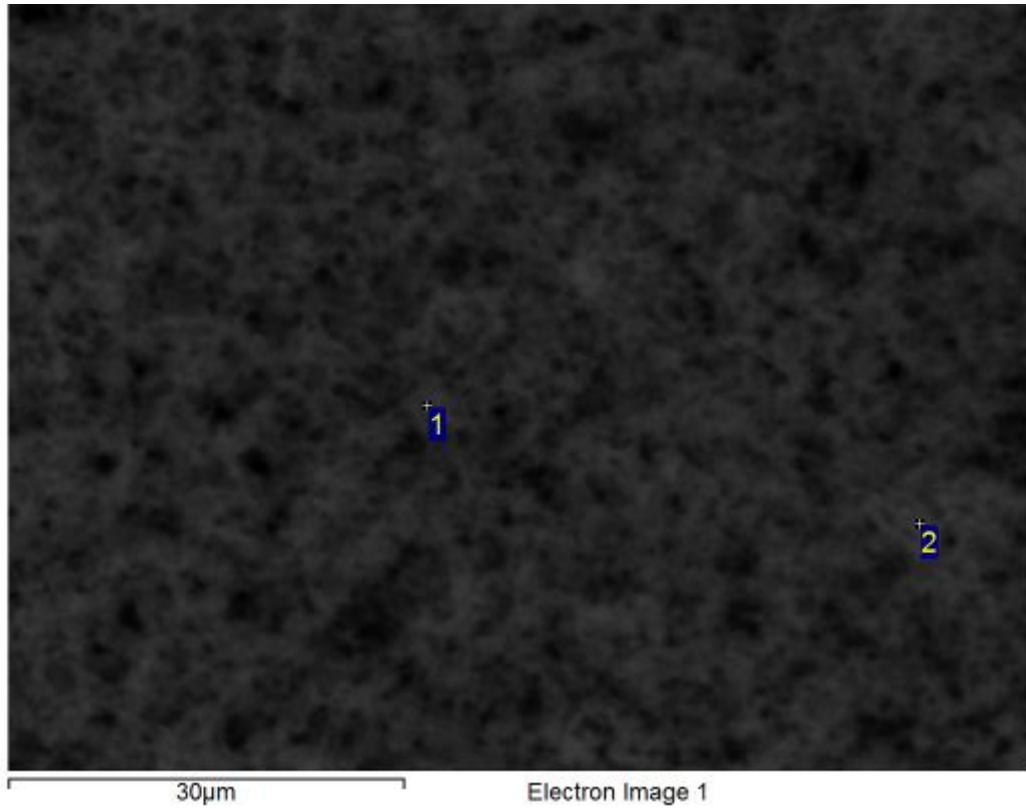
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	Mineral ID
1	Blank Filter
2	Blank Filter

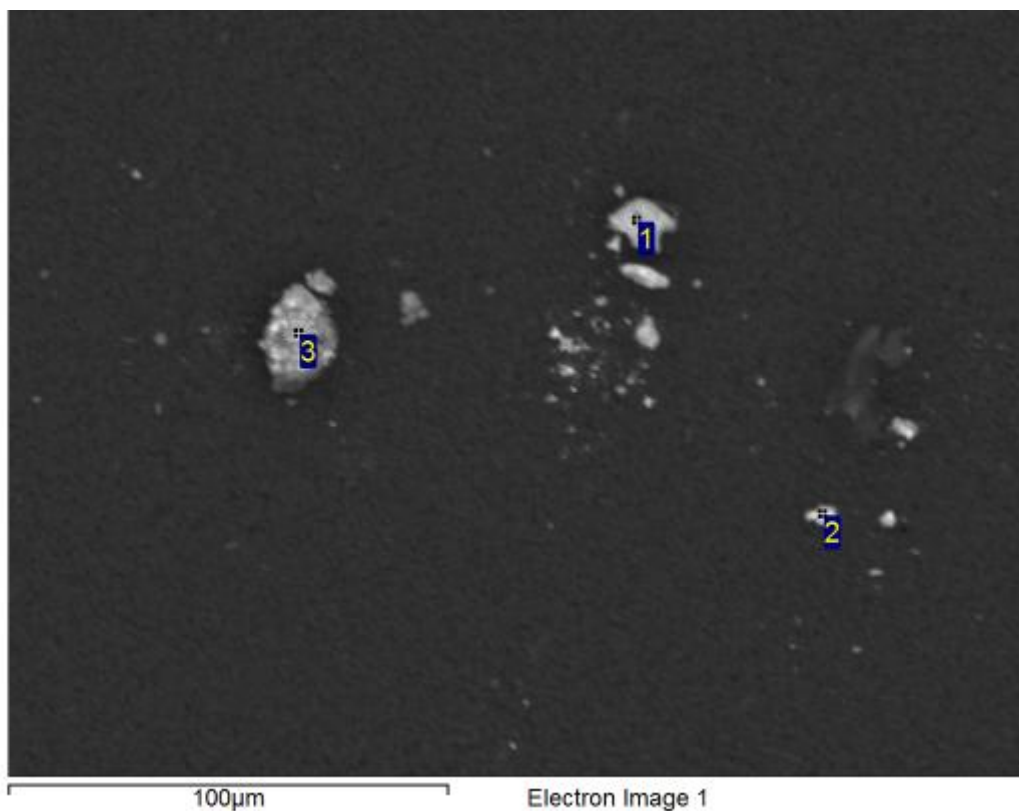
Analysis was conducted on as-received sample



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	Mineral ID
1	Blank Filter
2	Blank Filter

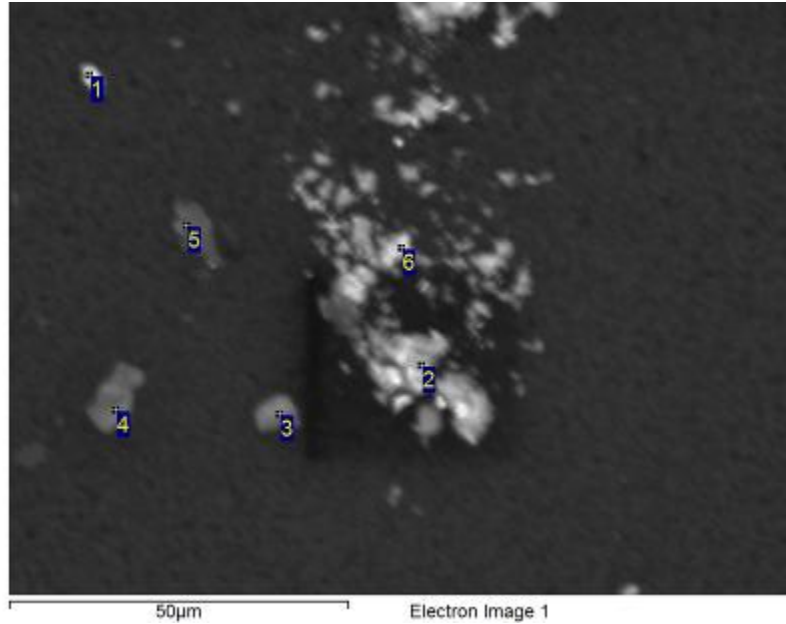
Analysis was conducted on as-received sample.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	S	K	Fe	Cu	Zn	As	Pb	Total	Mineral ID
1	41.8		1.5			56.7					100.0	Fe Oxide
2	31.9	0.3	0.6	25.0		12.3	13.0	16.6	0.4		100.0	???
3	37.8			19.3	0.8	4.3	1.7	21.9		14.2	100.0	???

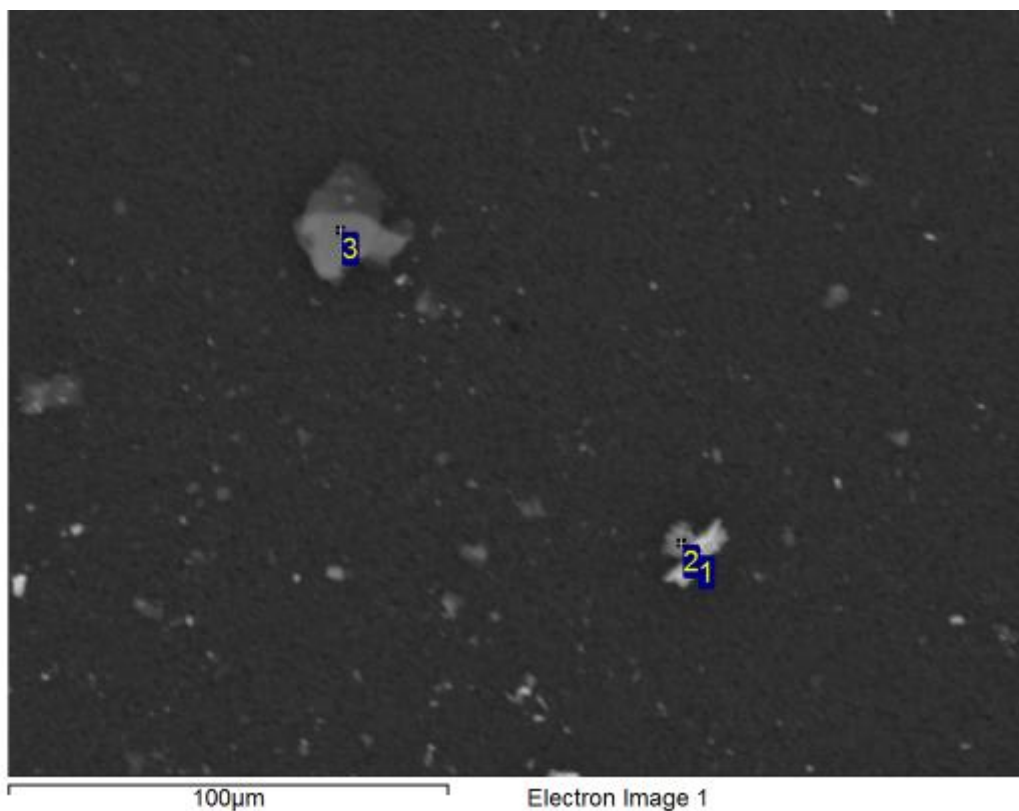
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	S	Cl	K	Ca	Ti	Mn	Fe	Cu	Zn	As	Total	Mineral ID
1	22.2				0.2	27.0						21.2	29.4			100.0	Chalcopyrite
2	42.1				0.2	21.0						10.2	7.7	18.5	0.3	100.0	???
3	56.7		5.3						21.3		0.7	15.9				100.0	Ankerite
4	54.5	7.0		8.9	29.2				0.4							100.0	Plagioclase
5	66.7	2.6	1.6	4.2	10.7	2.2	0.4	2.0	5.1	0.7		3.7				100.0	Plagioclase
6	37.9			0.4	1.0	23.5						13.9	15.2	8.1		100.0	???

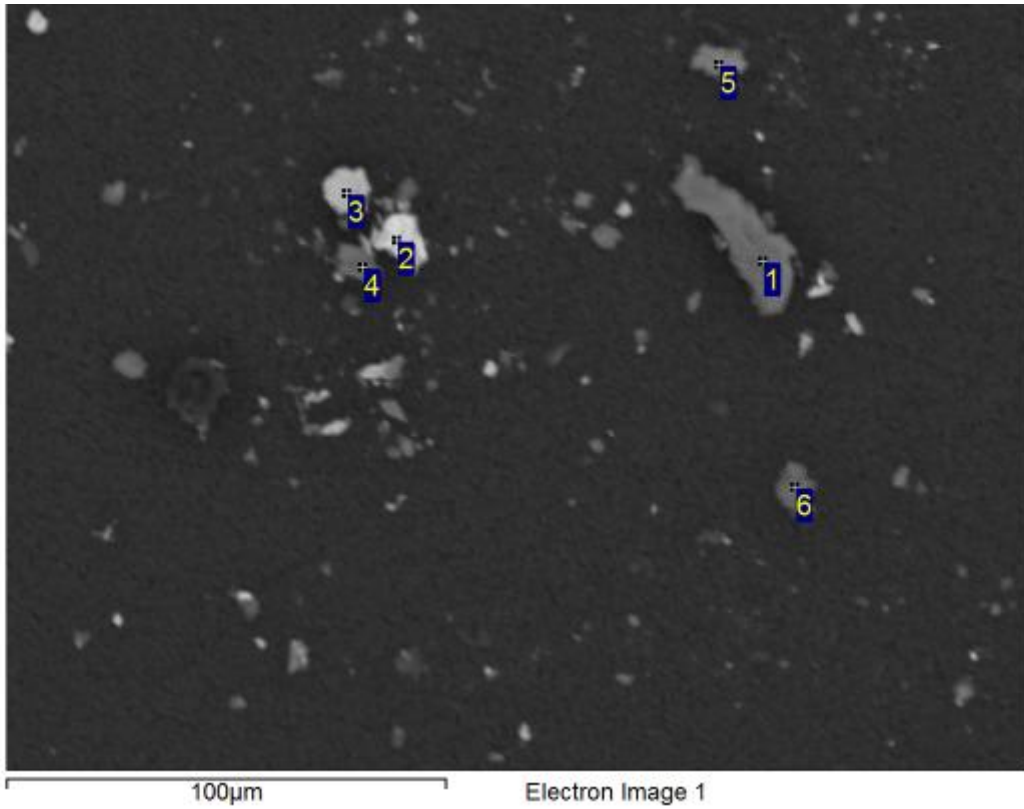
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	K	Mn	Fe	Total	Mineral ID
1	47.4		3.0	3.3			46.4	100.0	Fe Oxide
2	58.8		10.9	12.7	0.3	0.4	17.0	100.0	Kaolinite/Fe Oxide
3	71.3	1.2	11.3	12.9	3.3			100.0	Feldspar

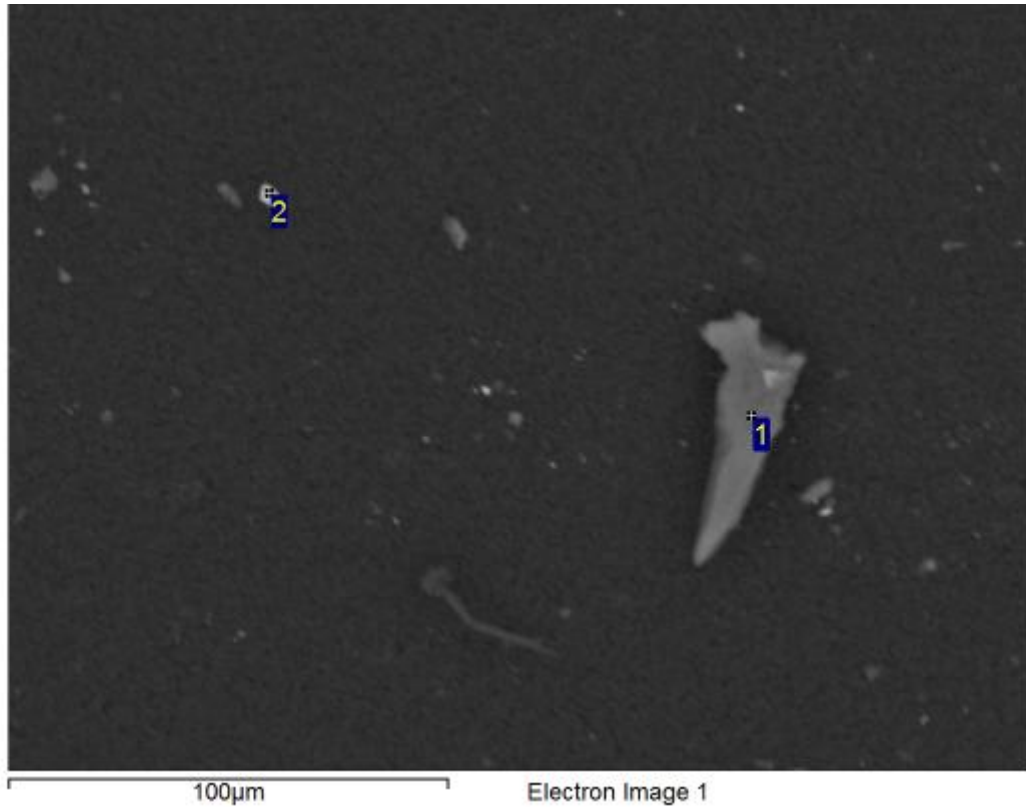
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	51.5			19.1	21.8		4.8		2.8	100.0	Mica
2	42.5			0.5	0.8				56.1	100.0	Fe Oxide
3	30.6		0.3	1.8	1.9	0.4		0.4	64.5	100.0	Fe Oxide
4	62.7				36.7				0.6	100.0	Quartz
5	59.6	0.6	0.6	13.8	17.5		6.3		1.8	100.0	Mica
6	64.2			35.0	0.9					100.0	Al Oxide

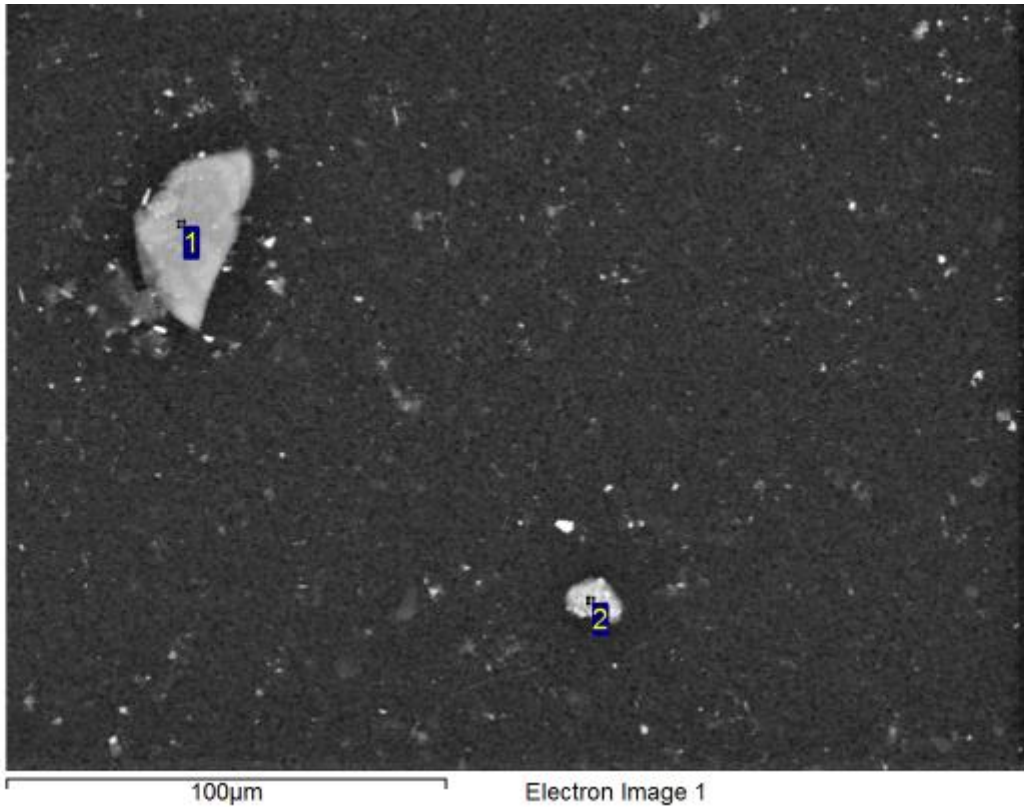
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Fe	Total	Mineral ID
1	60.3	0.3	0.3	16.5	18.7	3.2	0.6	100.0	Mica
2	43.0			1.5	1.2		54.3	100.0	Fe Oxide

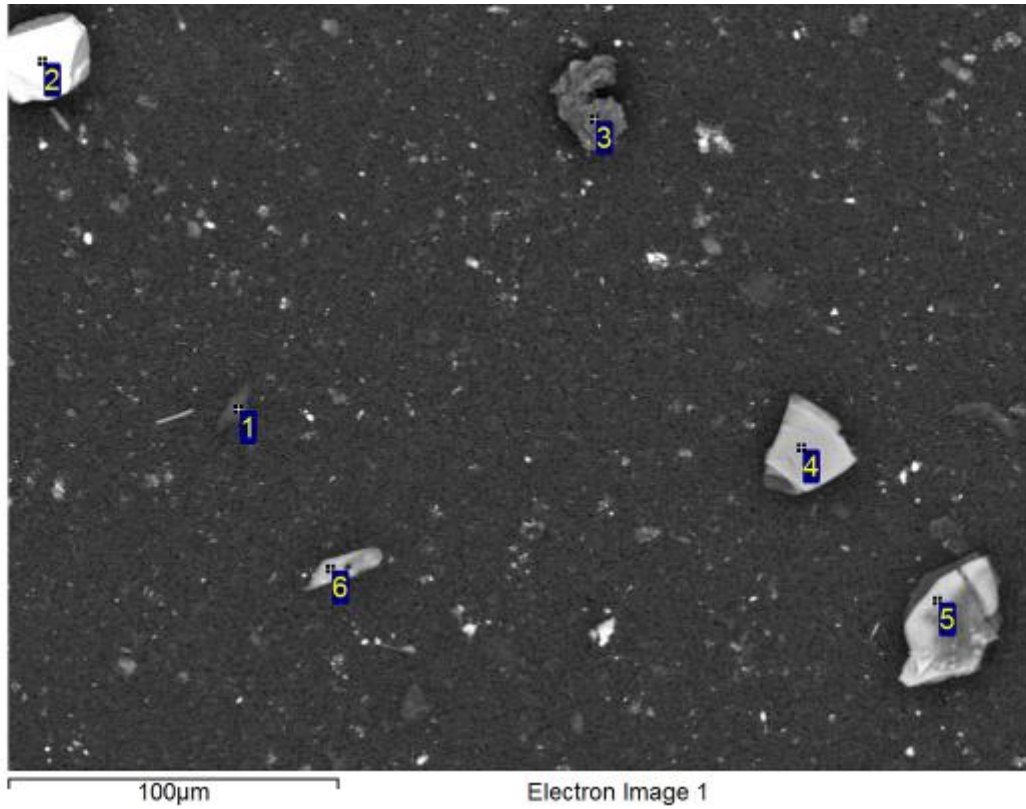
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ca	Mn	Fe	Total	Mineral ID
1	60.8	0.6	0.8	12.5	17.0		5.5			2.7	100.0	Mica
2	47.7			9.8	9.6	0.3	0.7	0.6	0.8	30.5	100.0	Fe Oxide/Kaolinite

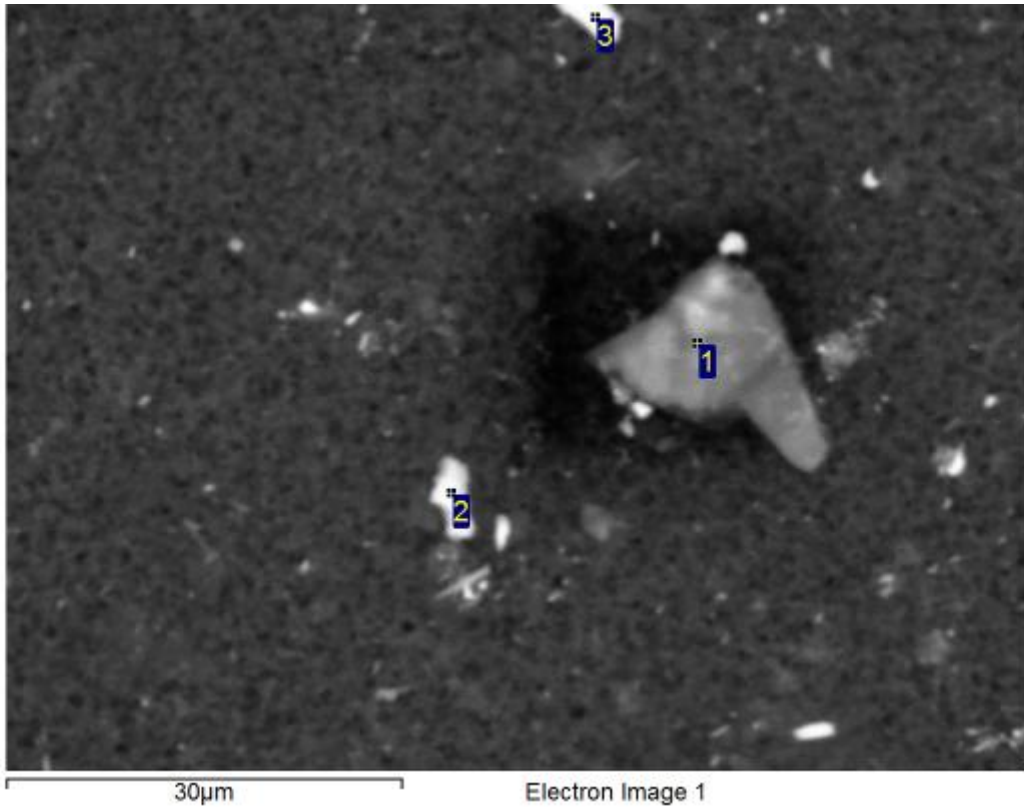
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	S	Cl	K	Ca	Ti	Fe	Total	Mineral ID
1	88.7				4.2							7.1	100.0	Fe-Si-O
2	34.6											65.4	100.0	Fe Oxide
3	42.1	0.6	0.8	13.5	25.1	0.7	1.9	0.6	1.3	1.5	1.2	10.9	100.0	Mica/other silicates
4	57.7		0.8	13.2	18.3				6.6		0.4	3.0	100.0	Mica
5	56.3		7.9	5.7	14.6			0.4	5.2		1.2	8.6	100.0	Mica
6	61.8		0.4	13.6	17.0				5.8			1.2	100.0	Mica

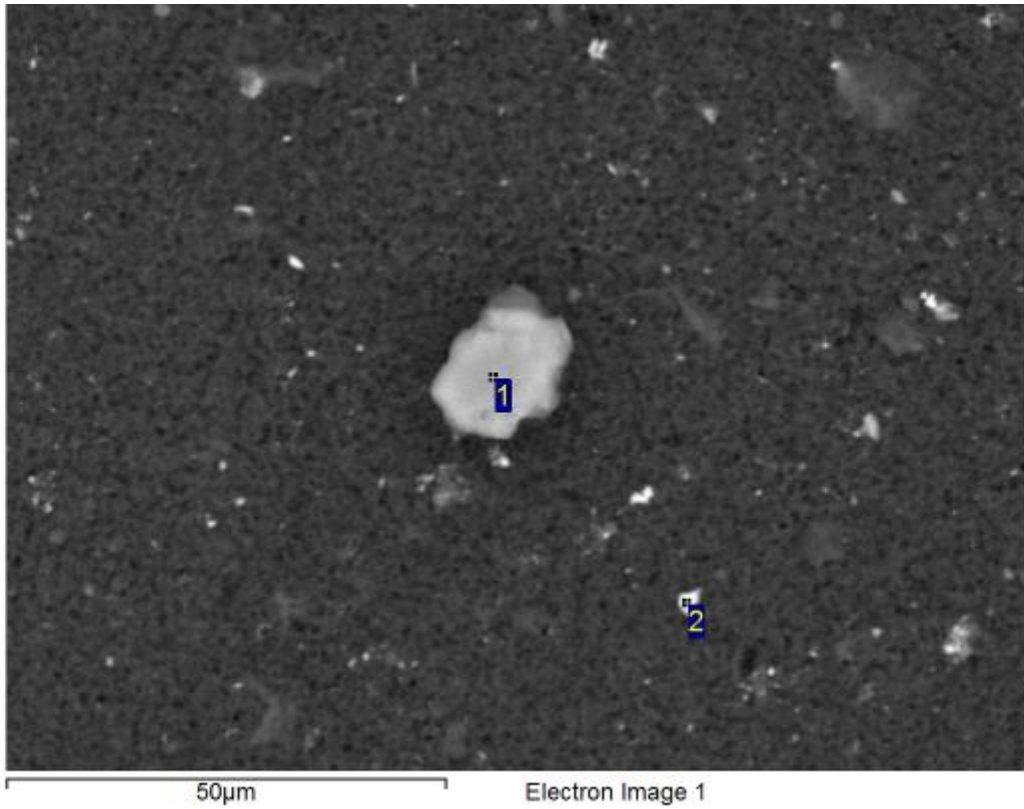
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ca	Mn	Fe	Cu	Total	Mineral ID
1	65.1	1.1	10.7	15.4	3.8			3.9		100.0	Mica
2	45.8		2.8	1.9		0.4		48.3	0.7	100.0	Fe Oxide
3	47.7		2.8	2.5			0.4	46.5		100.0	Fe Oxide

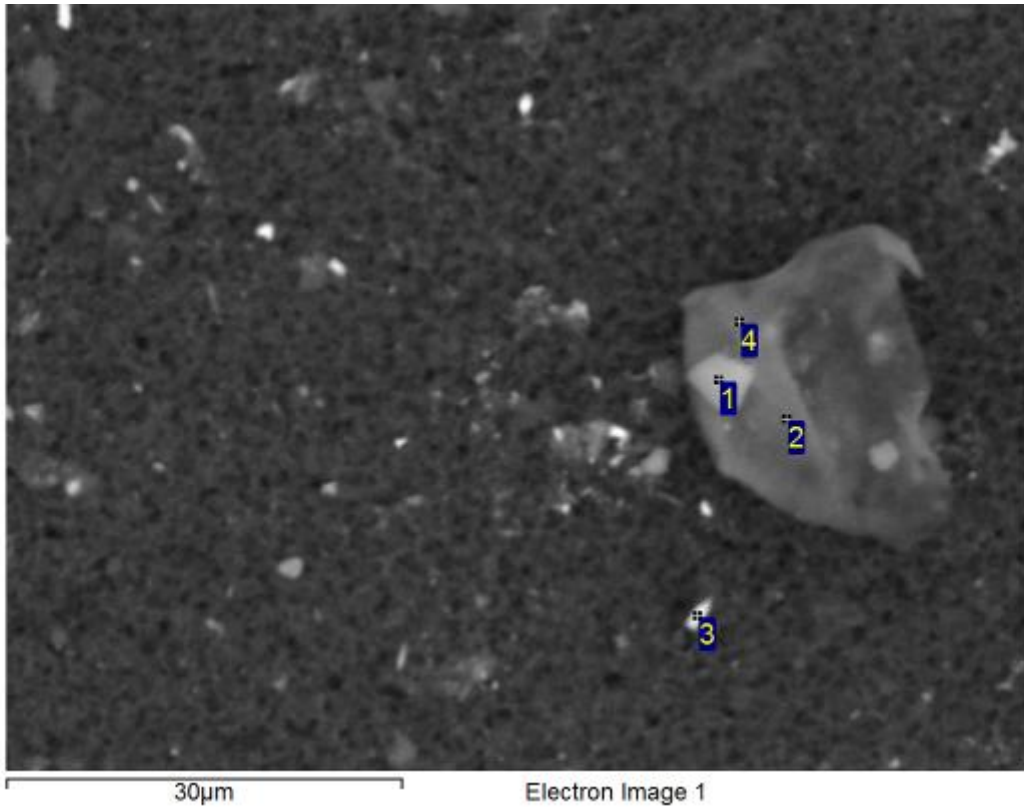
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	P	K	Fe	Total	Mineral ID
1	55.9	0.6	16.4	18.4		6.0	2.6	100.0	Mica
2	53.2		1.0	1.6	0.5		43.7	100.0	Fe Oxide

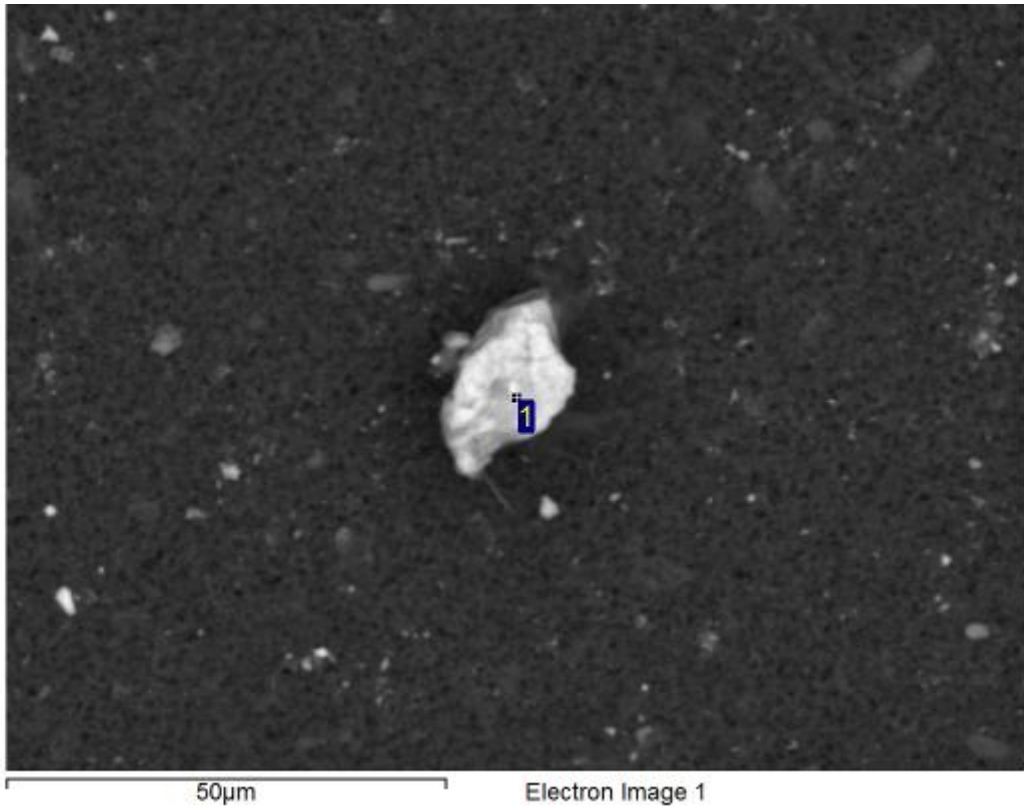
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	S	Cl	K	Ca	Fe	Total	Mineral ID
1	68.0	0.6	9.0	13.5	0.5	0.5	0.2	3.2	0.7	3.7	100.0	Mica
2	66.0		4.2	12.0	1.9	2.3			2.7	11.0	100.0	Ca-Fe-Si-Al-S-O
3	60.2		0.9	2.7						36.1	100.0	Fe Oxide
4	66.0		4.6	11.6	1.8	1.7	0.6		2.7	11.0	100.0	Ca-Fe-Si-Al-S-O

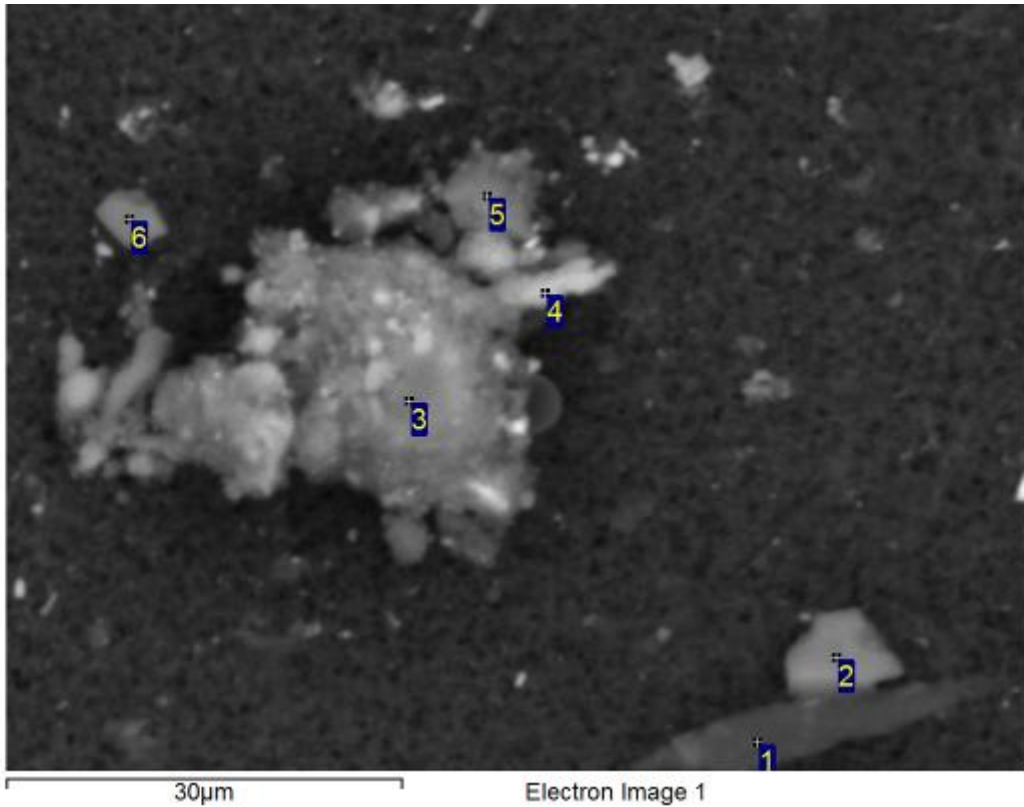
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	Ca	Fe	Total	Mineral ID
1	22.8	2.0	0.5	0.8	0.4	73.5	100.0	Fe Oxide

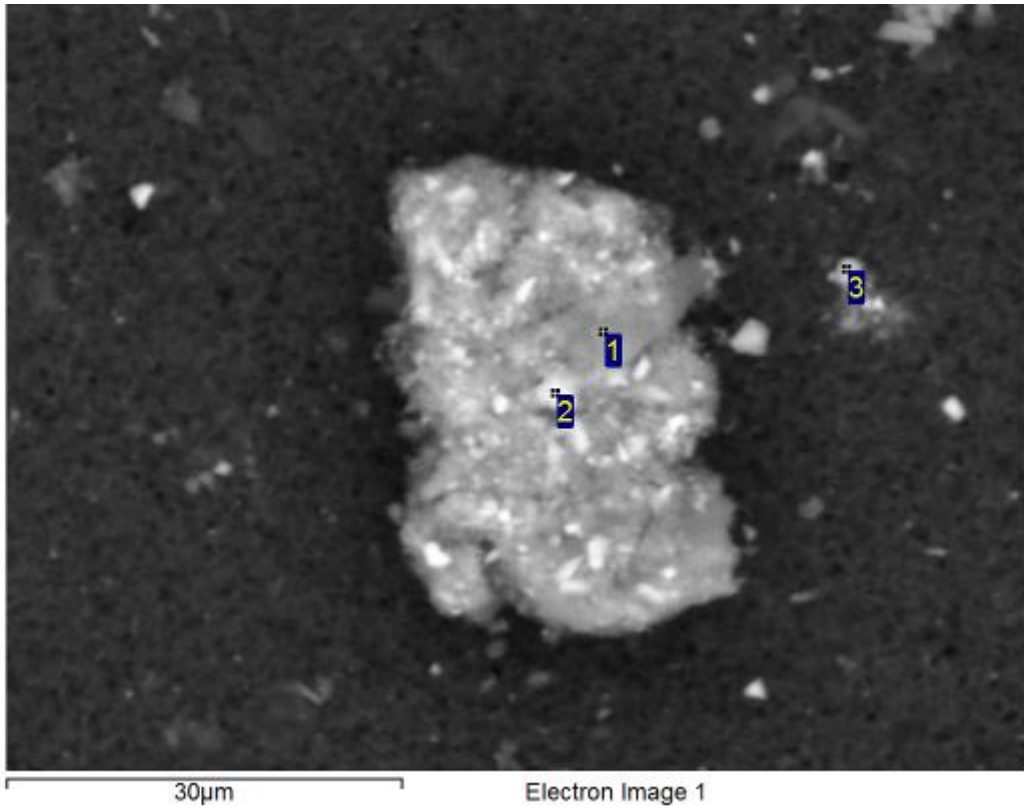
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	S	Ca	Ti	Mn	Fe	Cu	Total	Mineral ID
1	77.4		2.5	4.6		3.3	9.0			3.2		100.0	Ca-Fe-Al-Si-S-O
2	64.3			35.4			0.1			0.2		100.0	Quartz
3	44.2	2.3	3.3	16.1	3.9		10.4	0.3	2.7	16.3	0.6	100.0	Ca-Fe Silicates/Apatite
4	53.4	0.4	3.1	7.5	0.9		15.9	0.4	1.0	17.3		100.0	Ca-Fe Silicates
5	65.3	0.6	2.6	21.0	0.5		5.4		0.7	3.9		100.0	Quartz/Silicates
6	62.0			37.6			0.2			0.2		100.0	Quartz

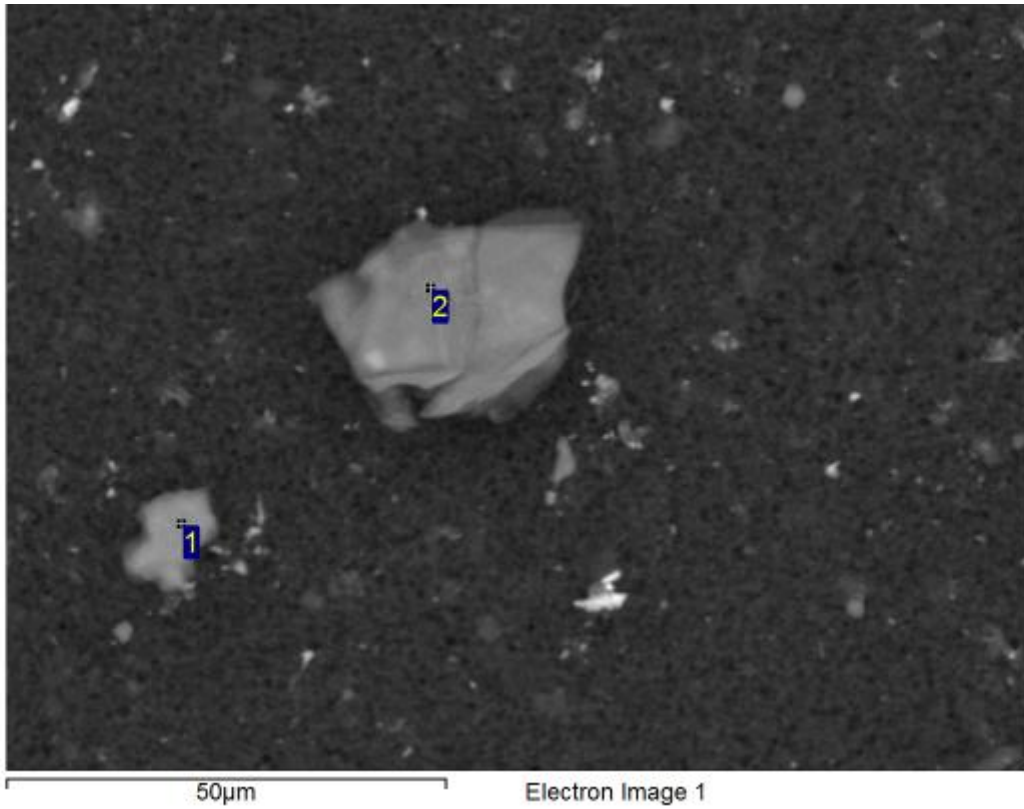
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	46.6	0.5	0.3	12.1	13.9		1.9	0.3	0.6	23.8	100.0	Fe Oxide/Kaolinite/Mica
2	38.6			7.8	6.6	0.3	0.6		0.5	45.6	100.0	Fe Oxide/Kaolinite
3	59.6			3.6	2.8					34.0	100.0	Fe Oxide

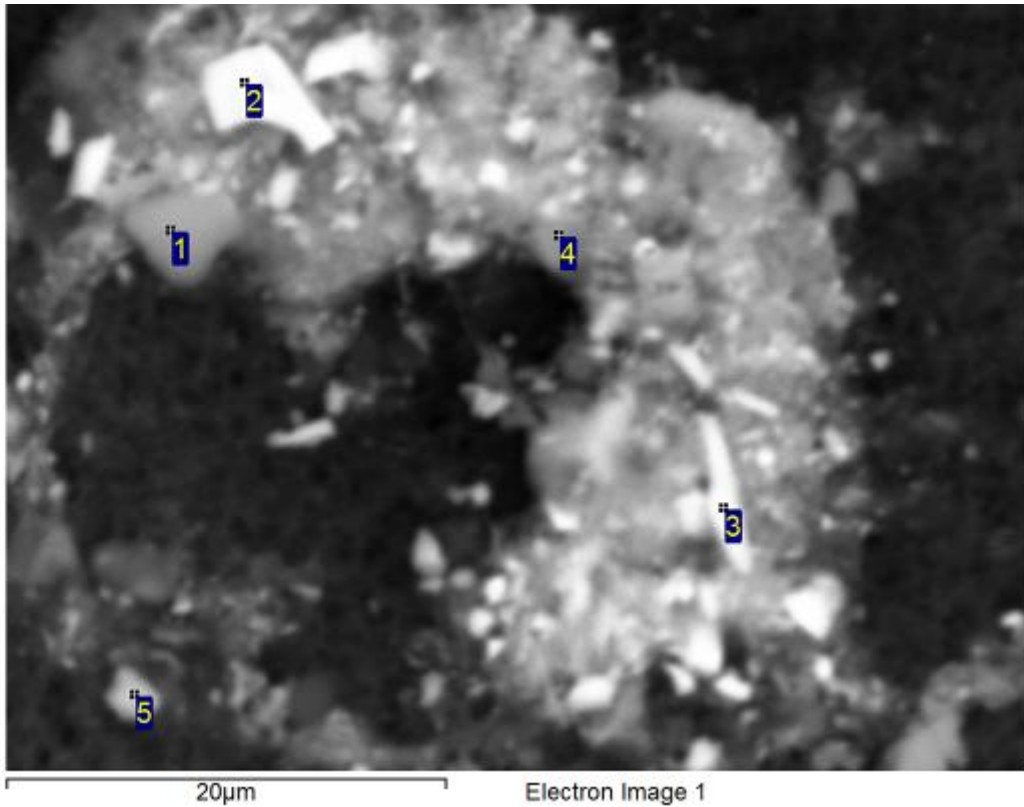
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Fe	Total	Mineral ID
1	62.9	0.5		14.7	17.2	3.6	1.0	100.0	Mica
2	60.9		1.1	11.5	16.5	5.0	5.0	100.0	Mica

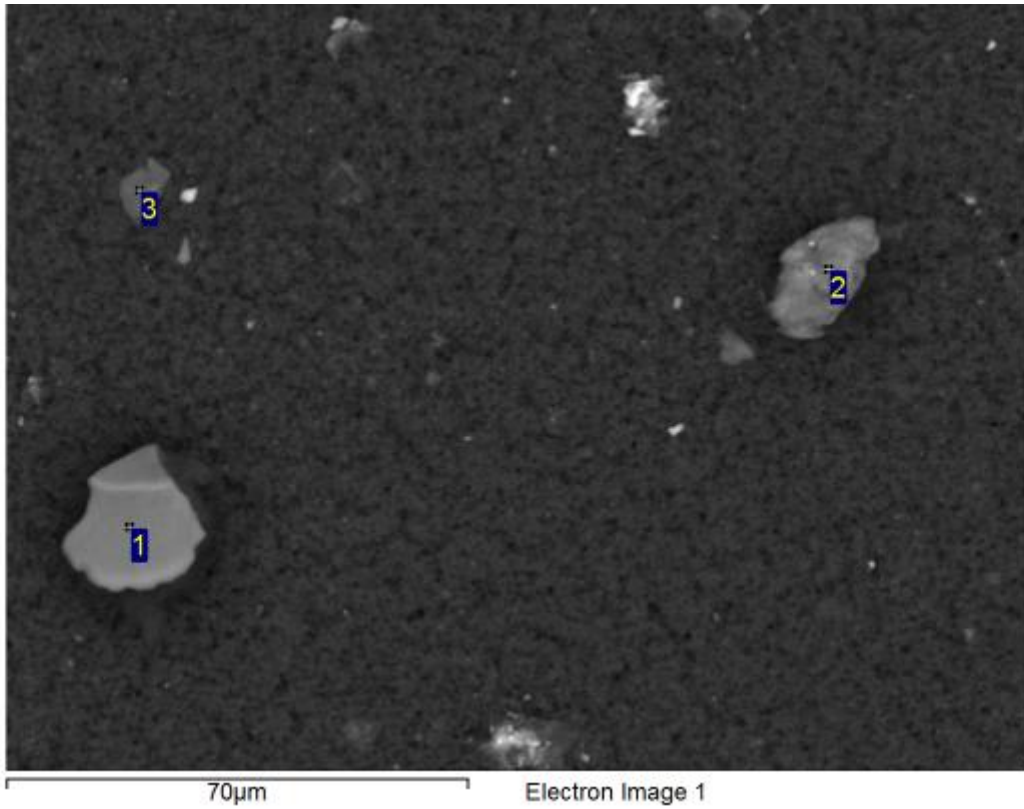
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ca	Mn	Fe	Total	Mineral ID
1	55.3	1.2	11.1	19.2		4.5	0.3	0.4	8.1	100.0	Mica
2	41.0		0.9	0.8					57.3	100.0	Fe Oxide
3	51.3		3.0	2.5					43.2	100.0	Fe Oxide
4	50.7		11.4	11.0		0.7		1.2	24.9	100.0	Kaolinite/Fe Oxide
5	54.1		3.3	2.1	0.4		0.3	1.1	38.7	100.0	Fe Oxide/Kaolinite

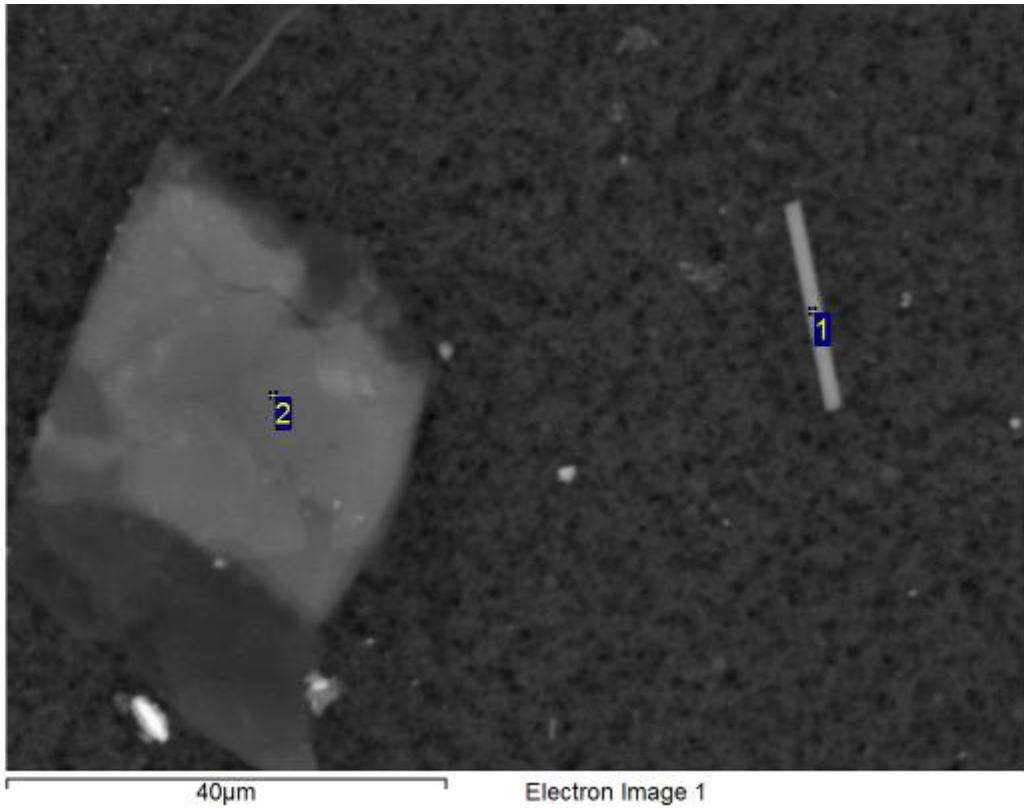
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Fe	Total	Mineral ID
1				100.0			100.0	Silicon
2	61.4	0.4	16.7	19.3	0.3	1.9	100.0	Kaolinite
3	70.2	0.8	10.3	13.9	3.3	1.4	100.0	Kaolinite/Mica

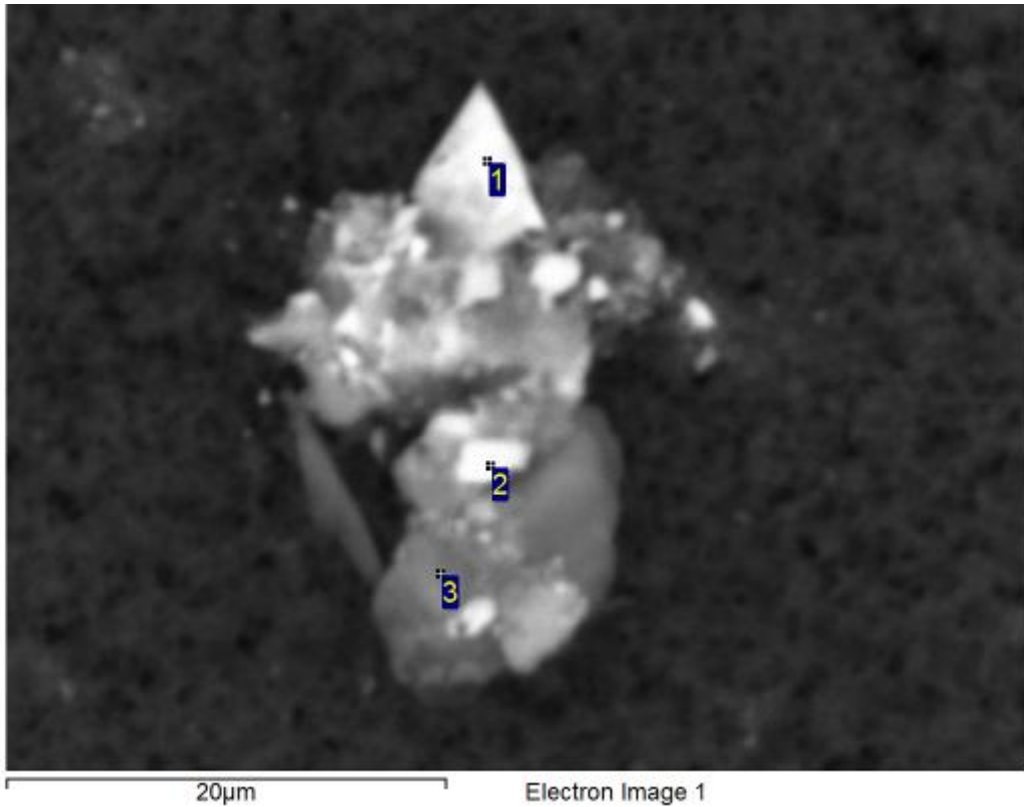
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ca	Ti	Fe	Zn	Ba	Total	Mineral ID
1	64.7	6.7		2.1	19.0	1.4	0.7		0.3	2.3	2.7	100.0	Unknown
2	65.1		0.3	3.4	26.3		1.2	0.4	3.3			100.0	Quartz

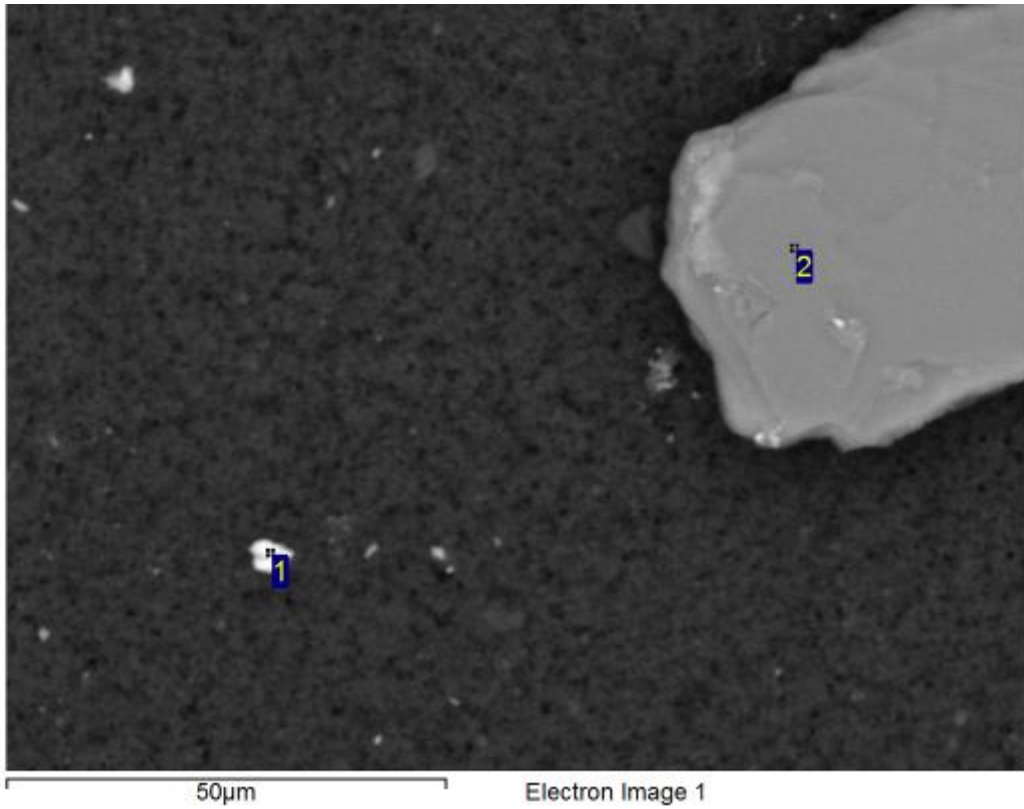
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	43.7	0.5	0.8	55.0	100.0	Fe Oxide
2	44.5	4.0	3.1	48.4	100.0	Fe Oxide
3	64.7	15.7	17.6	2.0	100.0	Kaolinite

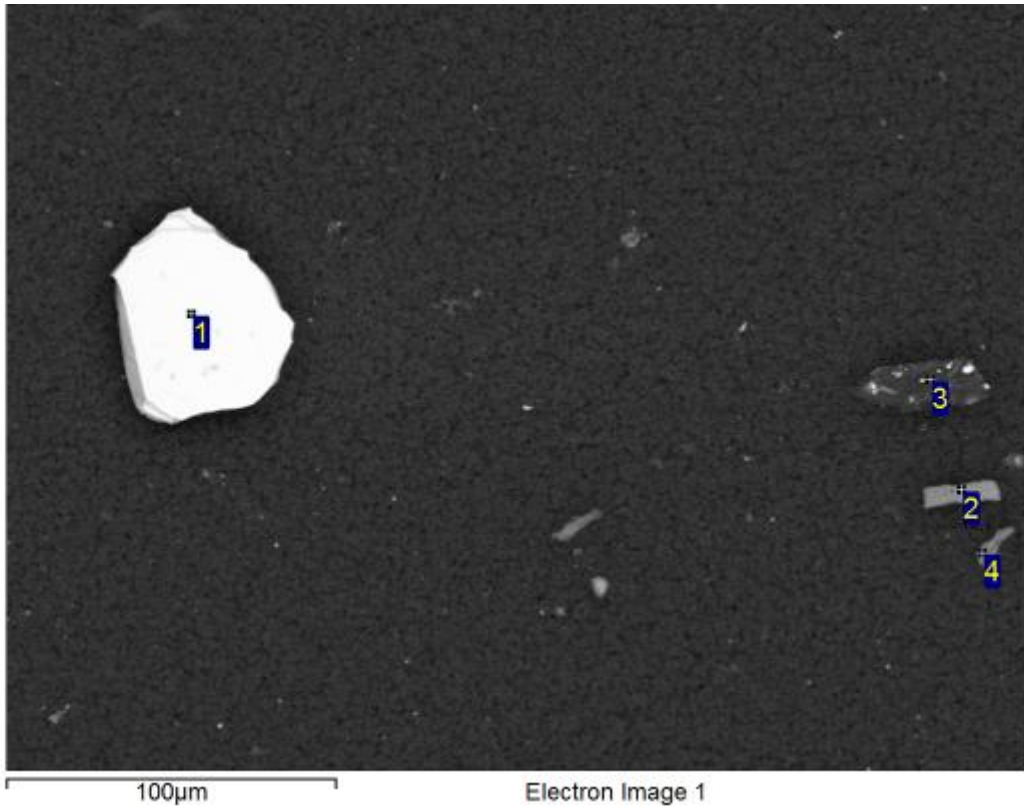
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	34.8						65.2	100.0	Fe Oxide
2	51.8	1.2	14.6	21.3	8.2	0.3	2.6	100.0	Mica

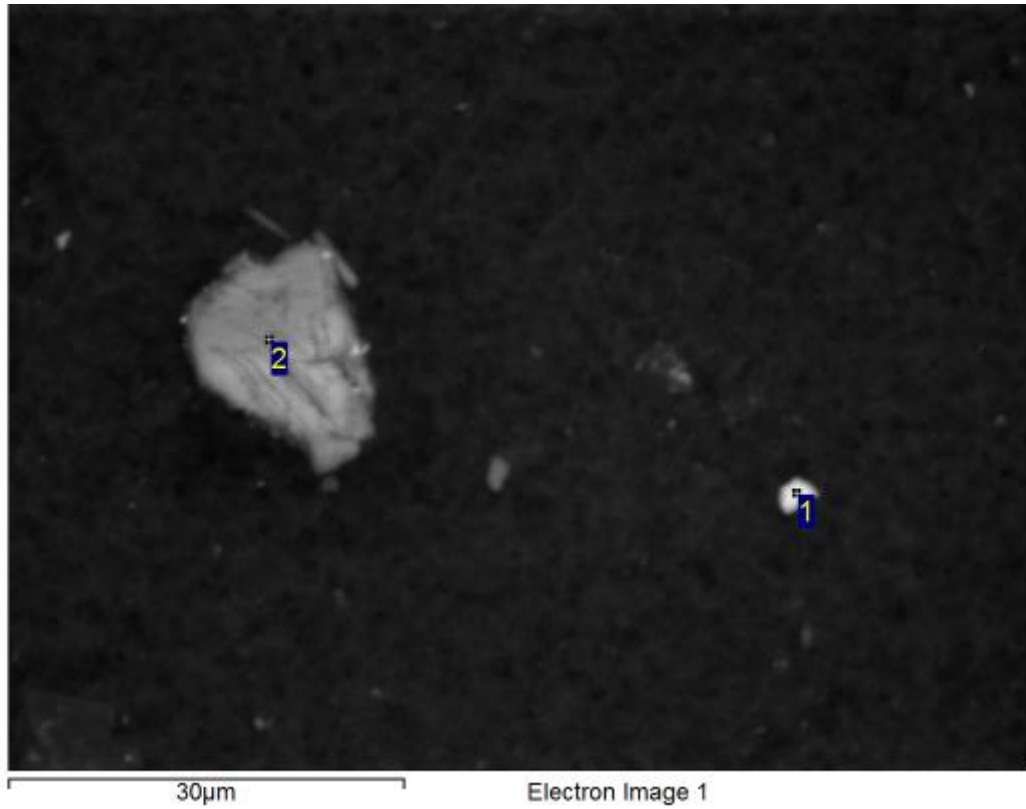
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	S	K	Ca	Ti	Fe	Zn	Total	Mineral ID
1	34.7									65.3		100.0	Fe Oxide
2	61.4	0.4	0.7	13.4	17.3		5.6		0.2	1.0		100.0	Mica
3	69.6			1.8	6.4	2.0		2.5		14.6	3.0	100.0	Kaolinite/Unknown
4	69.1			12.8	13.0					5.2		100.0	Kaolinite

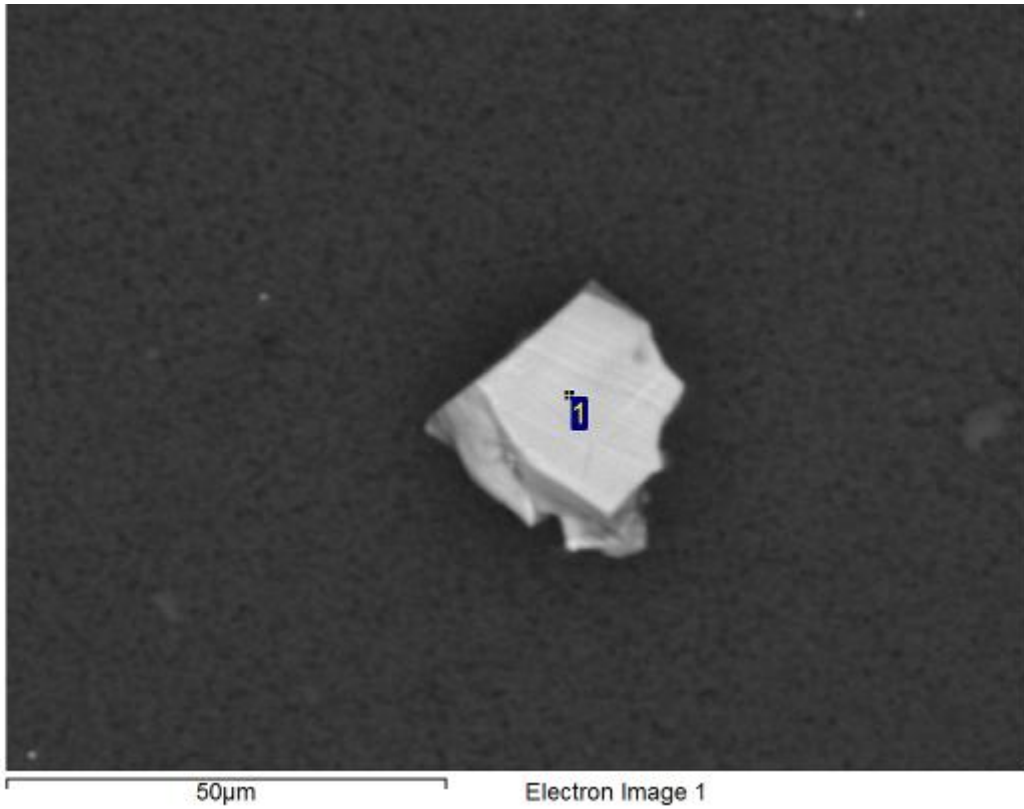
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Si	Ca	Fe	Total	Mineral ID
1	47.7		0.6		51.7	100.0	Fe Oxide
2	68.0	1.4		30.7		100.0	Calcite

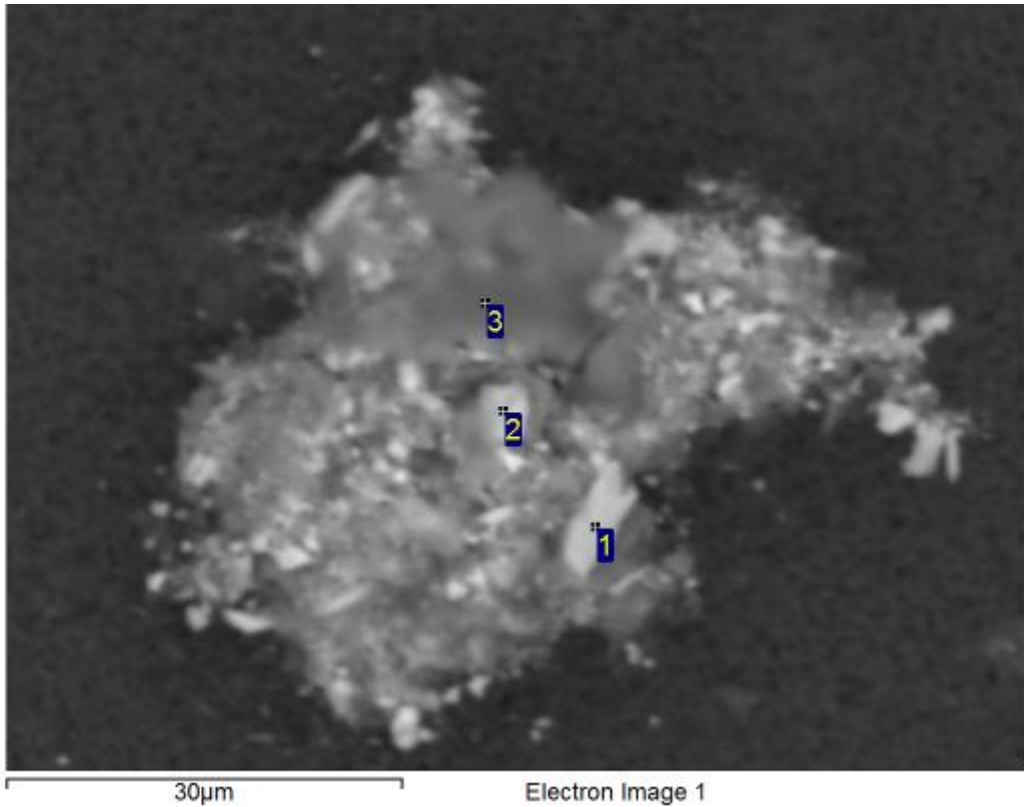
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	In stats.	O	Fe	Total	Mineral ID
1	Yes	29.0	71.0	100.0	Fe Oxide

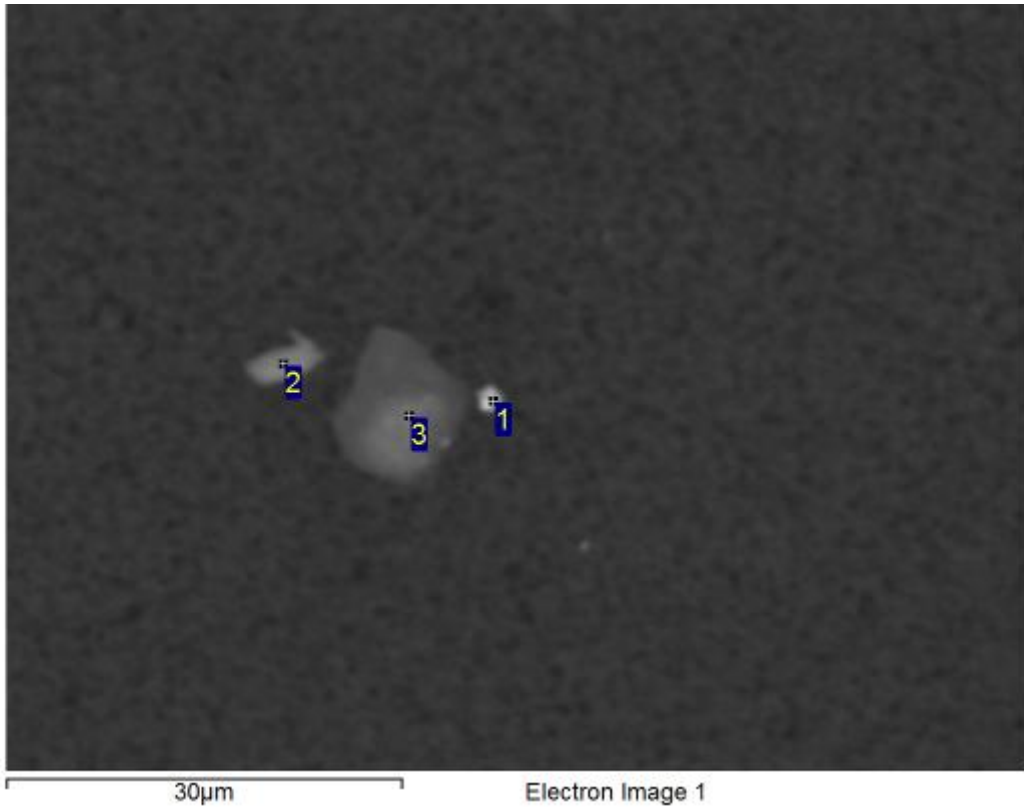
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Fe	Total	Mineral ID
1	7.8	0.7	0.9		90.6	100.0	Fe Oxide
2	51.8	6.1	6.2	1.1	34.9	100.0	Fe Oxide/Kaolinite
3	63.6	14.7	16.0	0.5	5.2	100.0	Kaolinite/Fe Oxide

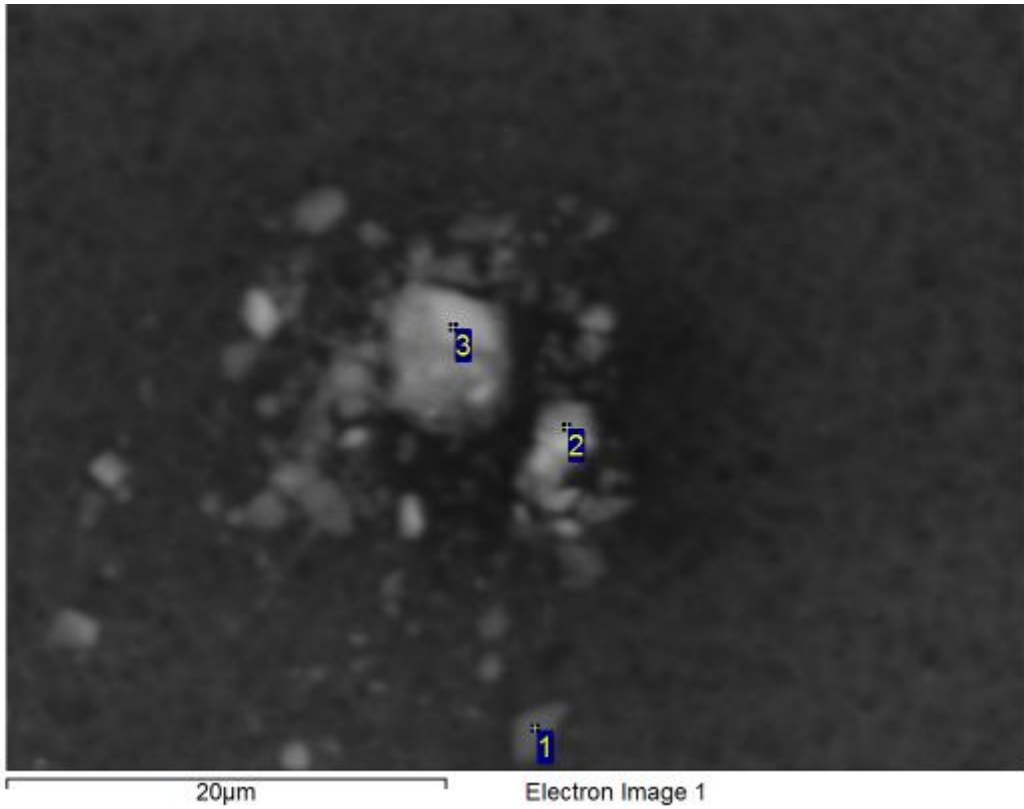
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ca	Fe	Cu	Zn	Total	Mineral ID
1	32.4			1.0	1.9	0.4		0.5	43.7	20.1	100.0	Cu-Zn-Oxide
2	63.8	0.7	4.3	6.1	13.9	0.2	4.2	6.9			100.0	Unknown
3	64.4		0.8	10.5	12.7	3.5		8.1			100.0	Unknown

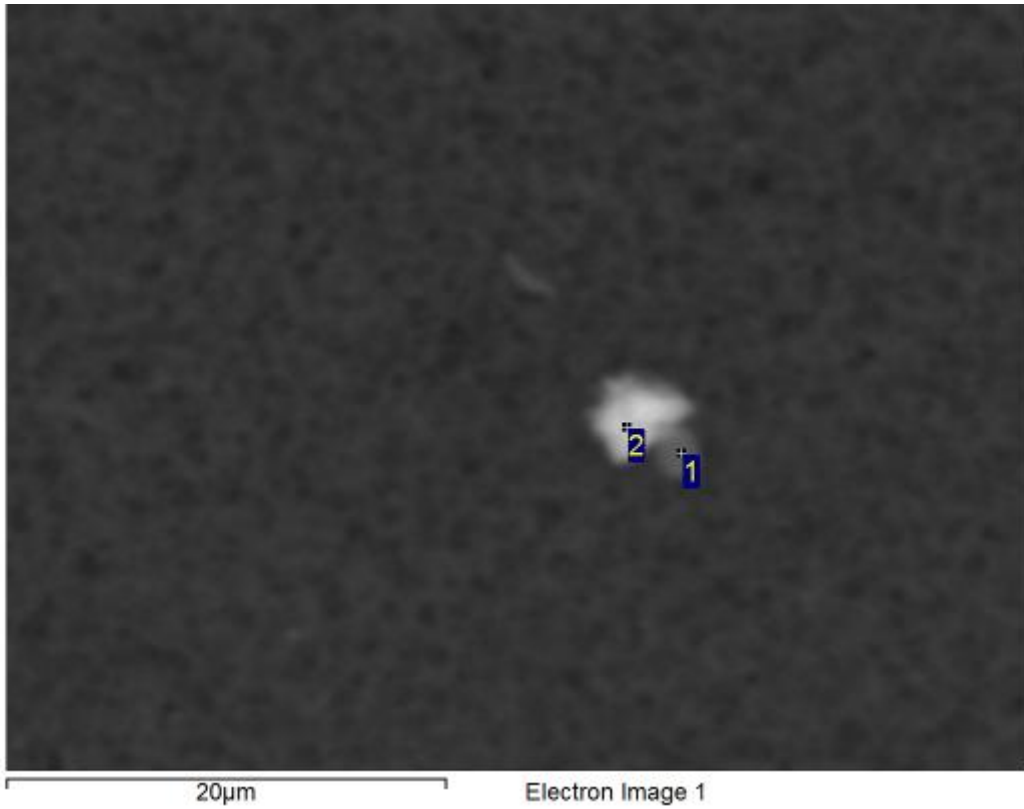
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	P	S	Cl	Ca	Ti	Cr	Fe	Sn	Total	Mineral ID
1	73.0		25.3	0.6	0.5						0.6		100.0	Gibbsite
2	62.6	1.0	0.5	0.3	11.6	0.5		3.0	0.6	4.9	3.6	11.3	100.0	Unknown
3	56.6	0.9	0.6	1.1	13.1	1.3	0.4	2.5	0.5	8.3	3.7	11.0	100.0	Unknown

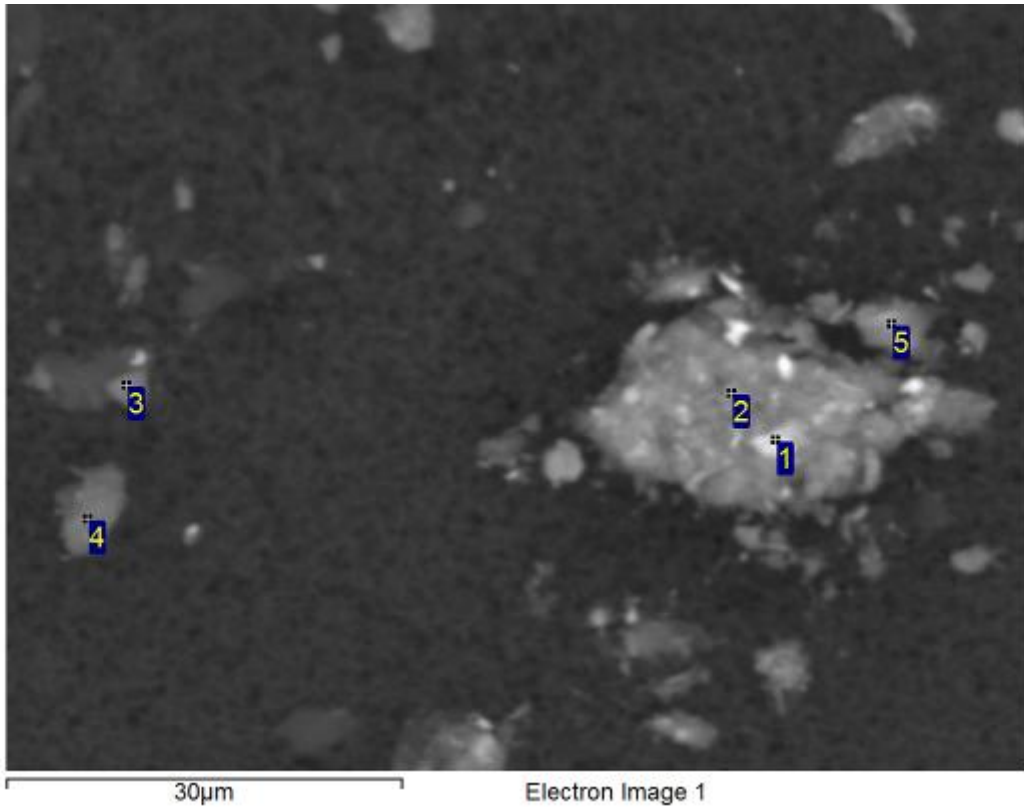
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	S	Cl	Ca	Cr	Fe	Cu	Zn	Sn	Total	Mineral ID
1	66.5	1.0	0.8	7.5	1.0	1.0	2.5	8.3	6.9	1.1	0.8	2.6	100.0	Unknown
2	42.8	2.0	1.6	0.6					53.0				100.0	Fe Oxide

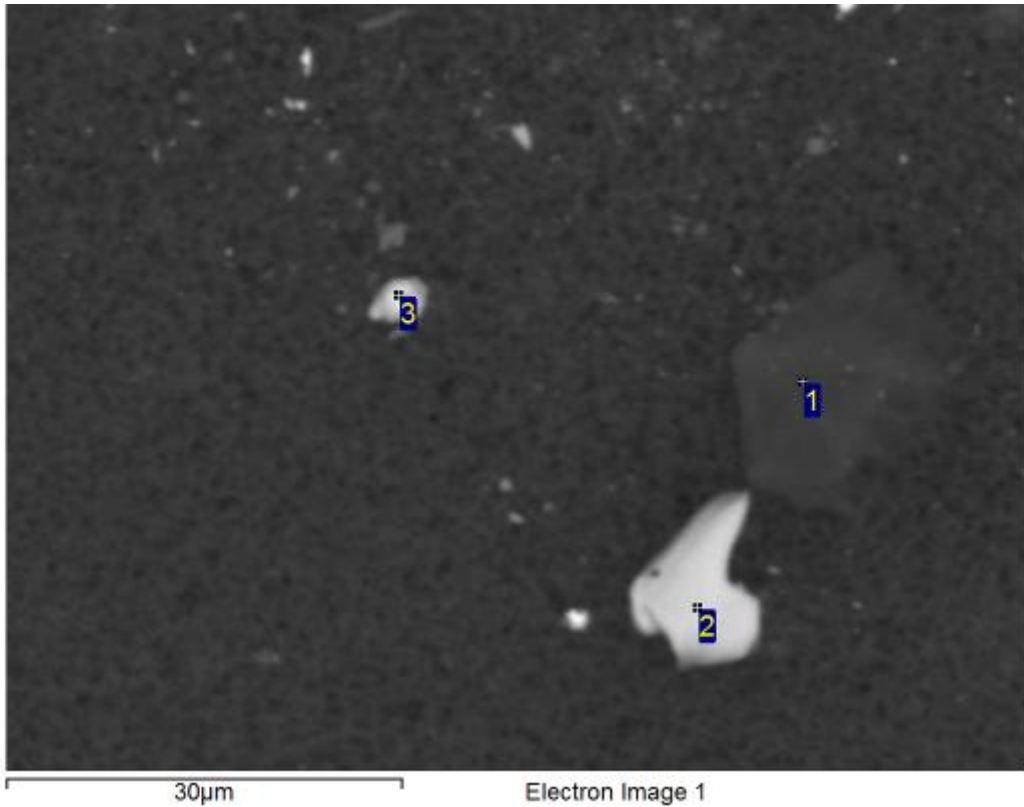
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	P	S	K	Ca	Mn	Fe	Cu	Total	Mineral ID
1	43.7		9.4	8.9			0.9		0.6	36.6		100.0	Fe Oxide/Kaolinite
2	45.7		10.0	11.2			0.8		0.7	31.5		100.0	Fe Oxide/Kaolinite
3	57.7	7.3	9.1	22.7		0.4	0.4	1.9		0.6		100.0	Feldspar
4	58.2		9.2	7.6	0.3		0.6		1.7	22.3		100.0	Fe Oxide/Kaolinite
5	54.7		8.8	7.5	0.4		0.4		0.4	27.7	0.3	100.0	Fe Oxide/Kaolinite

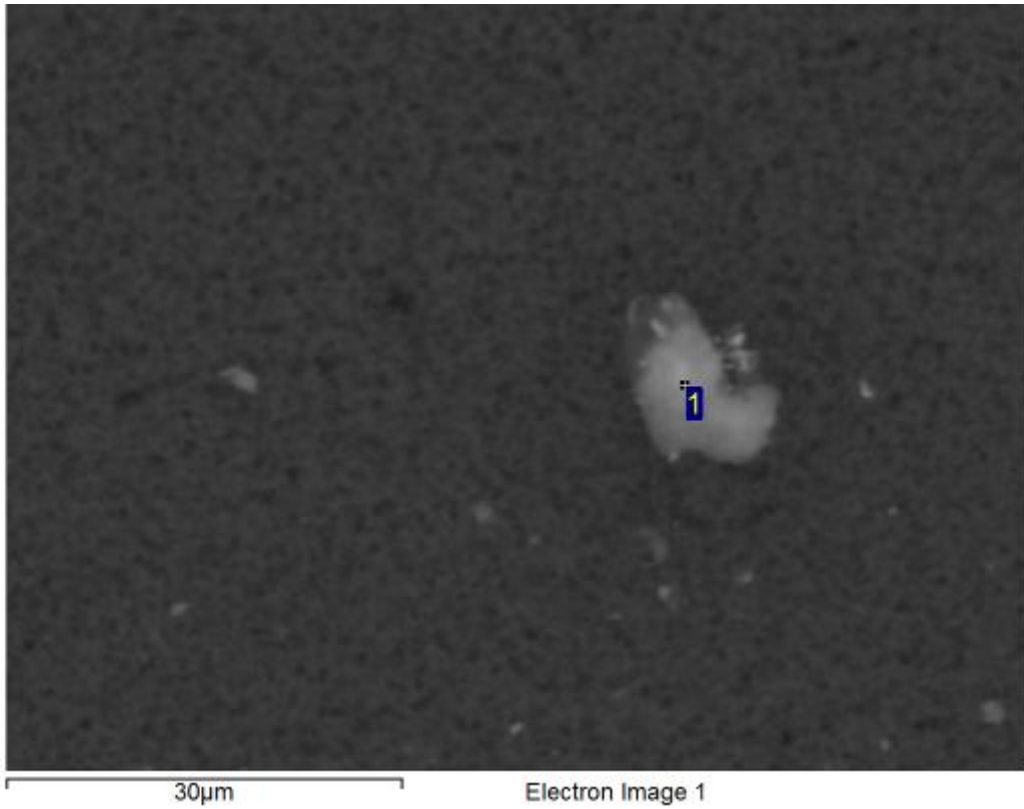
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	S	Ca	Fe	Total	Mineral ID
1	83.4		1.8	3.1	4.4	3.4	3.9	100.0	Unknown
2	43.8	0.5	0.7	0.6			54.4	100.0	Fe Oxide
3	42.8			0.3			56.9	100.0	Fe Oxide

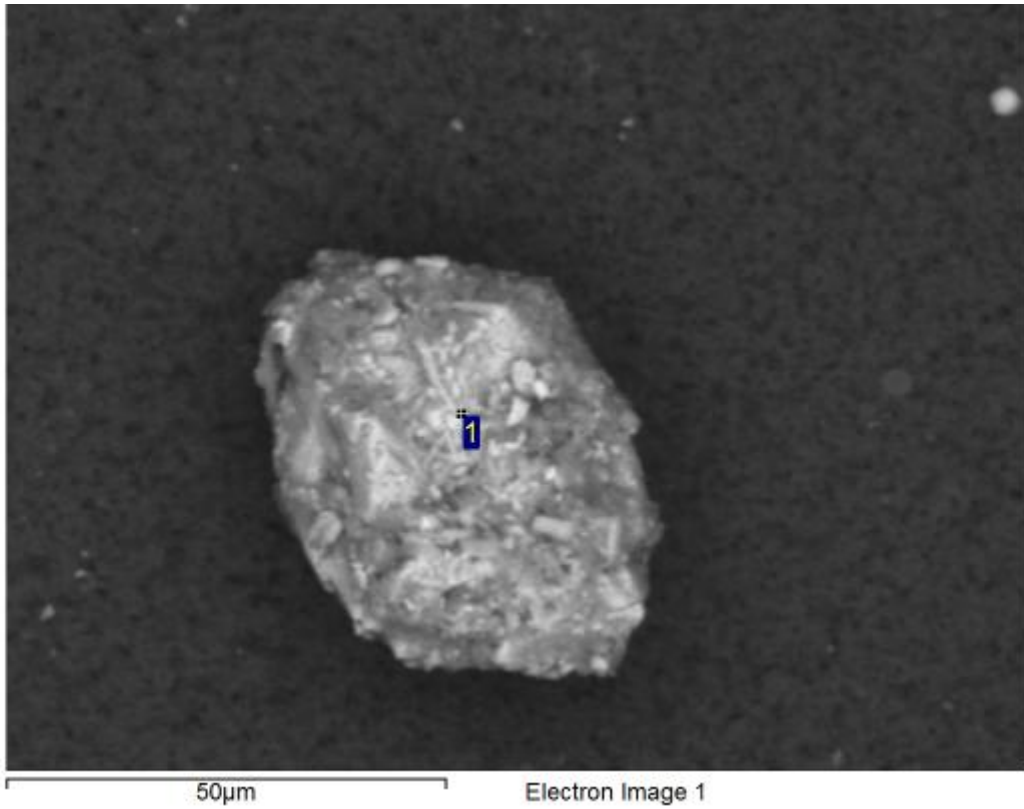
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Ti	Fe	Total	Mineral ID
1	56.6	11.9	13.0	0.5	0.3	17.7	100.0	Fe Oxide/Kaolinite

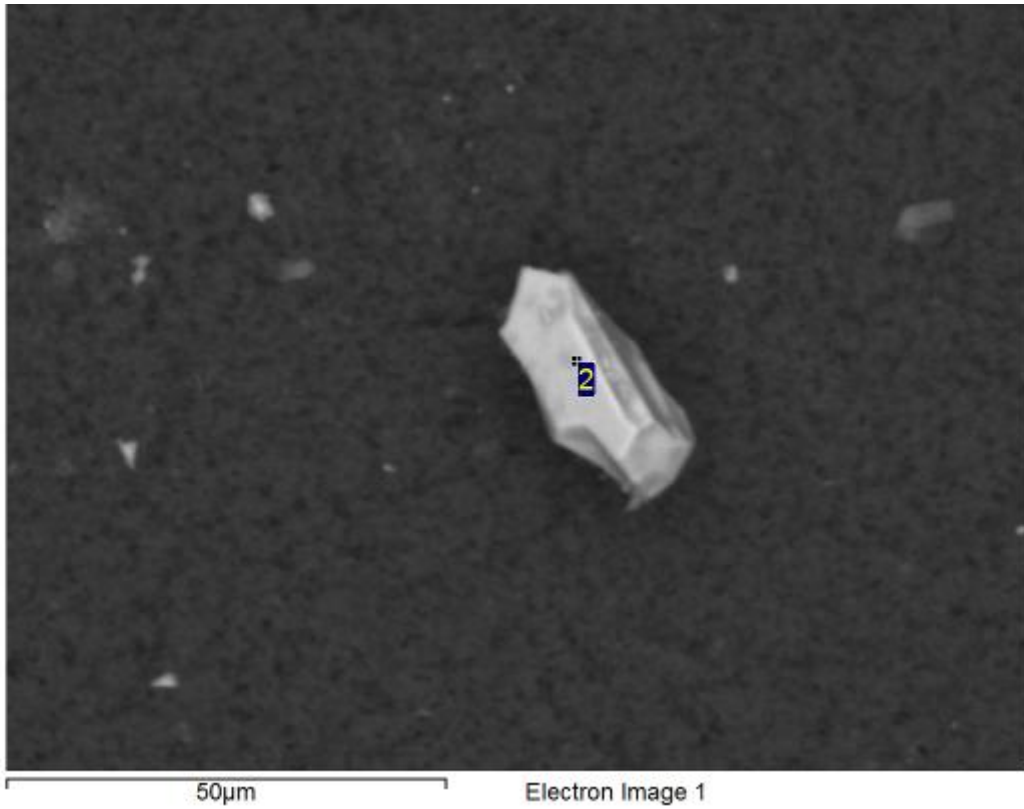
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Ca	Fe	Total	Mineral ID
1	27.6	1.9	1.7	0.4	68.4	100.0	Fe Oxide

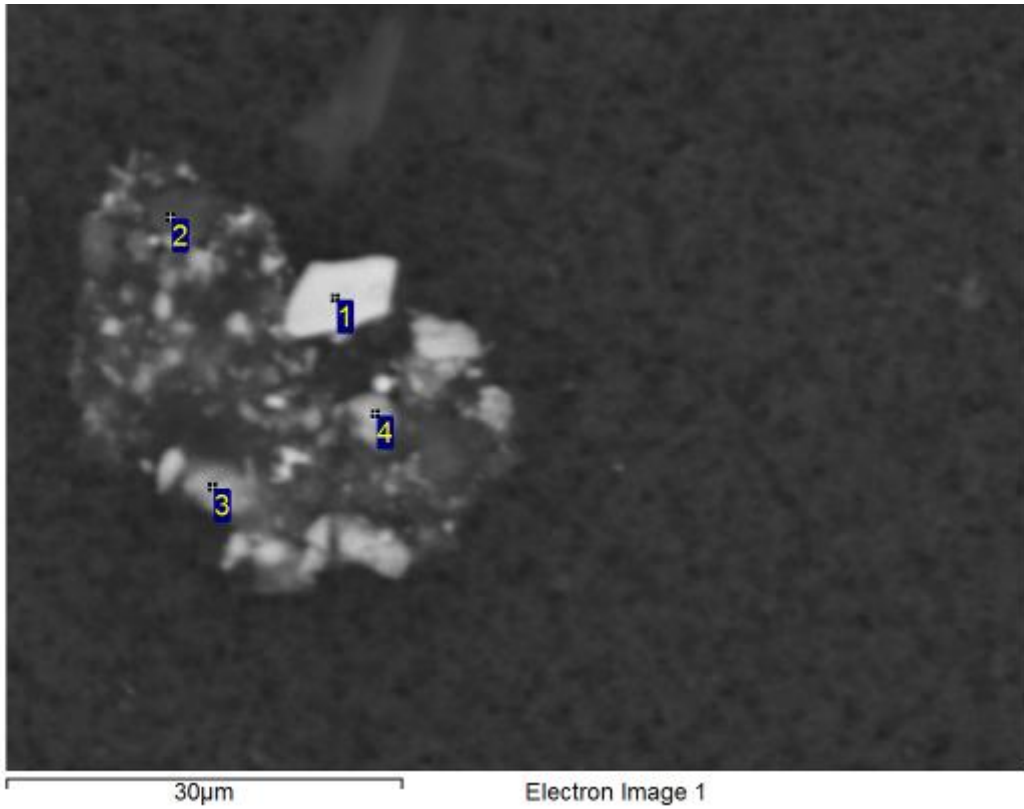
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Fe	Total	Mineral ID
2	39.5	60.5	100.0	Fe Oxide

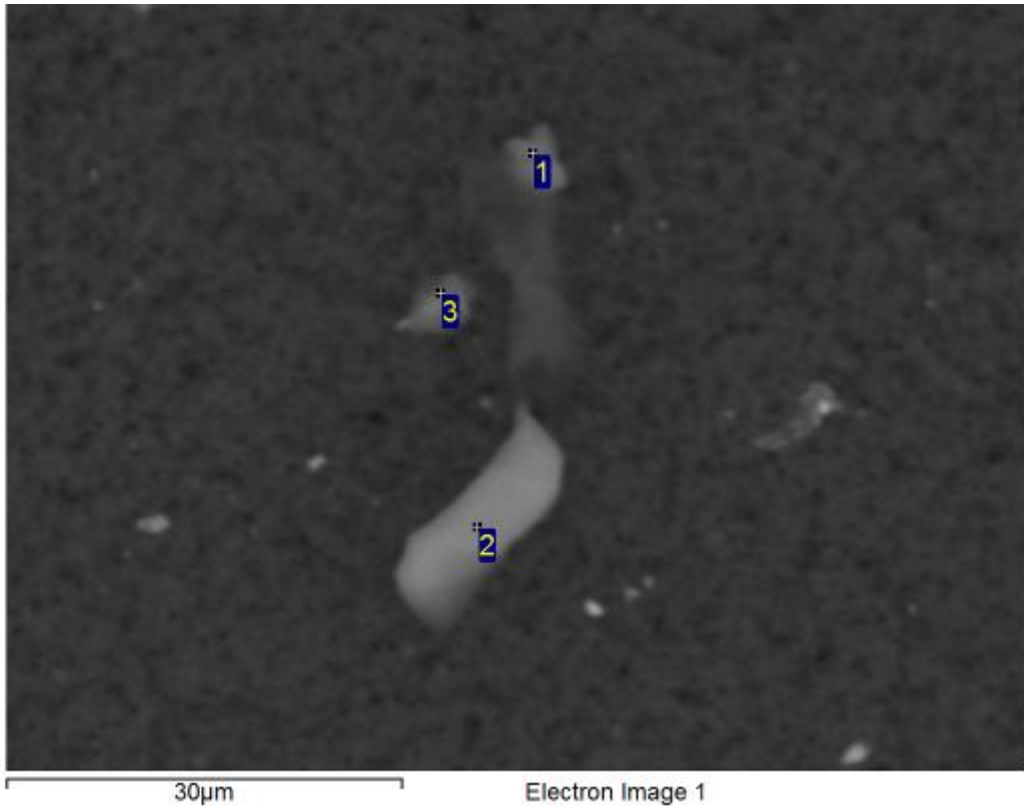
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	K	Mn	Fe	Total	Mineral ID
1	41.4						58.6	100.0	Fe Oxide
2	70.9	0.8	10.2	12.4	3.2		2.5	100.0	Mica/Organic
3	43.7		0.4	0.6			55.3	100.0	Fe Oxide
4	42.1		1.6	1.0		0.3	55.0	100.0	Fe Oxide/Kaolinite

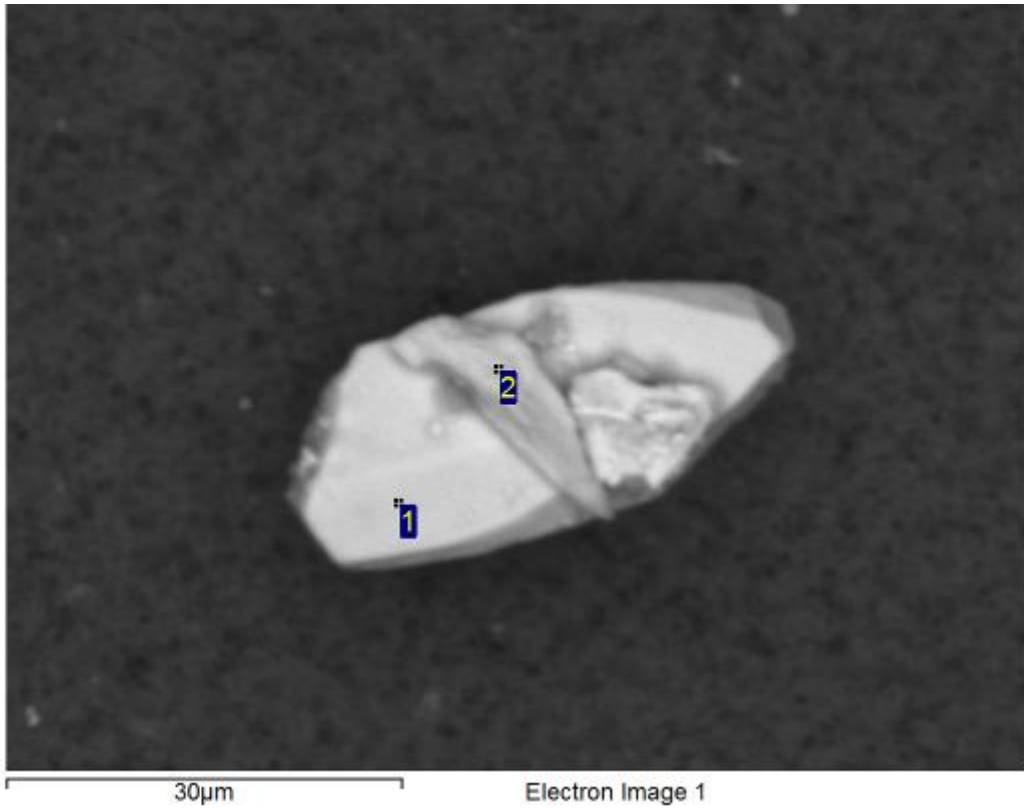
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Fe	Total	Mineral ID
1	53.9			46.1				100.0	Gibbsite
2	60.6	0.4	0.4	13.3	17.0	6.1	2.2	100.0	Mica
3	67.2	0.6	0.4	12.2	14.8	3.4	1.3	100.0	Mica

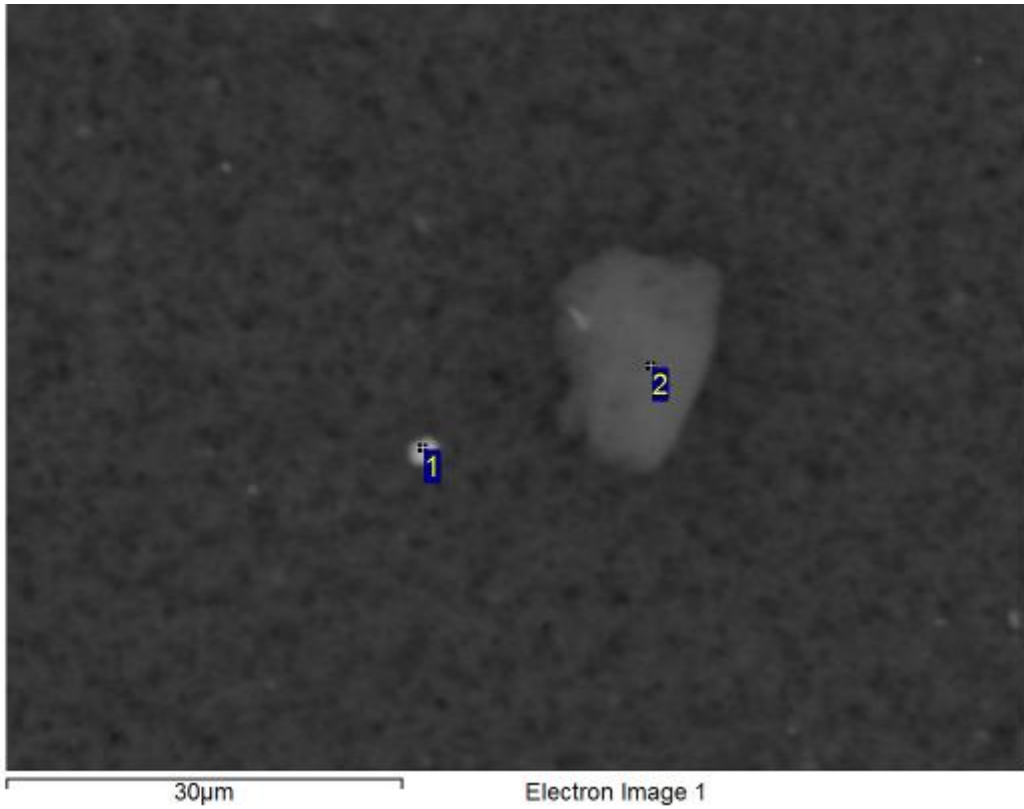
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	24.4			75.6	100.0	Fe Oxide
2	41.3	0.9	1.5	56.3	100.0	Fe Oxide

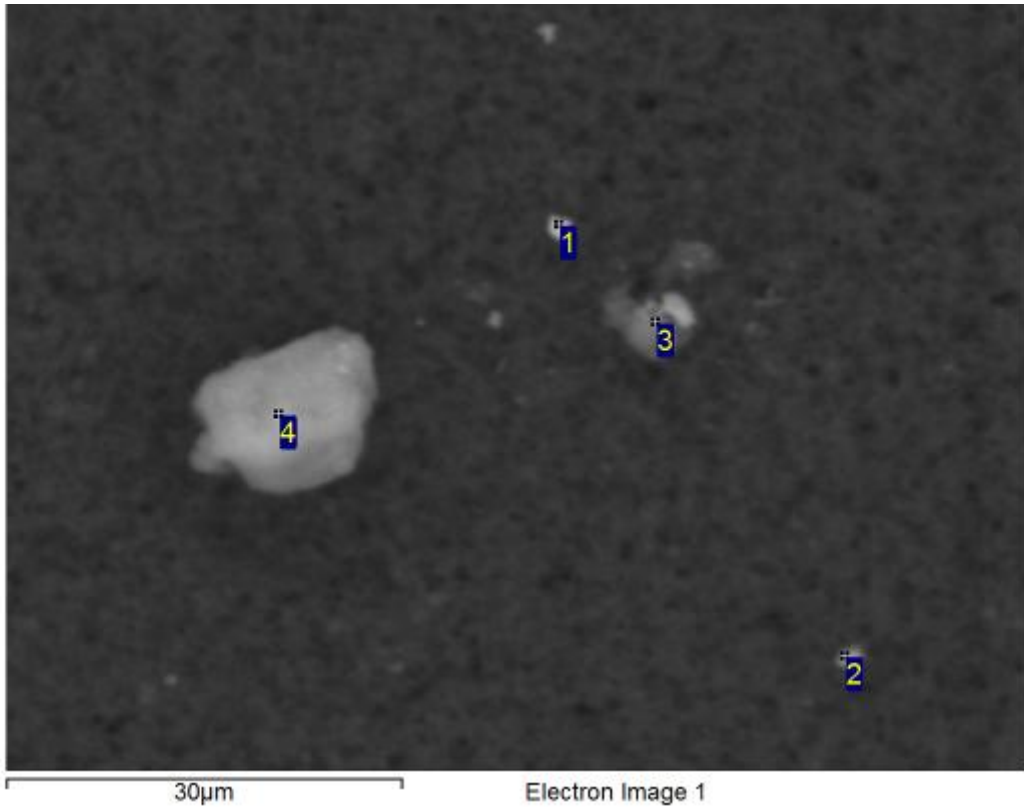
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Ca	Mn	Fe	Total	Mineral ID
1	50.0	1.5	2.5		0.5	45.5	100.0	Fe Oxide
2	72.1		27.7	0.2			100.0	Opal

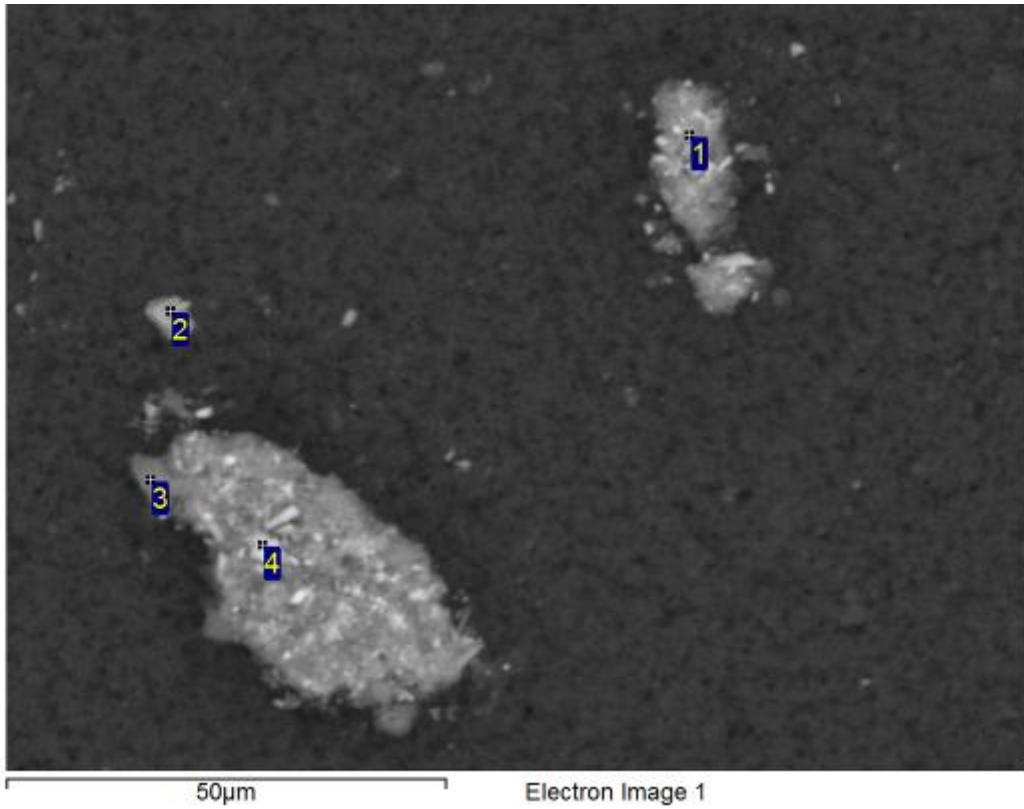
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	S	Cl	K	Ca	Fe	Total	Mineral ID
1	44.3	0.6	1.8	1.9		0.4			51.0	100.0	Fe Oxide
2	56.3		0.6	1.2					41.9	100.0	Fe Oxide
3	53.8	5.2	8.6	20.4	0.2		0.4	1.3	10.1	100.0	Feldspar/Fe Oxide
4	9.9	33.7				56.5				100.0	Halite

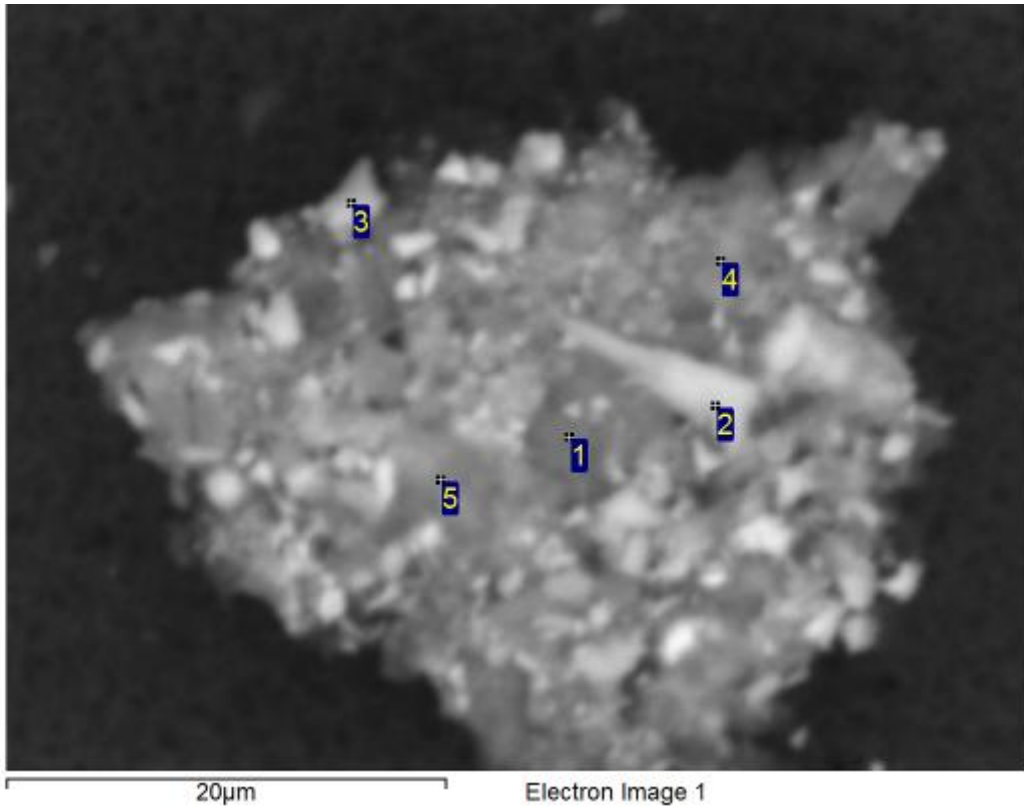
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	52.1		6.4	9.2		0.4	4.0	28.0	100.0	Fe Oxide/Kaolinite
2	46.2		1.4	0.8				51.5	100.0	Fe Oxide
3	64.1	0.3	13.2	14.0		1.9		6.5	100.0	Kaolinite/Mica/Fe Oxide
4	45.0		3.5	3.6	0.5	0.2	0.7	46.5	100.0	Fe Oxide

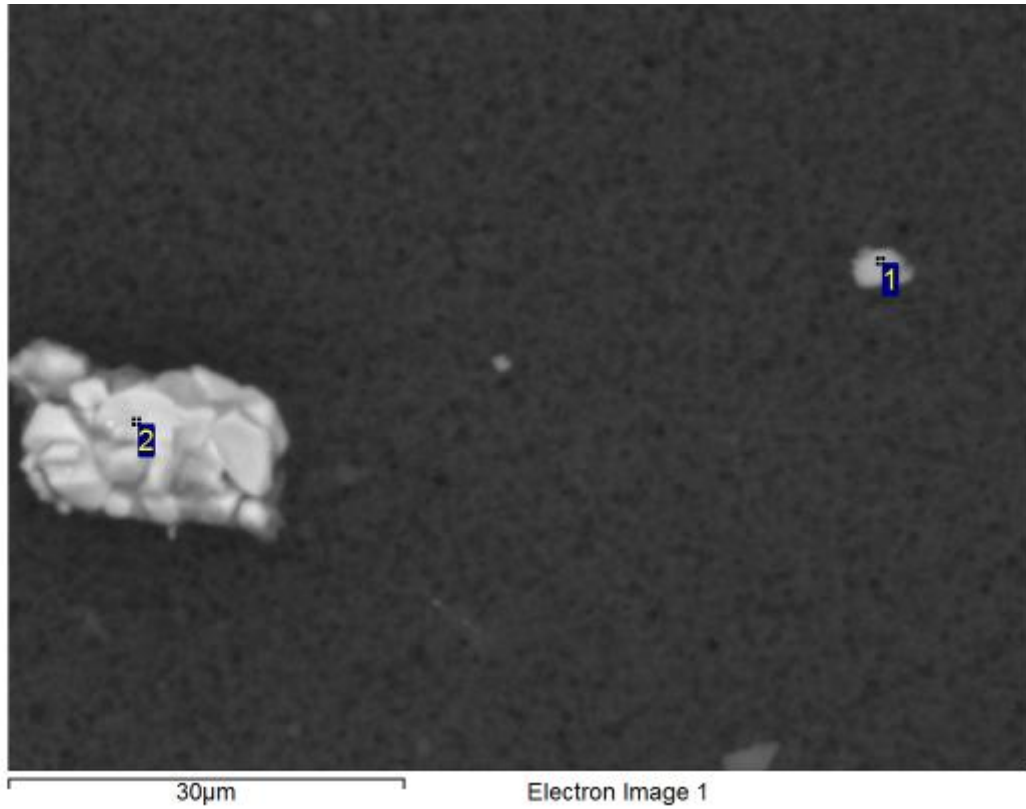
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	54.1		9.4	9.1	1.3	1.1	0.4	1.6	23.0	100.0	Fe Oxide/Mica/Kaolinite
2	44.0		3.5	3.0	0.2	0.3			48.9	100.0	Fe Oxide
3	59.6		4.3	4.4	0.4				31.3	100.0	Fe Oxide/Kaolinite
4	58.6		10.5	10.7	0.9			0.5	18.8	100.0	Fe Oxide/Kaolinite
5	48.5	0.4	9.2	8.4	1.0			1.1	31.4	100.0	Fe Oxide/Mica/Kaolinite

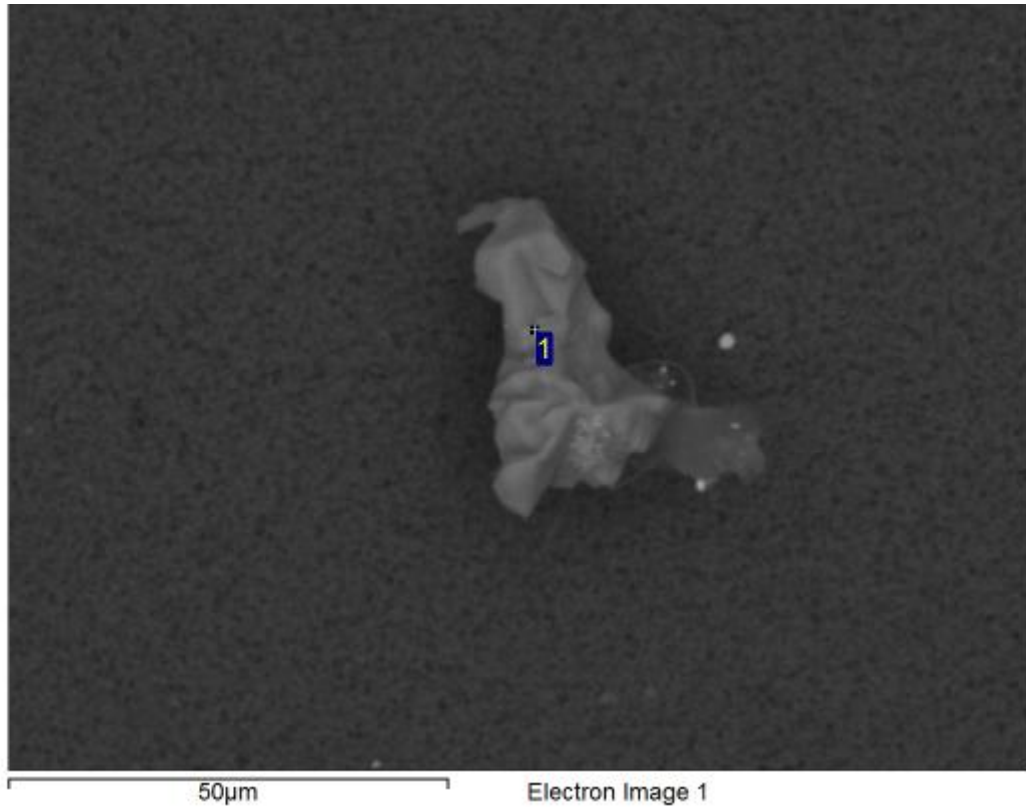
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	54.9	4.1	2.2	38.8	100.0	Fe Oxide/Kaolinite
2	39.5			60.5	100.0	Fe Oxide

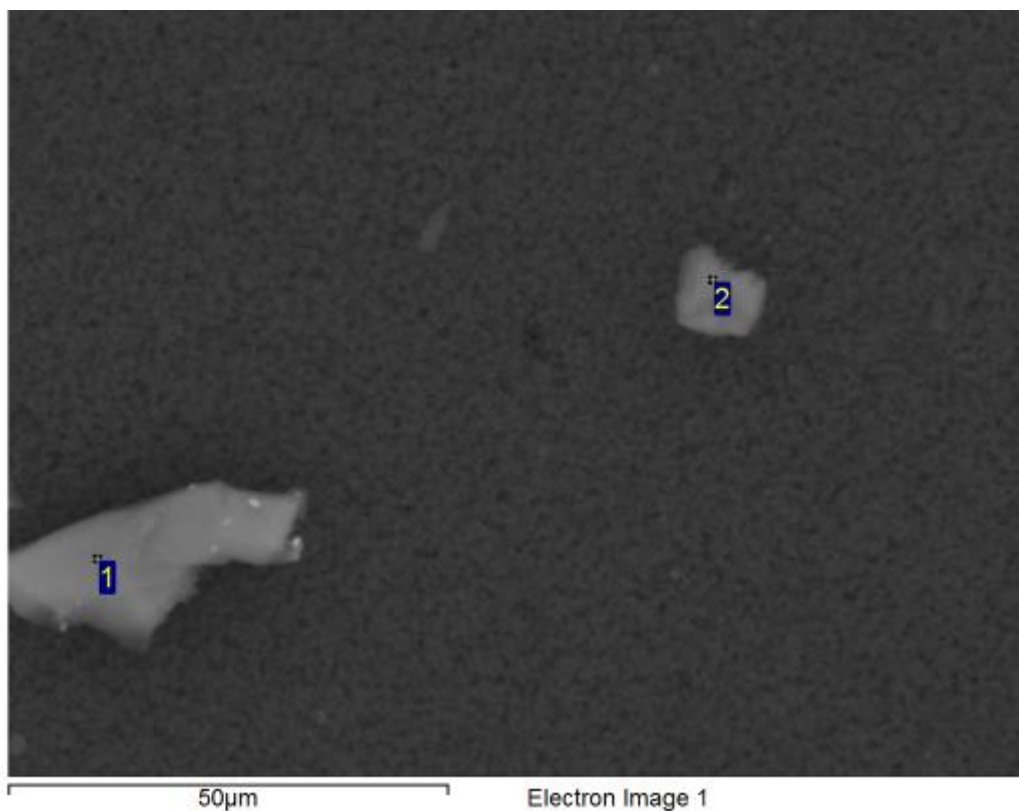
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Si	Total	Mineral ID
1	59.0	41.0	100.0	Quartz

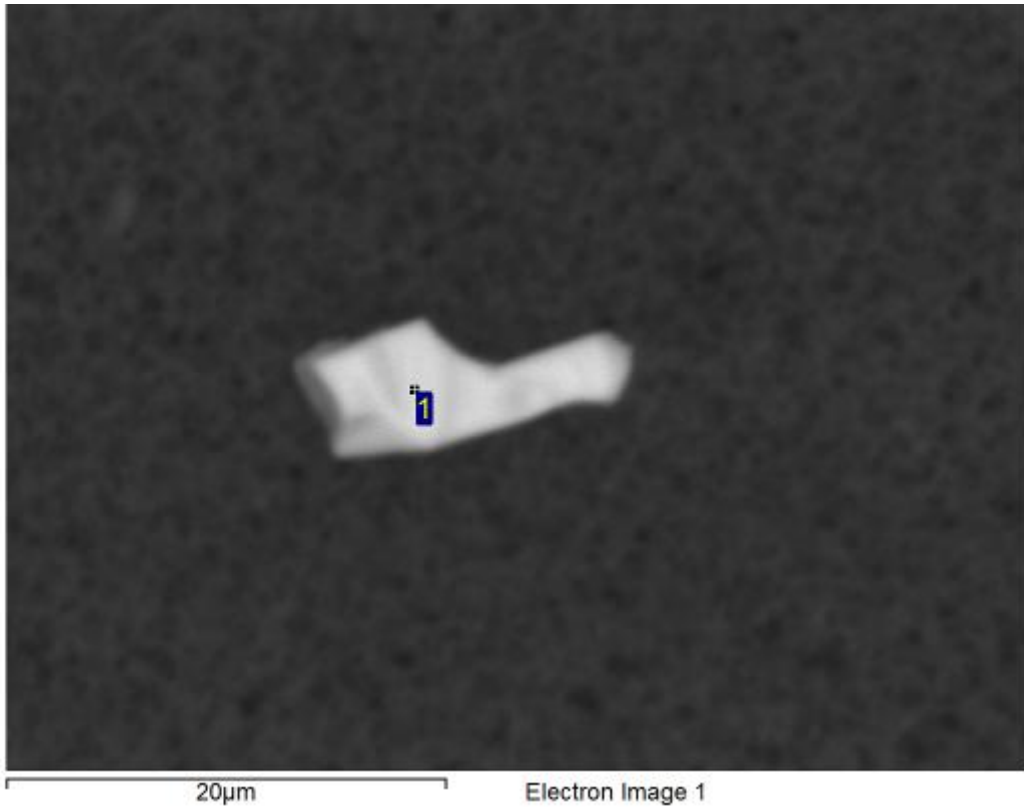
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Fe	Total	Mineral ID
1	55.8	0.3	0.6	15.0	20.8	6.4	1.1	100.0	Mica
2	62.7		15.3		21.5		0.5	100.0	Pyroxene

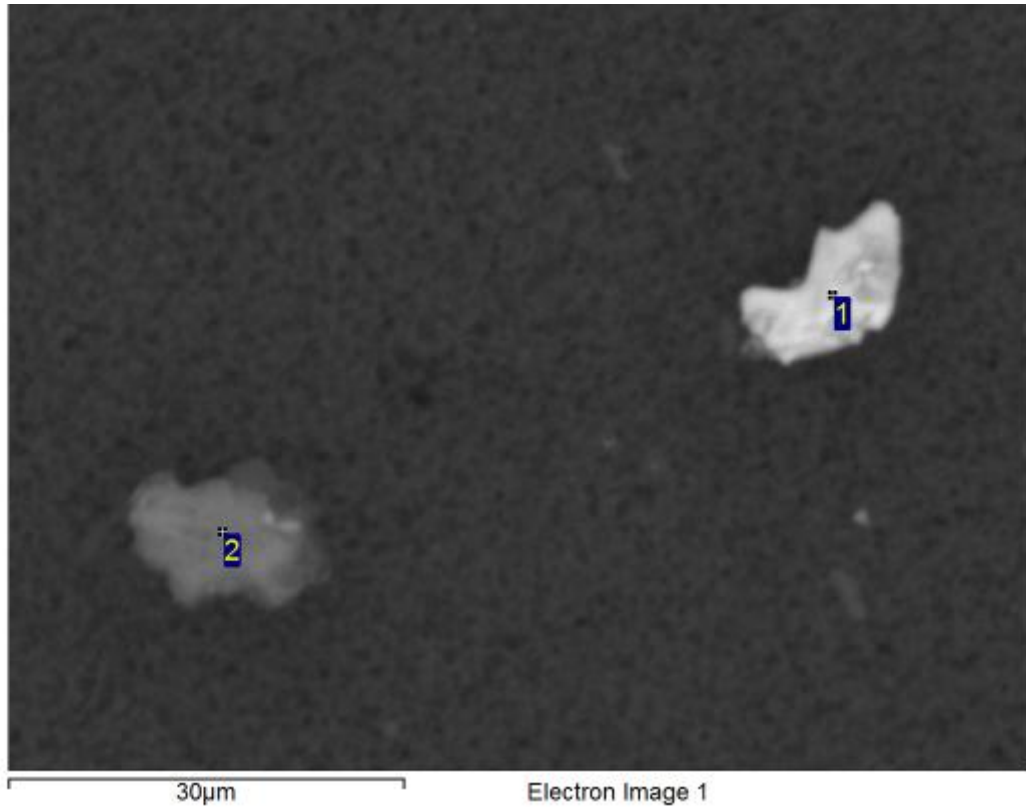
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Fe	Total	Mineral ID
1	33.2	66.8	100.0	Fe Oxide

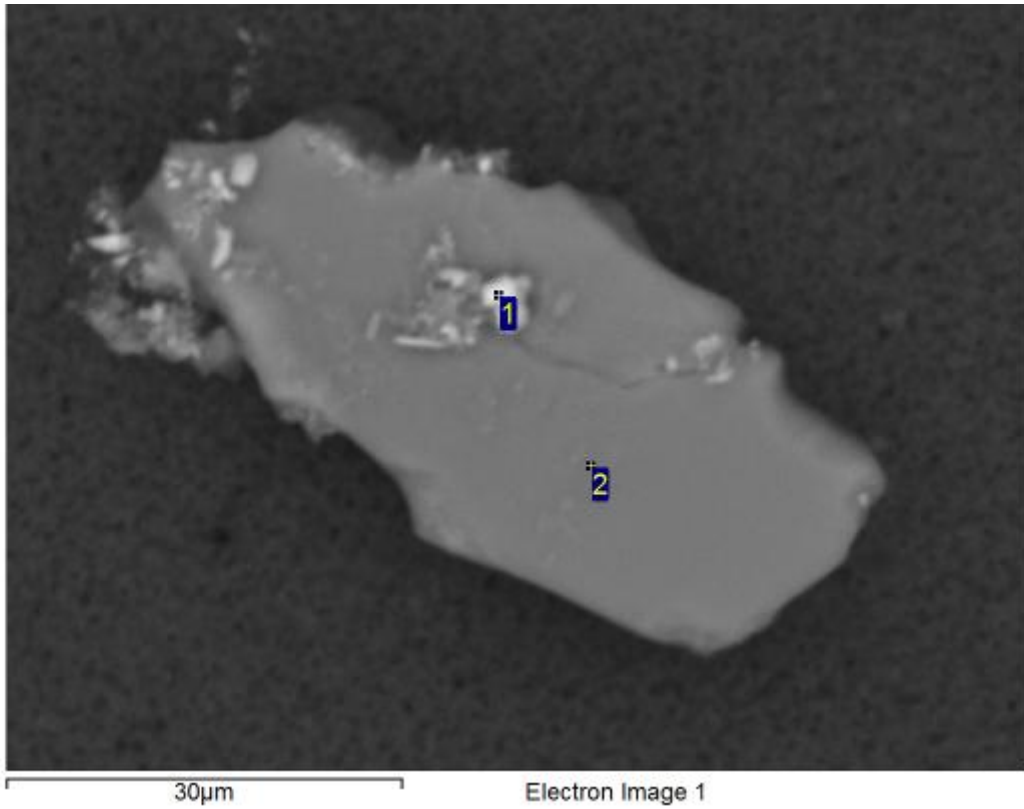
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	43.9			56.1	100.0	Fe Oxide
2	64.2	16.6	18.1	1.1	100.0	Kaolinite

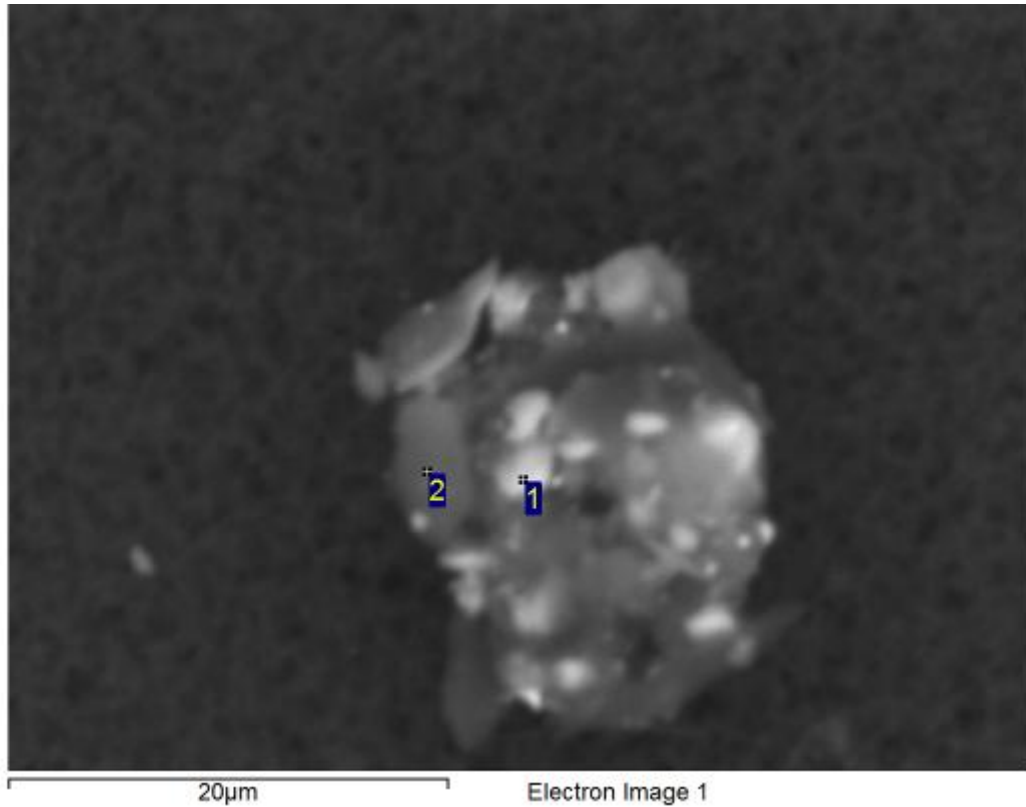
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Fe	Total	Mineral ID
1	49.8	0.4	4.9	5.1	0.9	38.9	100.0	Fe Oxide/Kaolinite
2	53.1	1.3	13.4	20.8	7.7	3.6	100.0	Mica

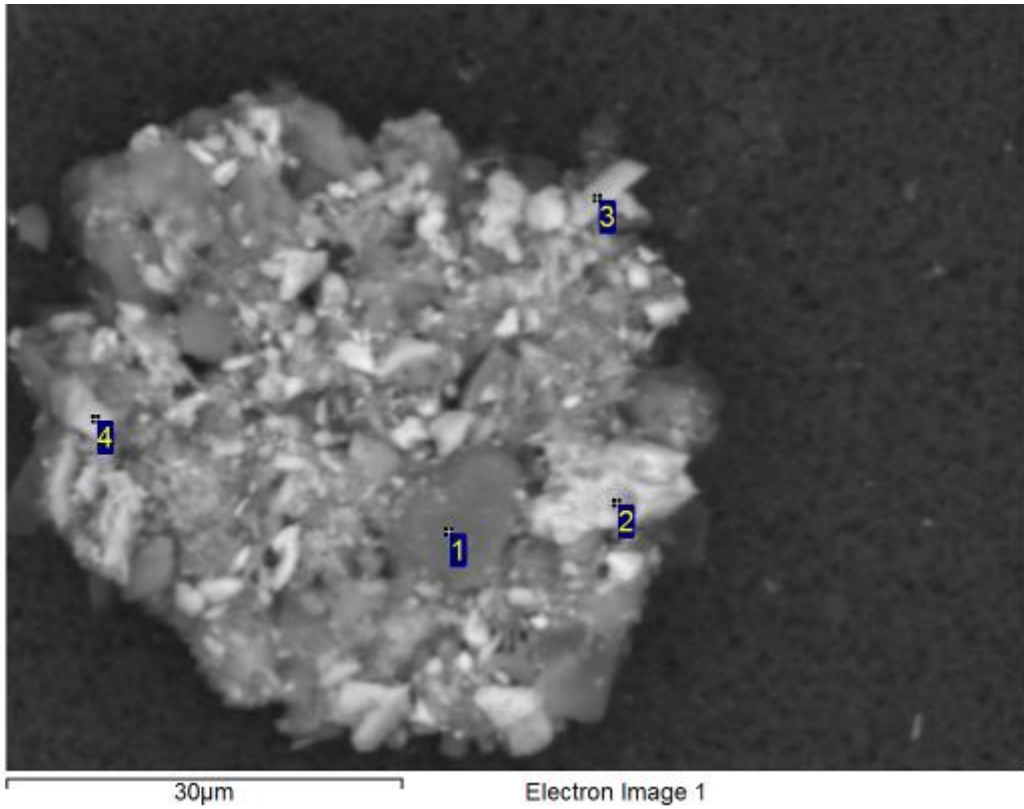
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	S	Ca	Mn	Fe	Total	Mineral ID
1	28.3	4.5	2.1	6.7	0.5	0.5	2.0	1.2	54.2	100.0	Fe Oxide
2	65.1	0.3	1.0	31.0			0.6		2.1	100.0	Quartz

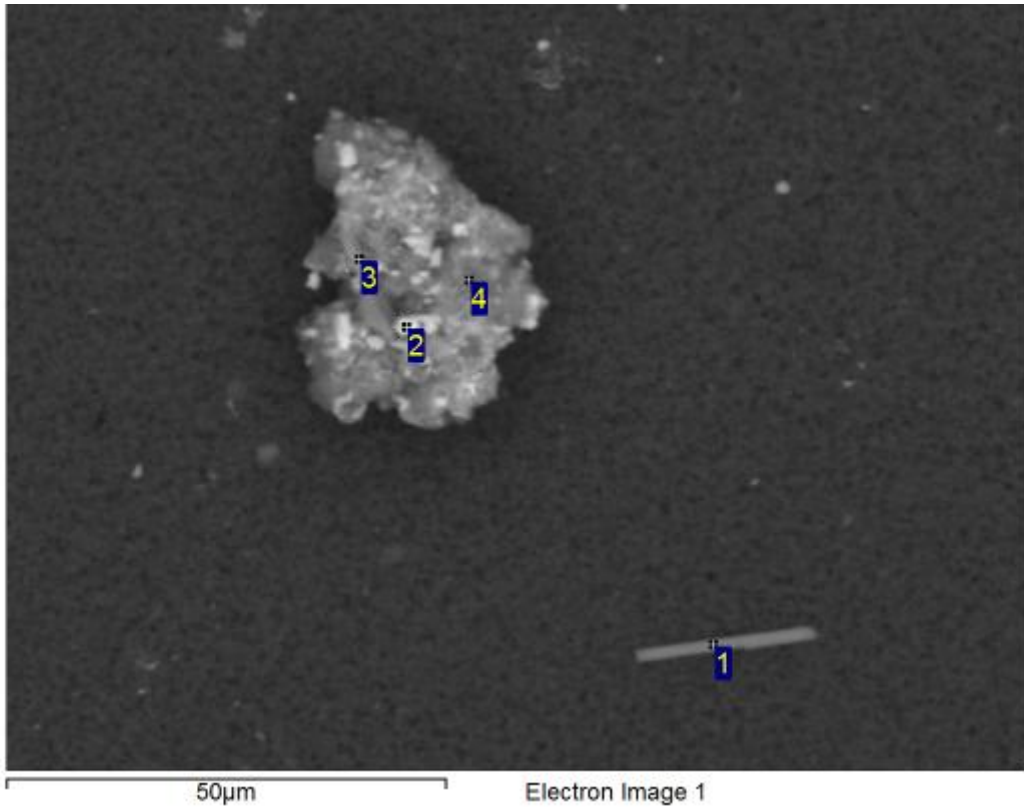
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Fe	Total	Mineral ID
1	52.0		47.1		0.9	100.0	Quartz
2	33.1	0.4	0.6		65.8	100.0	Fe Oxide
3	53.8	2.4	2.1		41.7	100.0	Fe Oxide
4	51.6	3.1	4.2	0.4	40.7	100.0	Fe Oxide

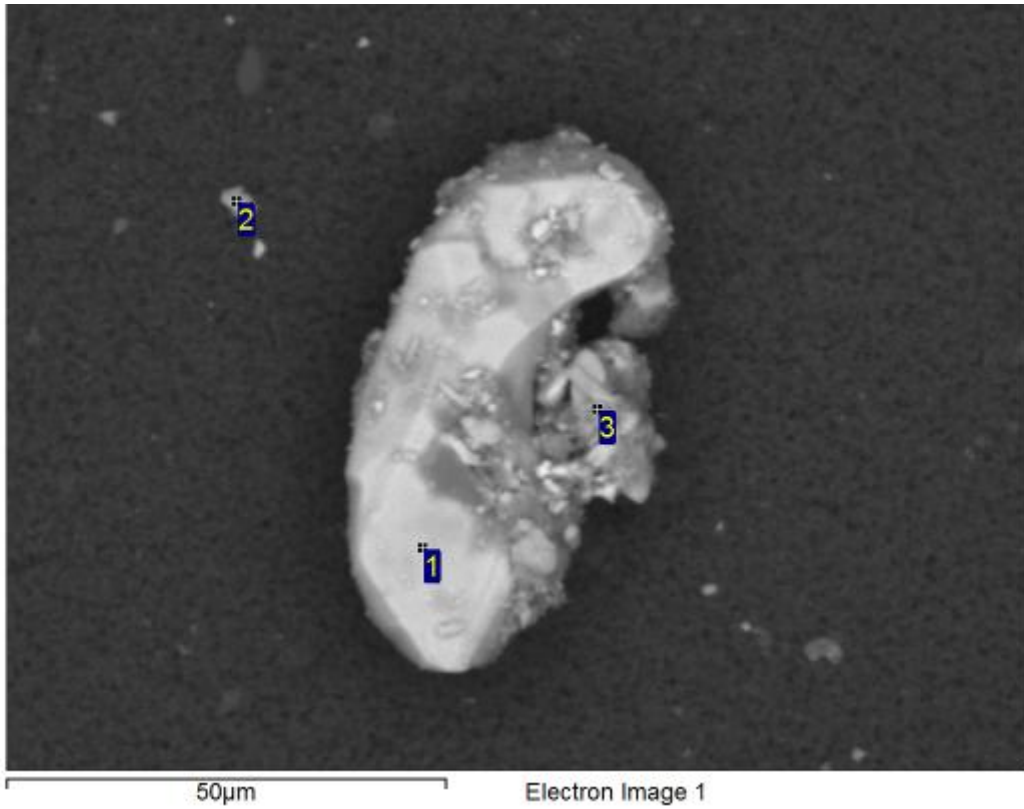
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Zn	Ba	Total	Mineral ID
1	66.9	6.0		2.3	18.0	1.3	0.7			0.5	2.0	2.3	100.0	Unknown
2	47.0			3.3	3.0	0.6				46.1			100.0	Fe Oxide
3	55.5		0.9	10.4	15.3	4.5			0.4	13.0			100.0	Mica/Kaolinite/Fe Oxide
4	52.1			10.5	10.5	0.5		0.2	0.6	25.7			100.0	Fe Oxide/Kaolinite

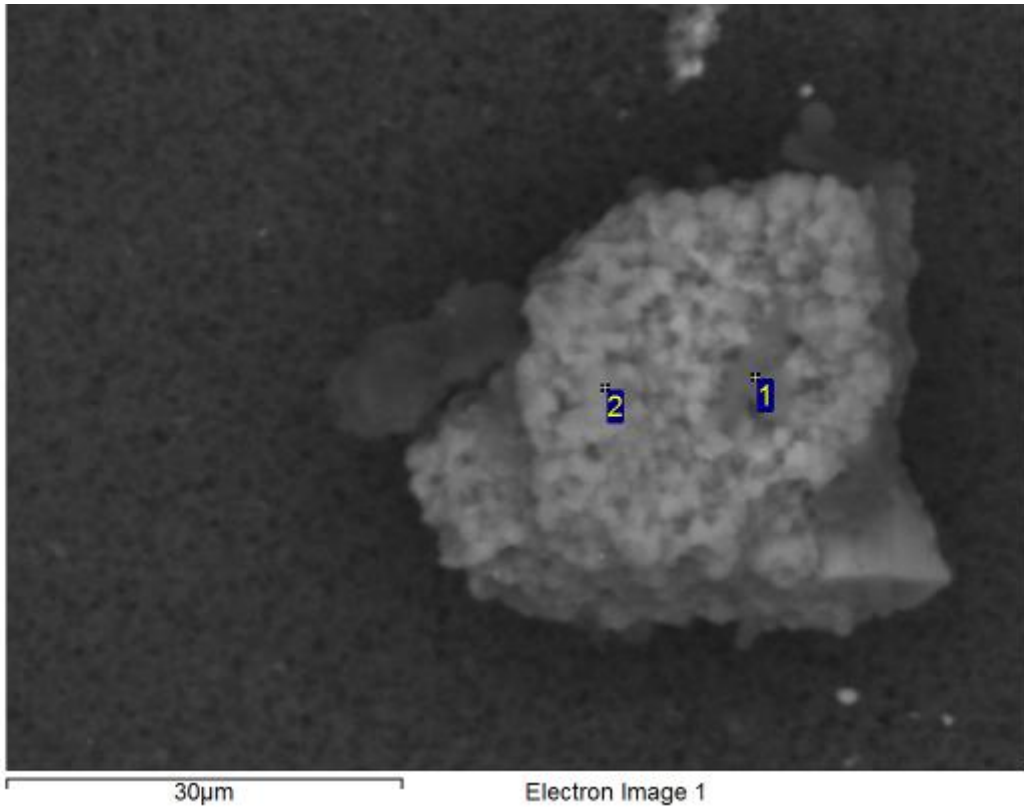
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	Fe	Total	Mineral ID
1	33.4	2.6	2.4		61.6	100.0	Fe Oxide
2	46.2	1.9	1.9	0.3	49.7	100.0	Fe Oxide
3	50.6	2.9	2.6		43.9	100.0	Fe Oxide

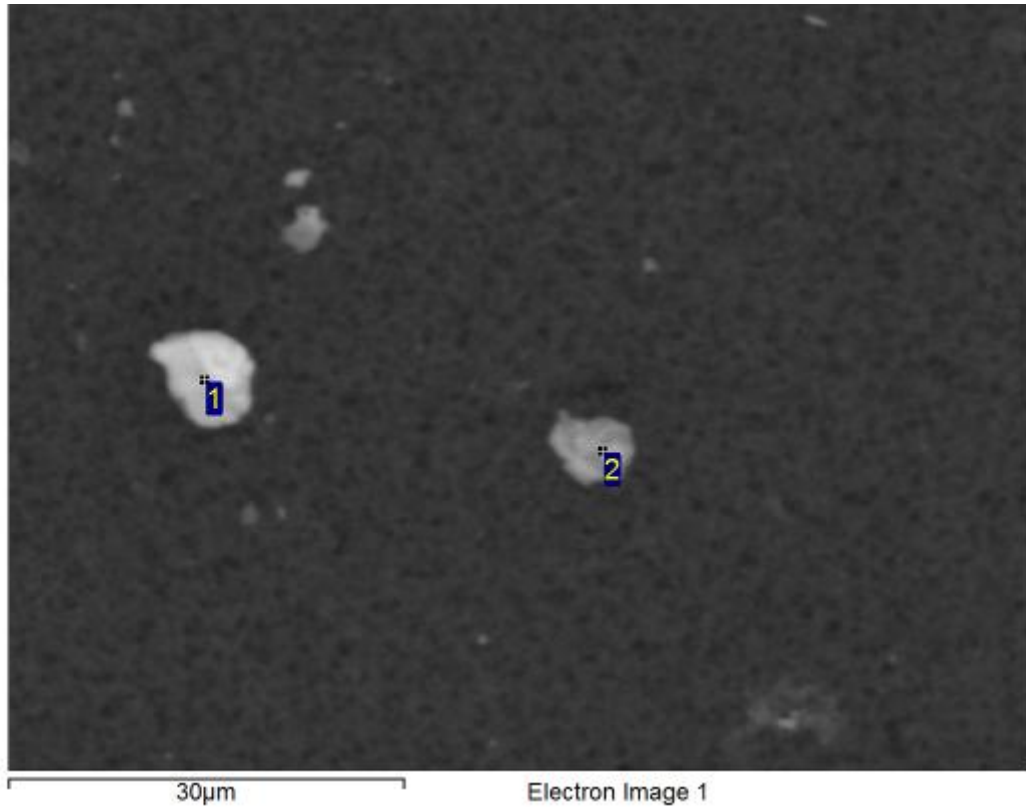
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	Cl	K	Ca	Fe	Total	Mineral ID
1	63.8	0.5	1.5	3.6	6.3	0.3	1.0	22.3	0.6	100.0	Calcite/Silicate
2	56.9		0.8	0.7	1.4		0.2	39.9		100.0	Calcite

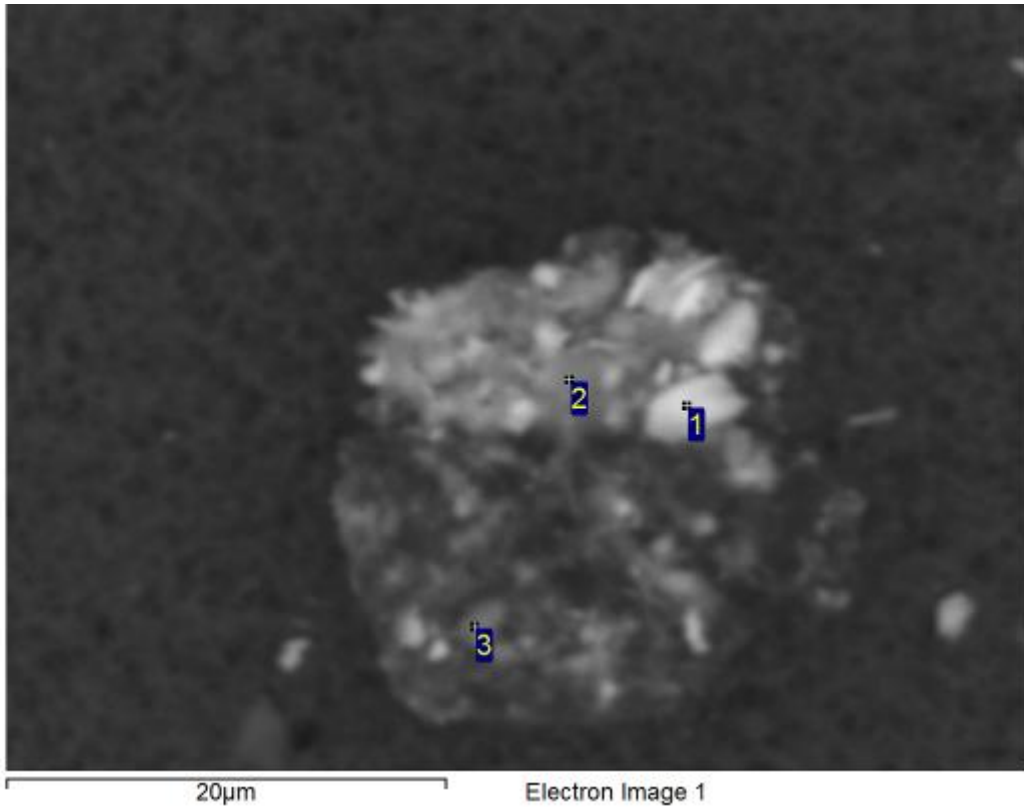
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Mn	Fe	Total	Mineral ID
1	34.9				65.1	100.0	Fe Oxide
2	55.7	2.1	1.3	0.8	40.1	100.0	Fe Oxide

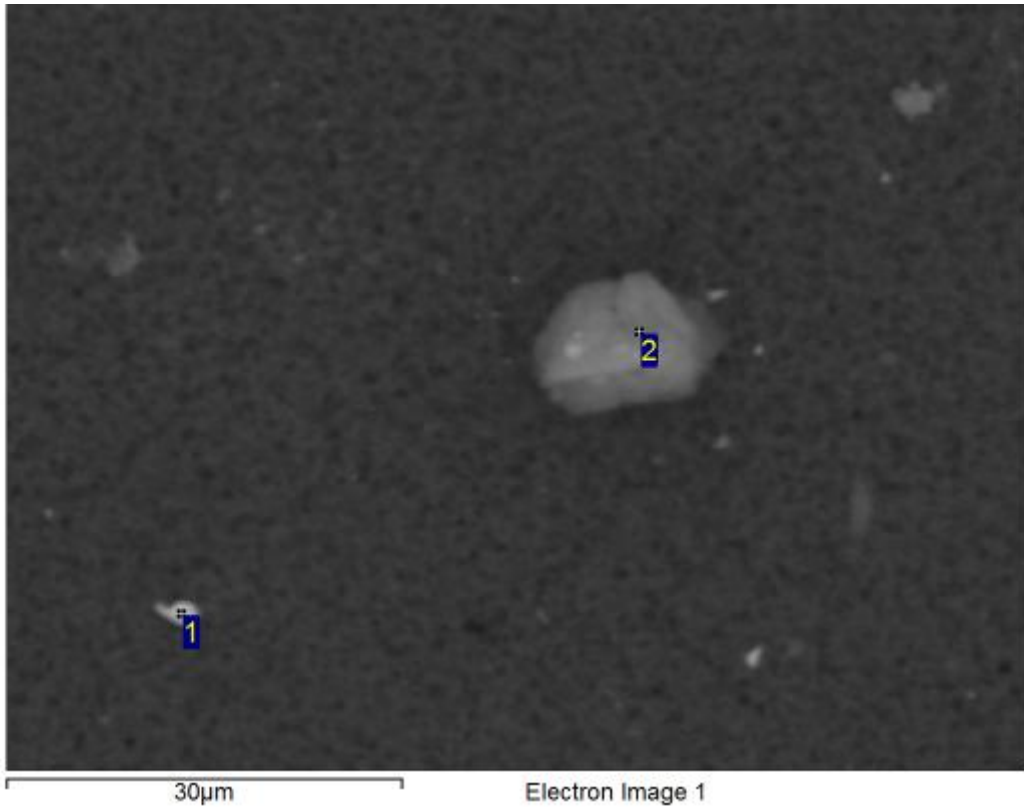
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	Ti	Fe	Total	Mineral ID
1	50.6	2.7	4.1	0.4	0.2	42.0	100.0	Fe Oxide
2	55.8	2.6	24.5			17.1	100.0	Quartz/Fe Oxide
3	72.0	6.7	8.8			12.5	100.0	Kaolinite/Fe Oxide

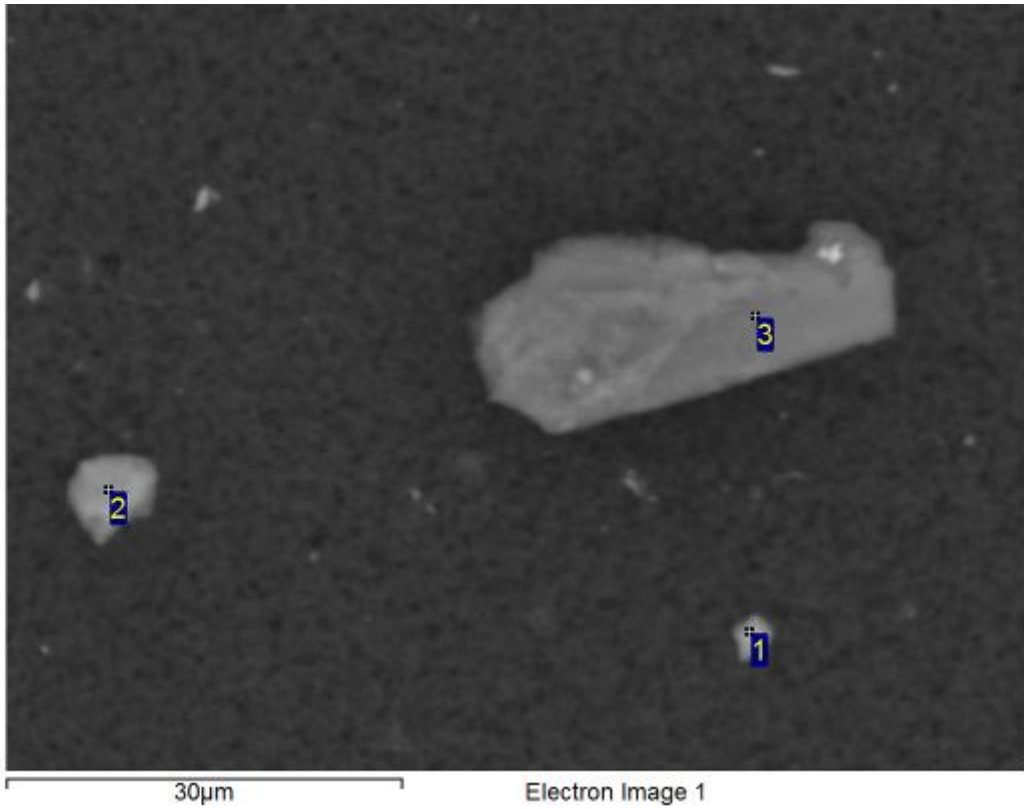
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	48.8		1.3	2.0				0.4	47.5	100.0	Fe Oxide
2	59.1	0.5	14.5	15.3	2.8	0.3	0.3		7.2	100.0	Mica/Kaolinite/Fe Oxide

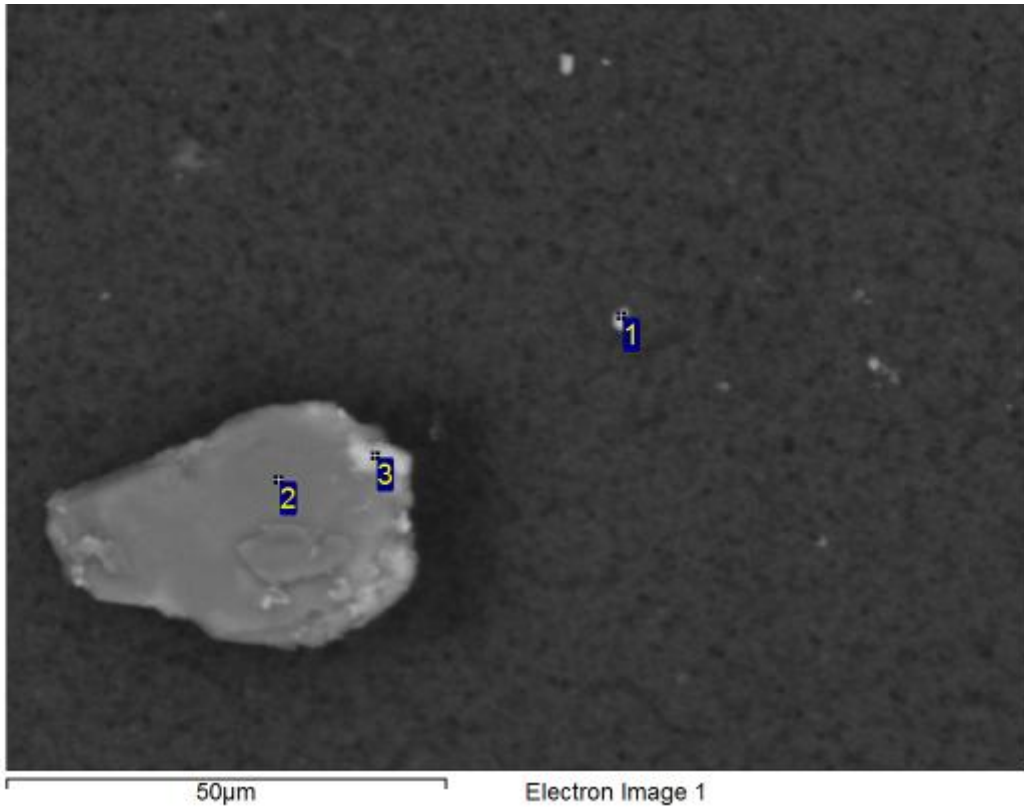
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ca	Ti	Fe	Total	Mineral ID
1	59.9		6.9	0.8	0.3			0.2	31.8	100.0	Fe Oxide/Kaolinite
2	38.3		3.9	0.9			1.0		56.0	100.0	Fe Oxide
3	54.4	0.7	14.5	19.1		6.6		0.3	4.4	100.0	Mica

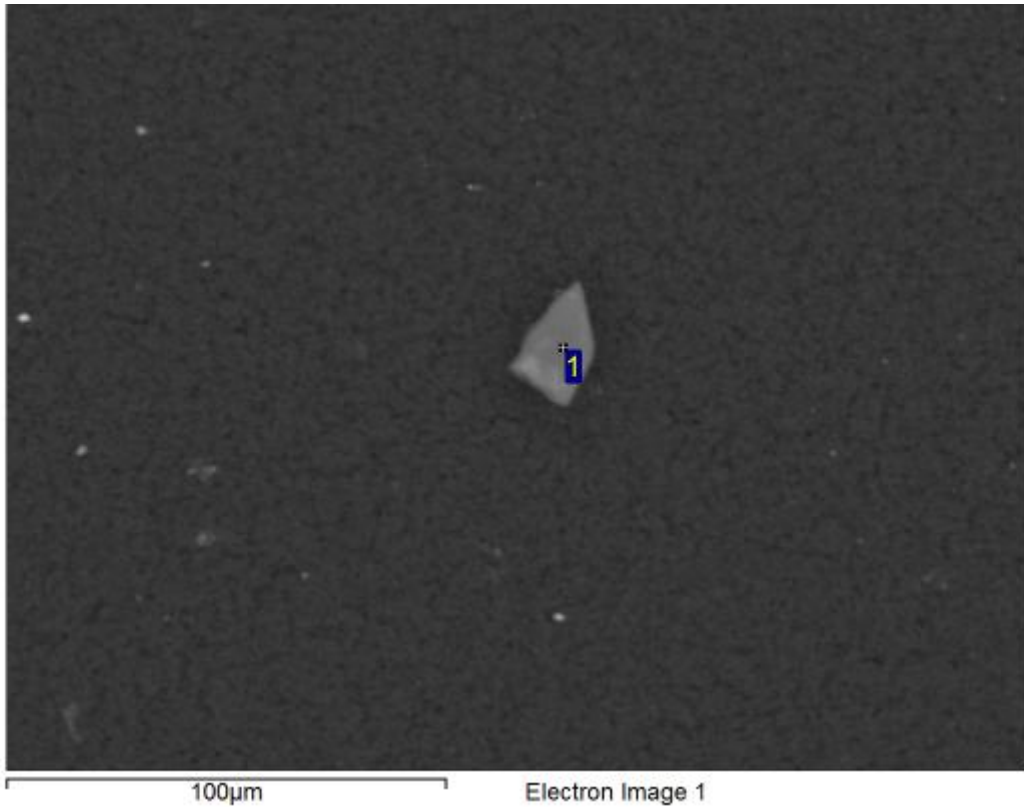
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ca	Fe	Total	Mineral ID
1	53.6			0.5	0.8			45.1	100.0	Fe Oxide
2	54.5	0.2	0.5	17.4	21.9	3.8		1.7	100.0	Mica
3	48.2			7.2	8.1	1.6	0.3	34.6	100.0	Fe Oxide/Kaolinite/Mica

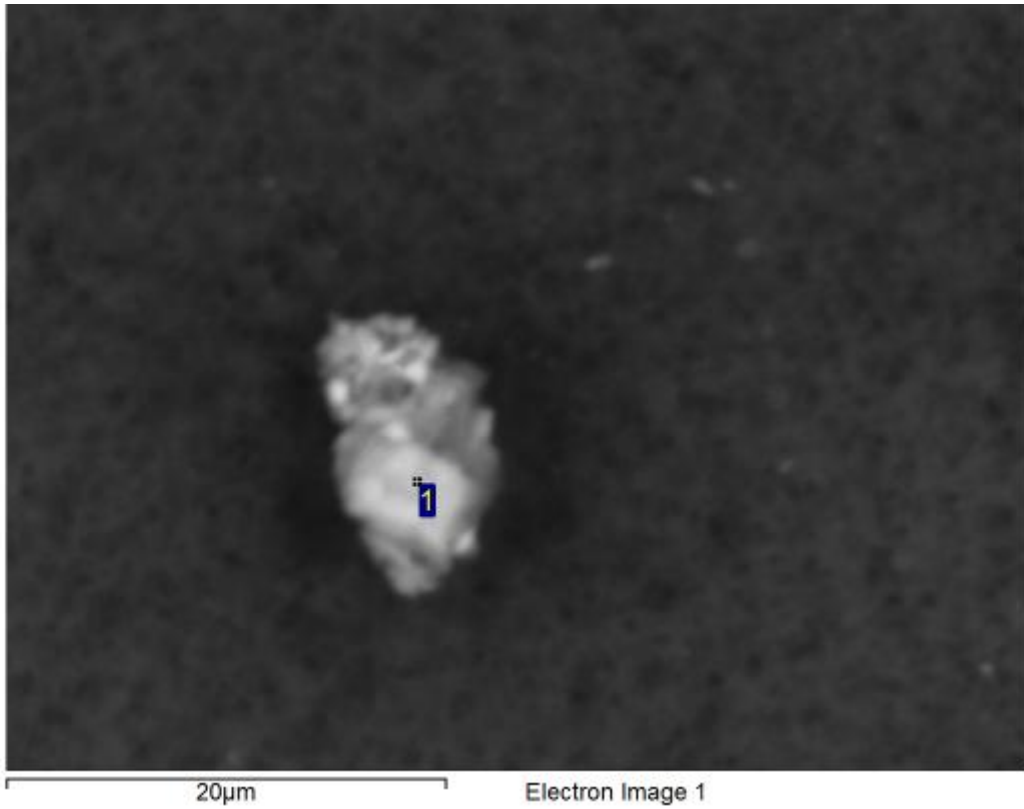
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Fe	Total	Mineral ID
1	64.7	0.9	11.2	15.9	5.1	2.2	100.0	Mica

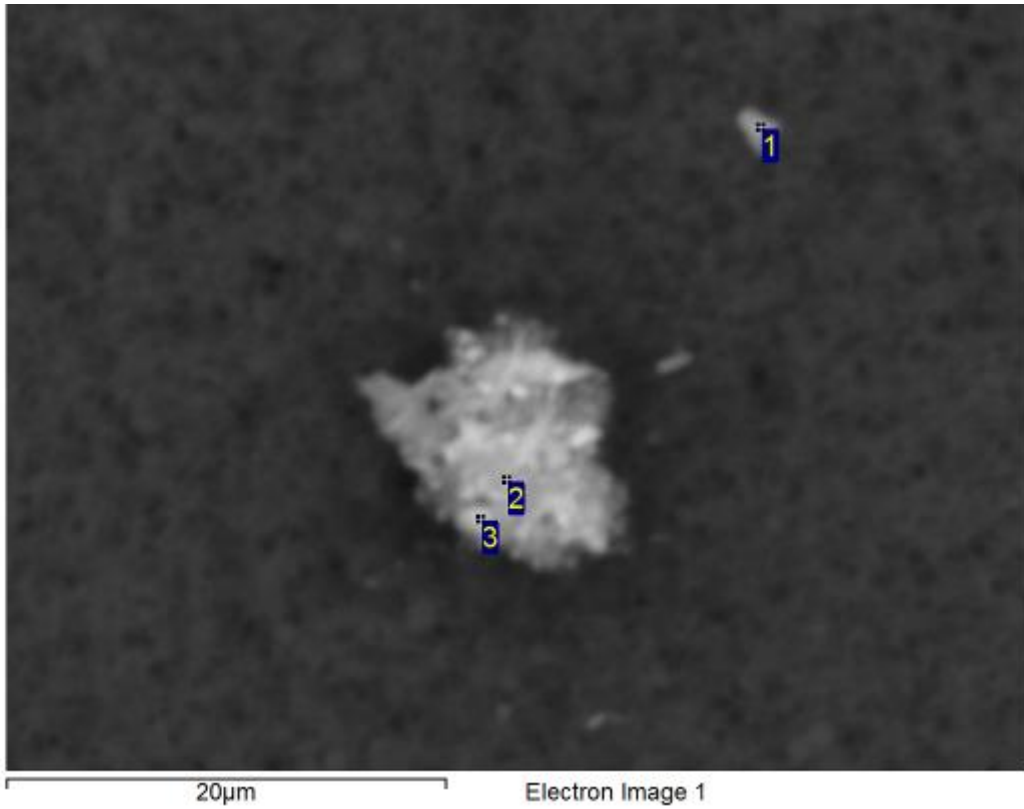
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	40.0	0.9	2.9	56.2	100.0	Fe Oxide

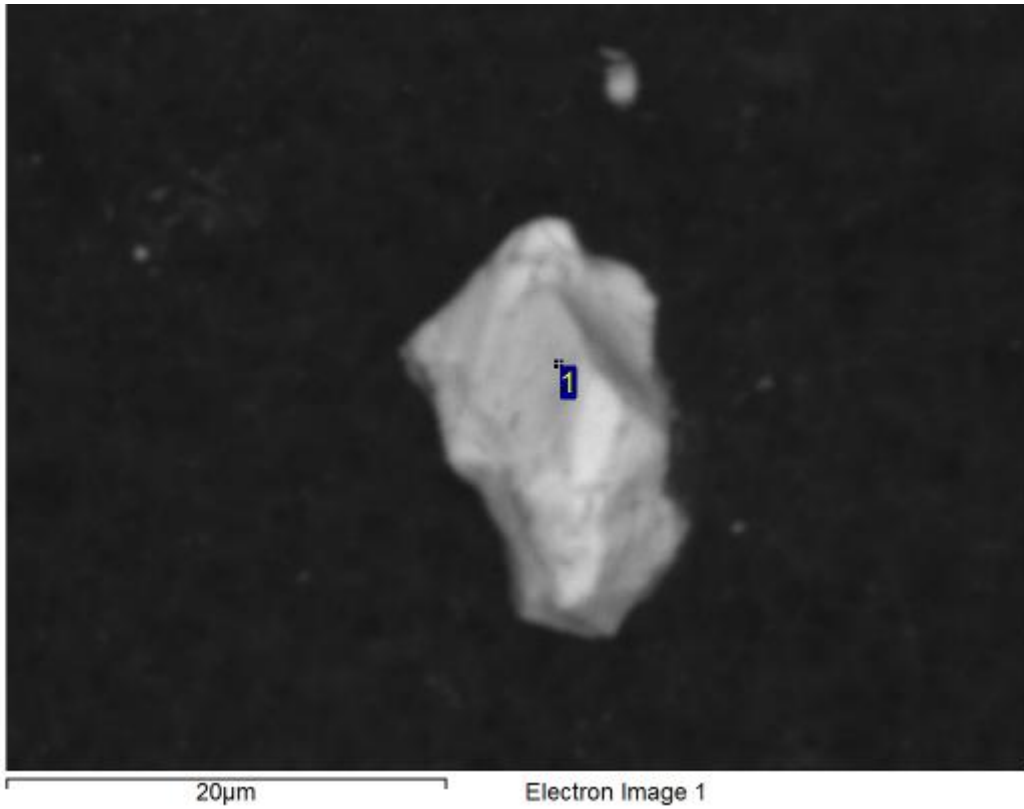
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Ti	Fe	Total	Mineral ID
1	53.3	1.9	1.8		43.0	100.0	Fe Oxide
2	51.8	5.3	4.4	1.5	37.0	100.0	Fe Oxide/Kaolinite
3	50.5	2.0	3.1		44.4	100.0	Fe Oxide

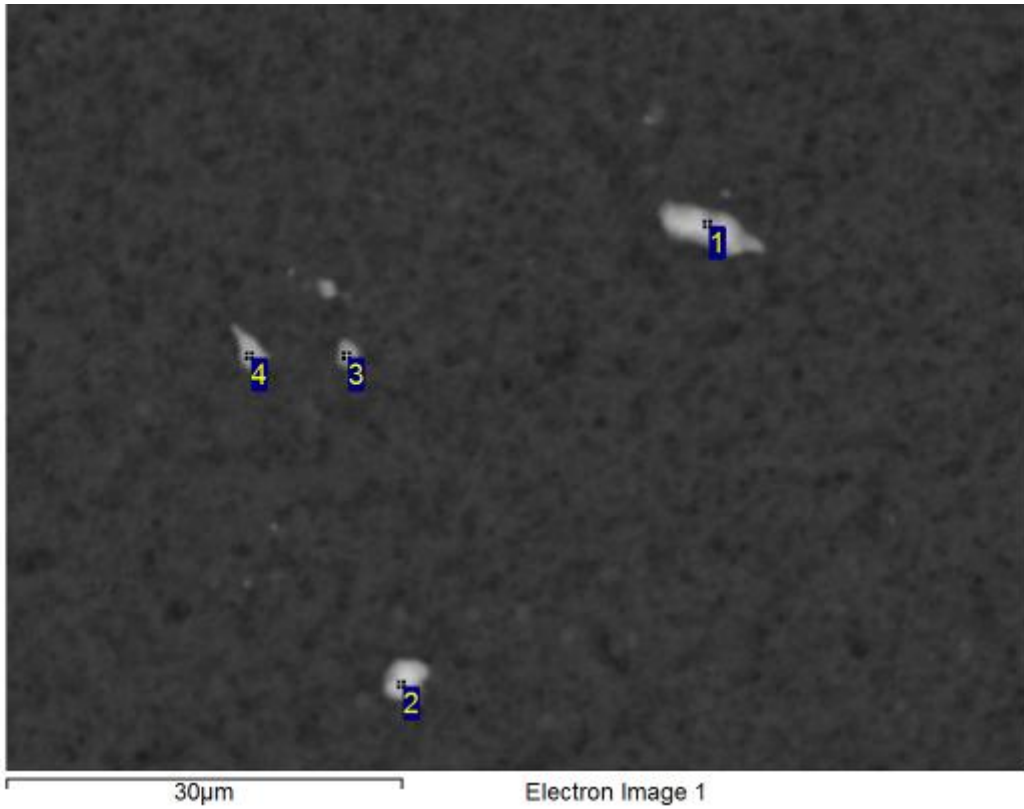
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Fe	Total	Mineral ID
1	47.1	52.9	100.0	Fe Oxide

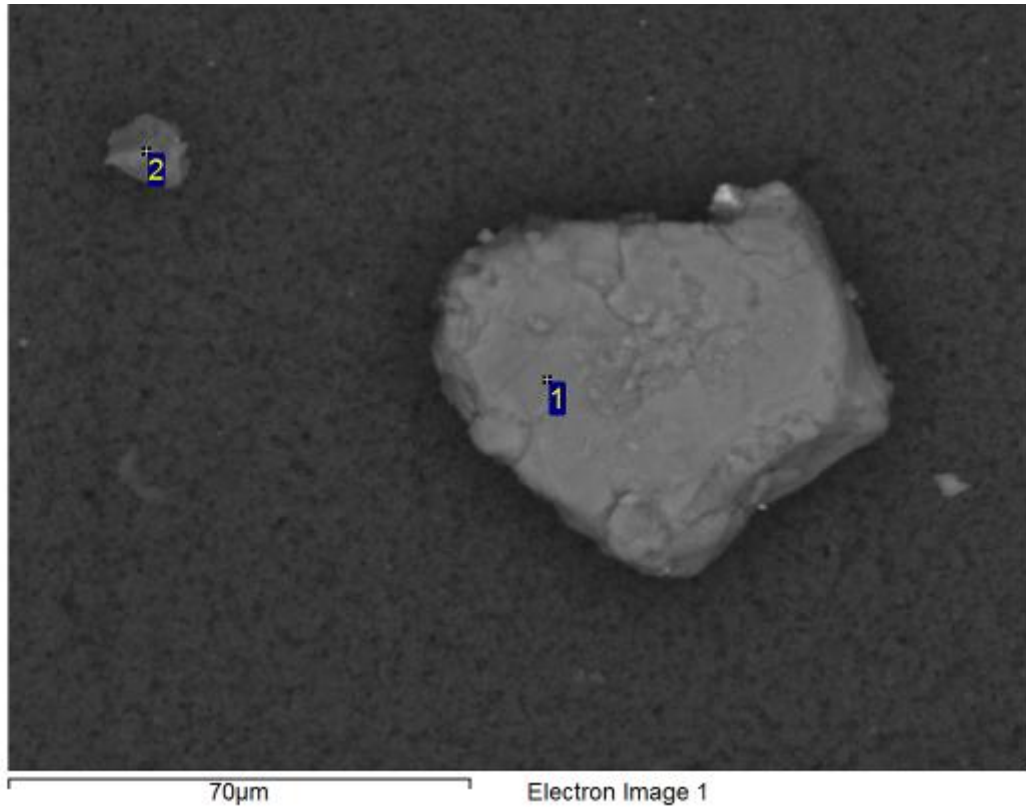
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	Ca	Mn	Fe	Total	Mineral ID
1	42.6	1.1	1.5			0.3	54.5	100.0	Fe Oxide
2	46.7	1.4	1.9	0.3	0.2	0.8	48.6	100.0	Fe Oxide
3	55.1	0.5	1.6				42.7	100.0	Fe Oxide
4	43.6	0.8	1.5				54.1	100.0	Fe Oxide

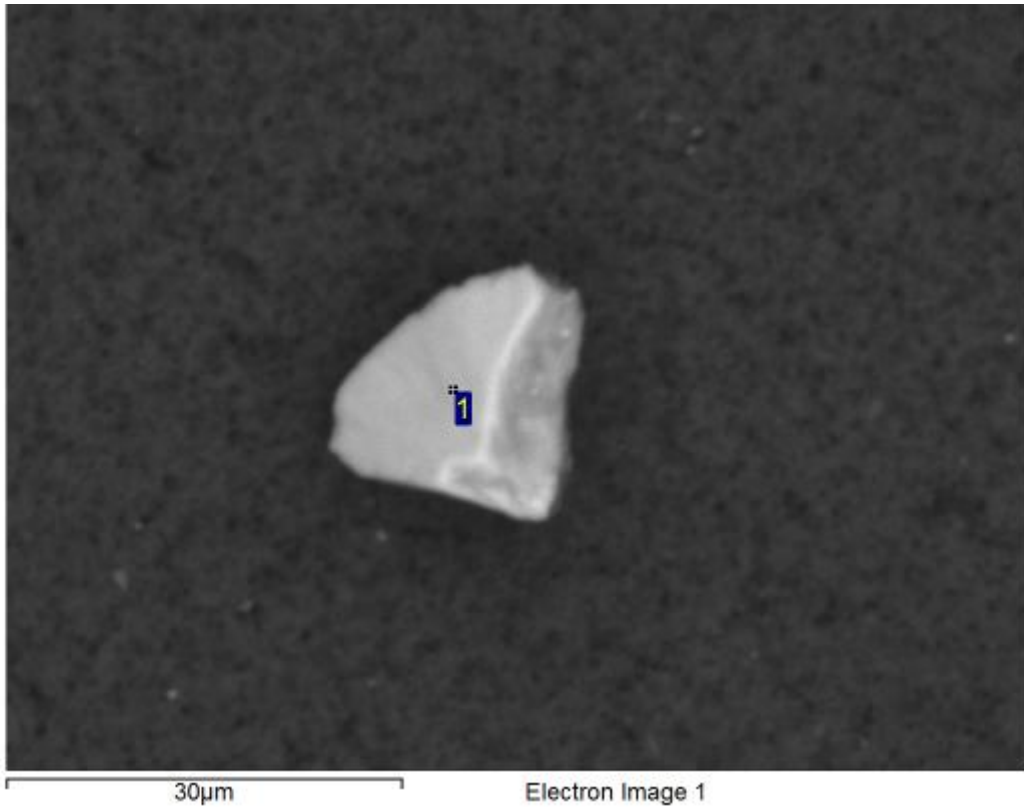
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	S	K	Ti	Fe	Total	Mineral ID
1	46.3	0.8	16.5	21.7		11.4	0.5	2.9	100.0	Mica/Kaolinite
2	64.7		0.2	34.9	0.2				100.0	Quartz

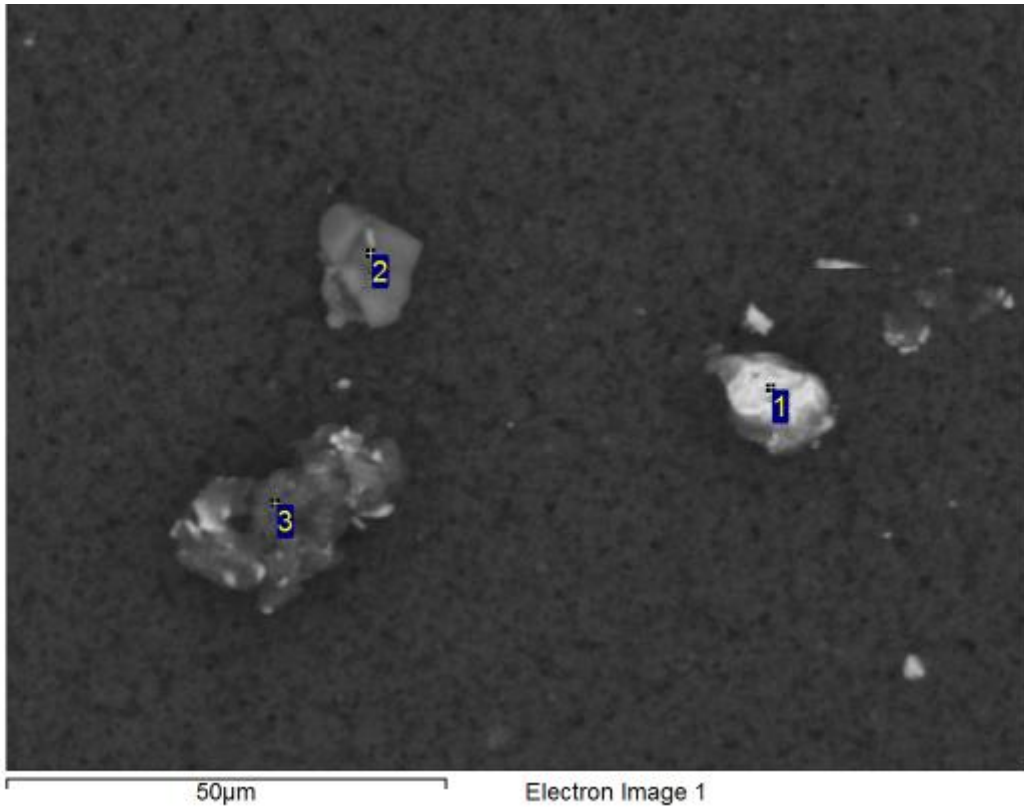
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	47.8	0.7	0.4	51.2	100.0	Fe Oxide

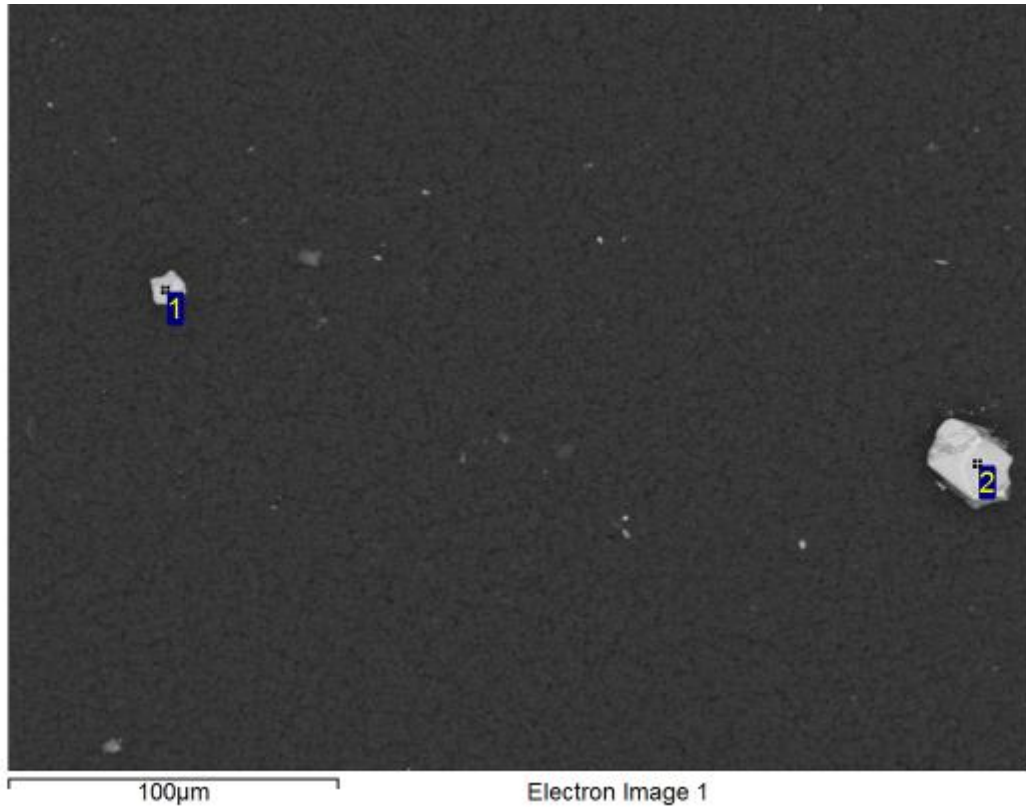
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	S	K	Ca	Fe	Total	Mineral ID
1	26.6							73.4	100.0	Fe Oxide
2	20.3		79.7						100.0	Quartz
3	61.3	13.5	8.2	0.8	0.4	0.4	0.9	14.4	100.0	Kaolinite/Fe Oxide

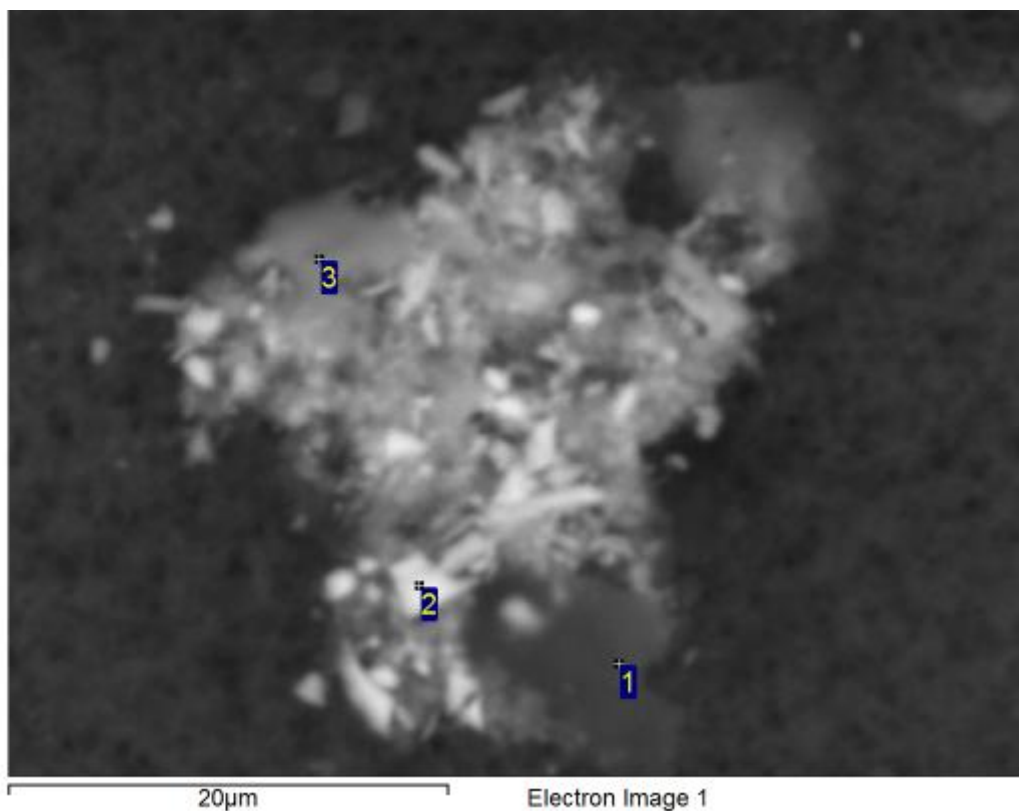
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Fe	Total	Mineral ID
1	37.4	62.6	100.0	Fe Oxide
2	20.5	79.5	100.0	Fe Oxide

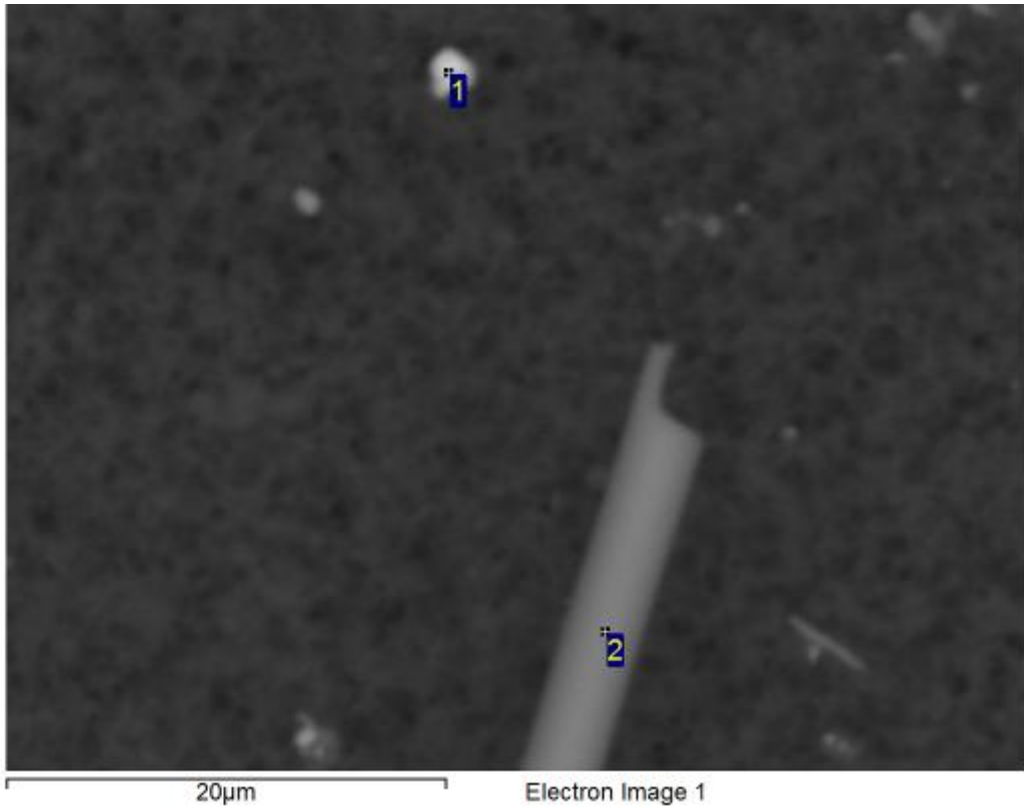
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Mn	Fe	Total	Mineral ID
1	71.8		13.0	13.6			1.6	100.0	Kaolinite
2	45.7		2.8	1.8			49.7	100.0	Fe Oxide
3	62.2	0.8	12.3	16.3	2.4	1.0	5.0	100.0	Kaolinite/Mica

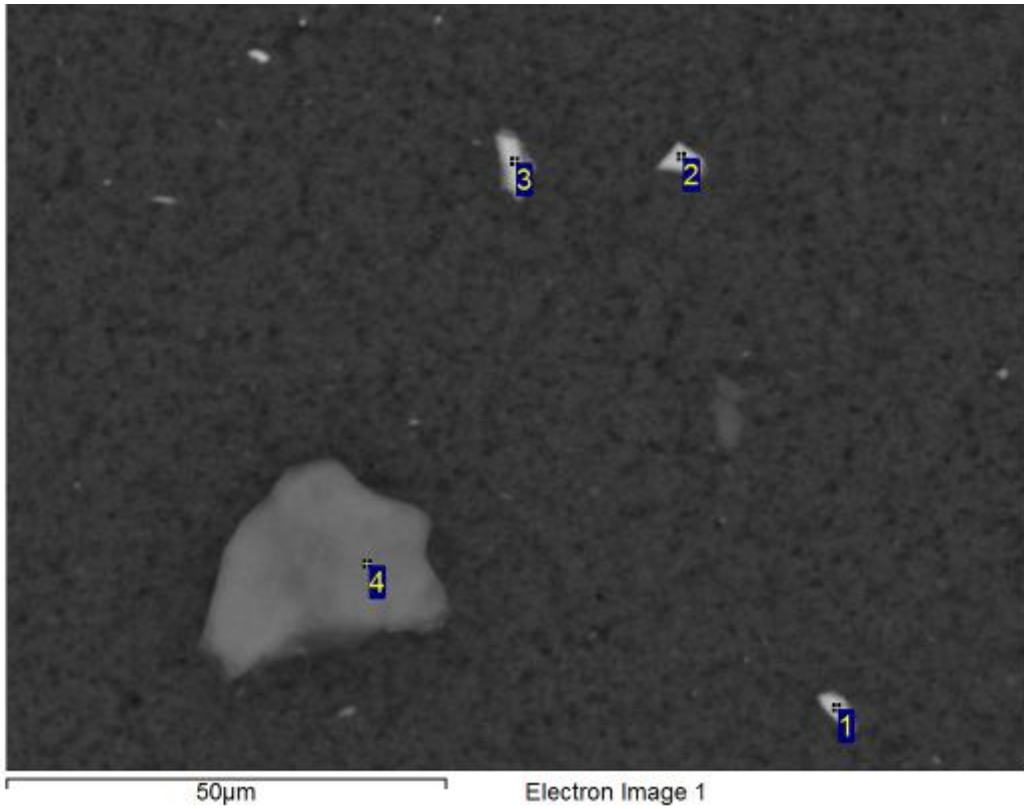
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	F	Na	Mg	Al	Si	K	Ca	Fe	Zn	Ba	Total	Mineral ID
1	41.4				0.3	0.7			57.6			100.0	Fe Oxide
2	57.1	1.6	5.4	0.5	2.7	25.9	1.5	1.7		1.1	2.6	100.0	Unknown

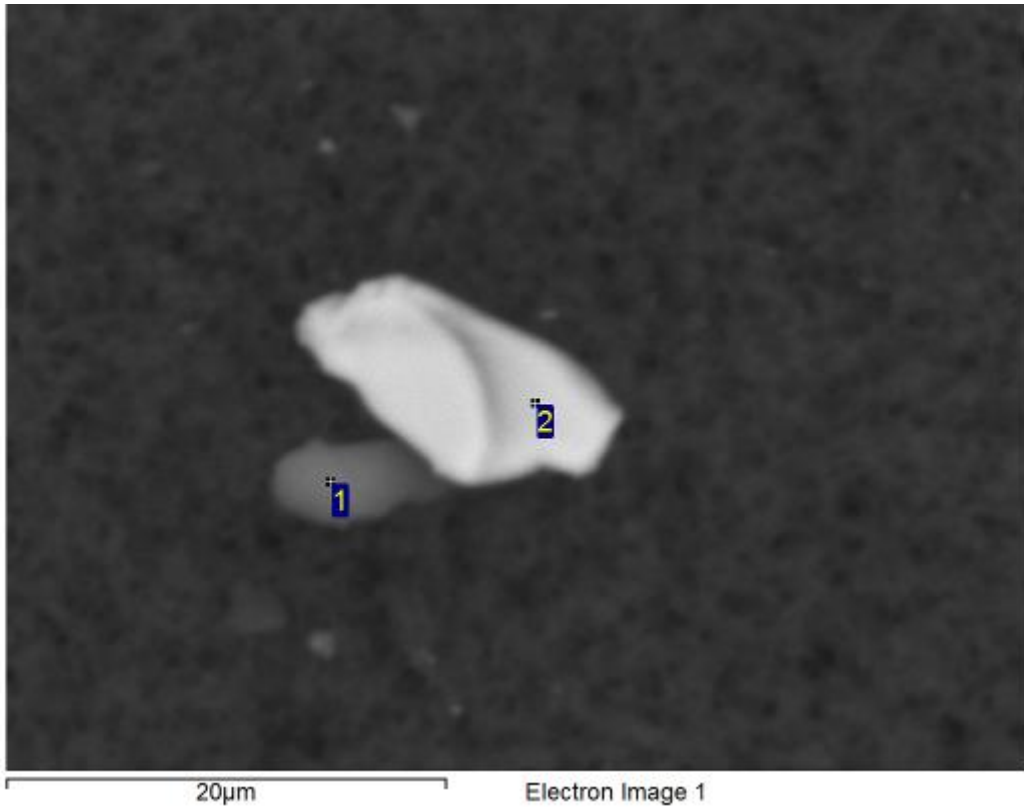
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Fe	Total	Mineral ID
1	47.7			1.0			51.3	100.0	Fe Oxide
2	33.2						66.8	100.0	Fe Oxide
3	46.5		0.3	0.3	0.5		52.4	100.0	Fe Oxide
4	62.1	0.9	13.7	18.6		3.5	1.2	100.0	Mica

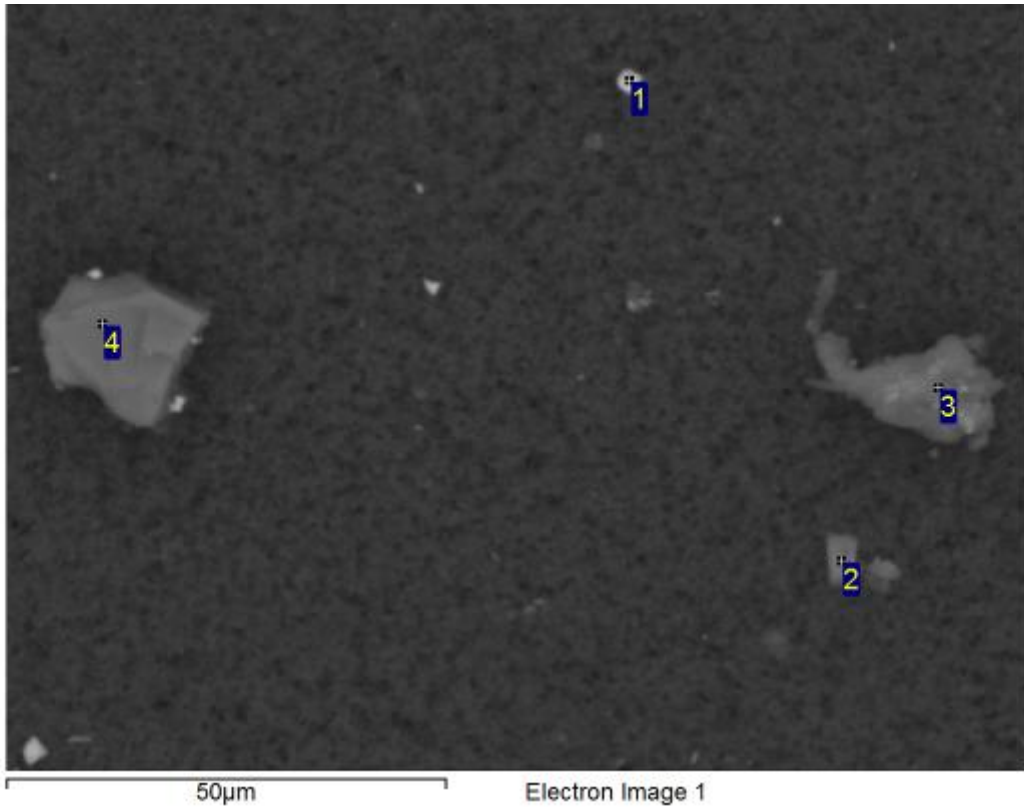
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	Fe	Total	Mineral ID
1	64.5	2.0	0.9	31.8	0.8	100.0	Quartz
2	36.6				63.4	100.0	Fe Oxide

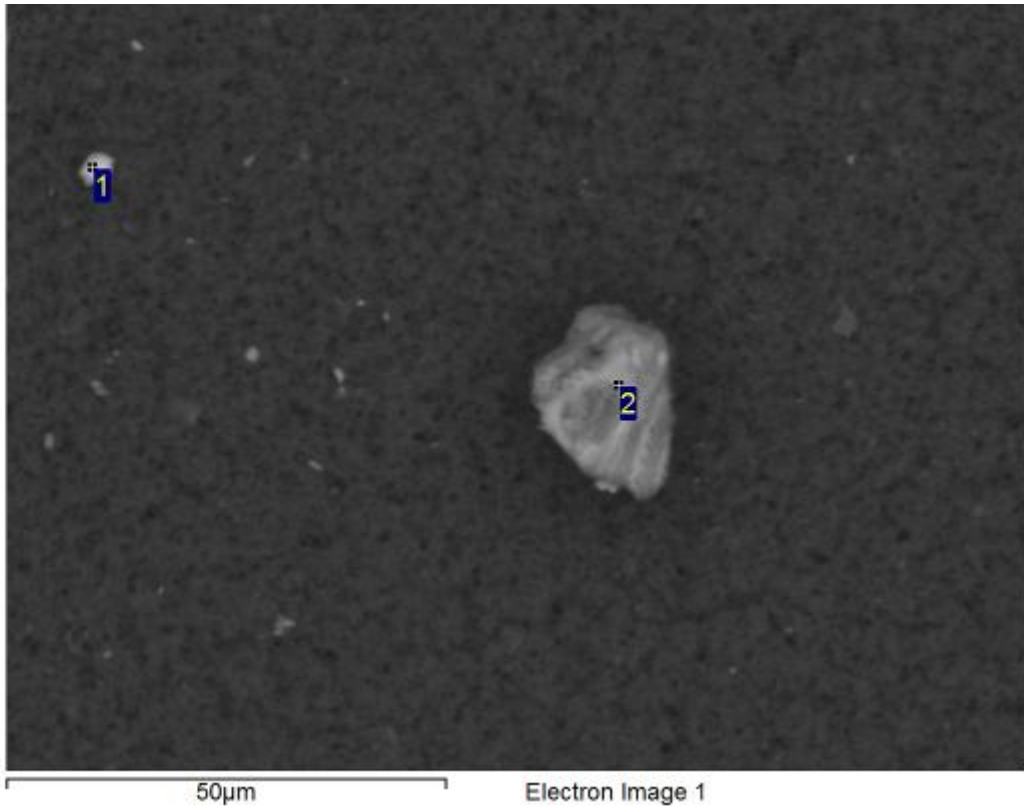
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	Cl	K	Ca	Ti	Fe	Total	Mineral ID
1	47.5			0.4					52.1	100.0	Fe Oxide
2	66.7		11.9	14.8		5.0			1.8	100.0	Mica
3	62.1	0.7	5.4	7.9	4.8		7.8	0.8	10.6	100.0	Ca-Fe-Al-Si-O Mixture
4	55.4			44.6						100.0	Quartz

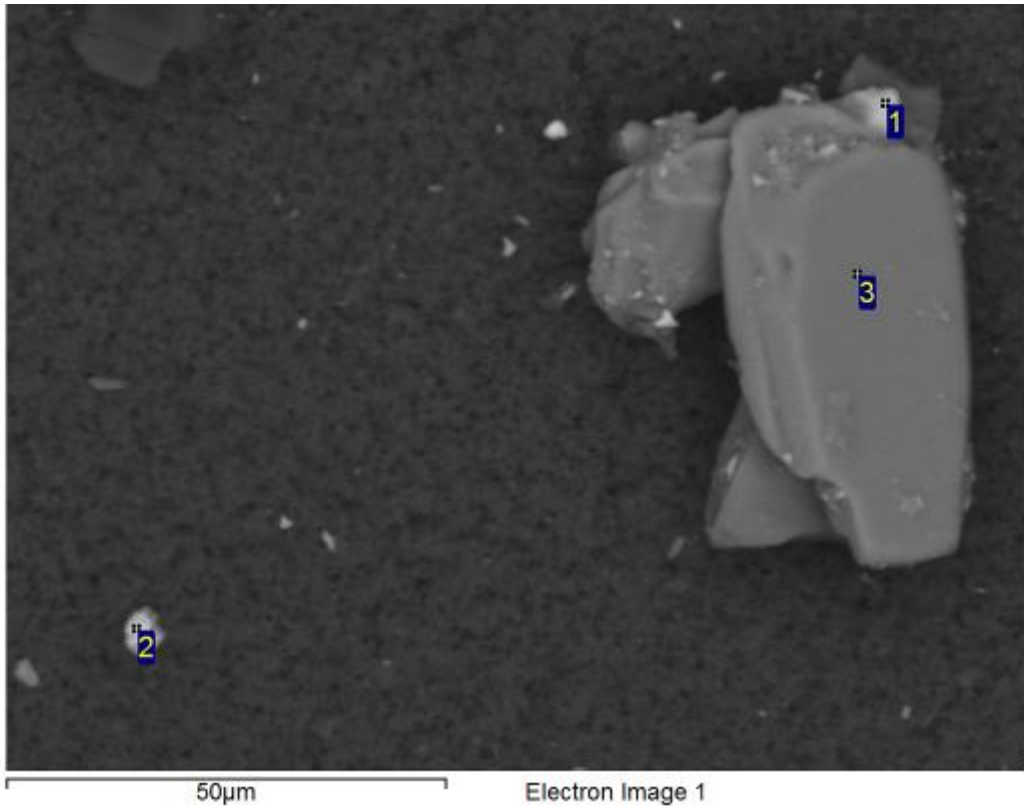
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	S	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	46.4		0.8	0.8	0.4						51.6	100.0	Fe Oxide
2	44.7	2.4	10.1	17.7		1.6	0.3	22.0	0.5	0.9		100.0	Kaolinite/Calcite (?)

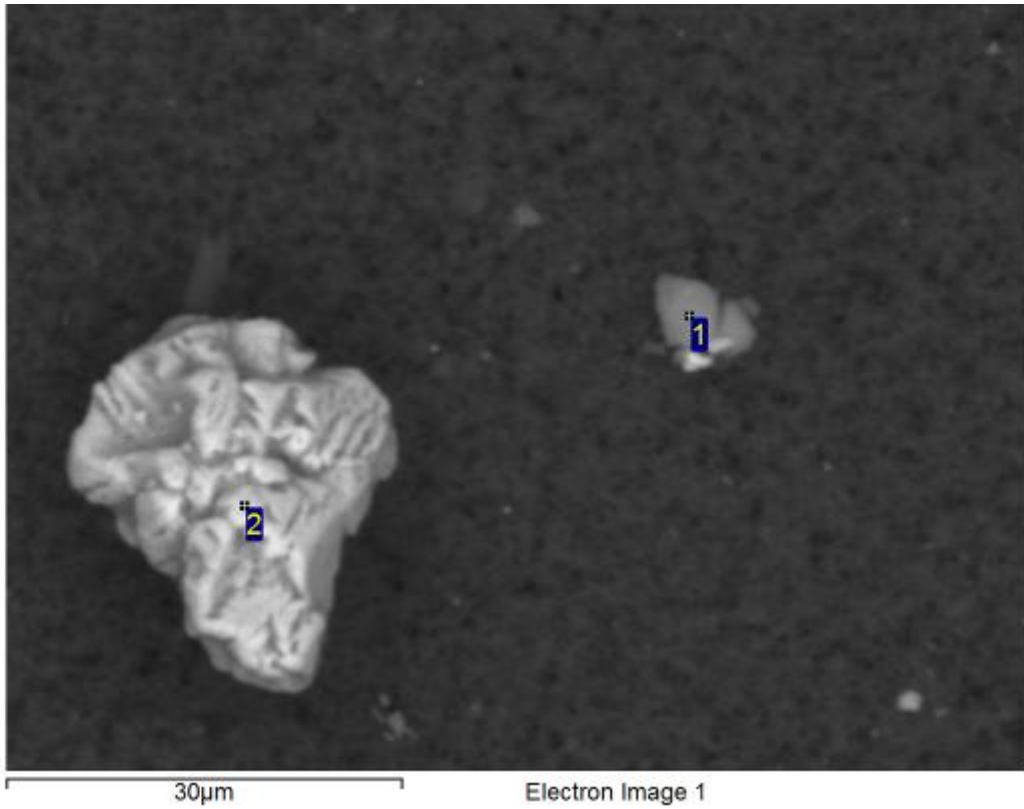
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	43.7			1.6	1.3	0.2		53.2	100.0	Fe Oxide
2	44.8				0.3			54.9	100.0	Fe Oxide
3	49.8	0.3	1.4	14.5	21.6	9.2	0.3	2.9	100.0	Mica

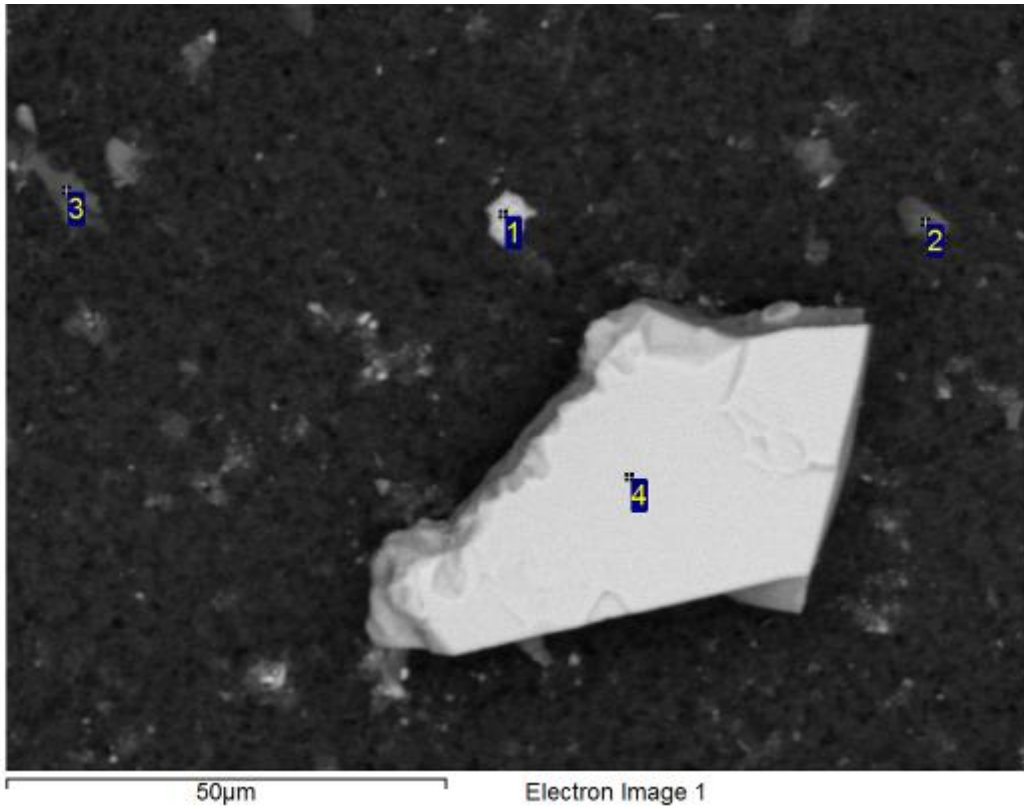
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	S	Cl	Ca	Fe	Zn	Total	Mineral ID
1	47.8	0.9	0.8	2.4	1.1	0.6	5.7	0.6	37.9	2.2	100.0	Fe Oxide/Unknown
2	43.8		0.4	0.3					55.6		100.0	Fe Oxide

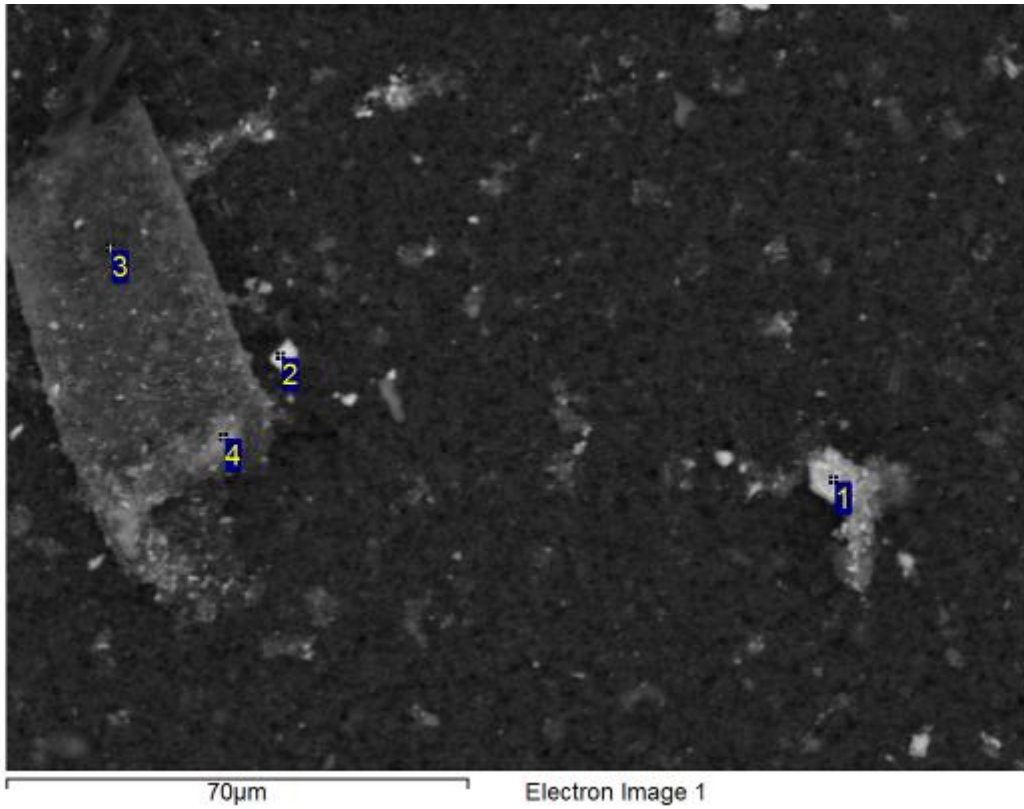
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Fe	Total	Mineral ID
1	50.2	1.5	1.1		47.2	100.0	Fe Oxide
2	66.1	10.0	10.4	1.4	12.0	100.0	Mica/Kaolinite
3	68.5	11.9	14.6	3.8	1.3	100.0	Mica/Kaolinite
4	33.2				66.8	100.0	Fe Oxide

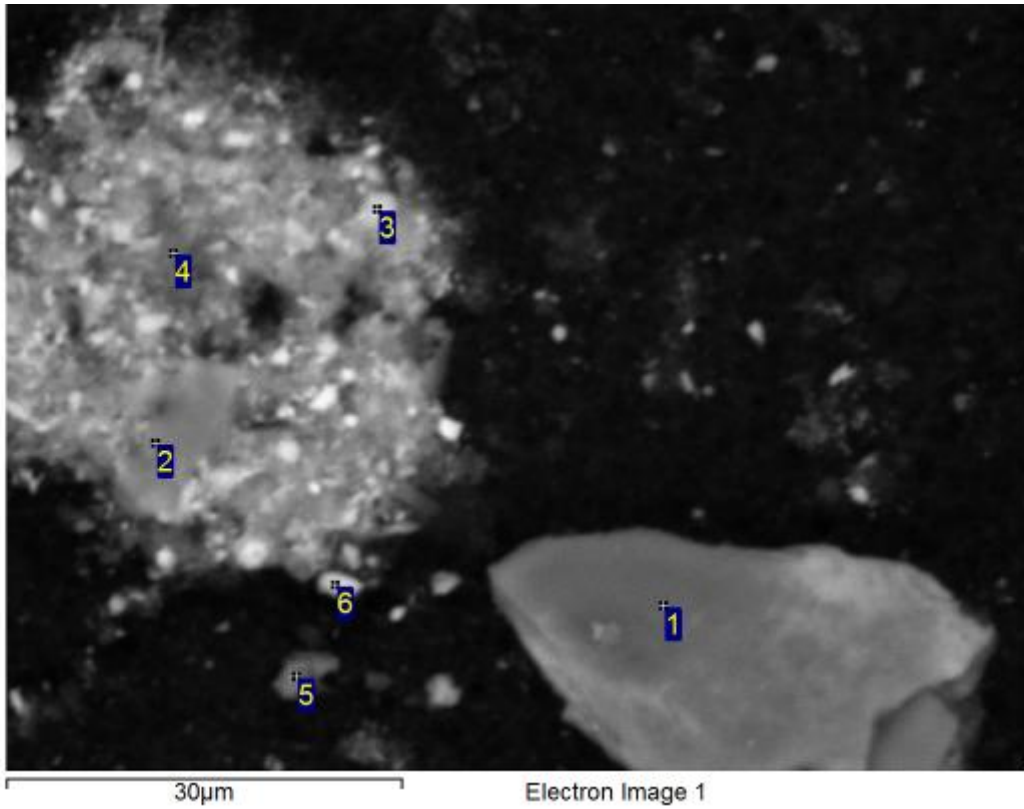
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Mn	Fe	Total	Mineral ID
1	43.2	1.4	1.0			54.4	100.0	Fe Oxide
2	52.2	1.4	1.7			44.6	100.0	Fe Oxide
3	68.4	9.3	11.2	0.6	4.3	6.3	100.0	Kaolinite/Mica
4	58.1	9.7	10.0	1.0	5.9	15.3	100.0	Kaolinite/Mica

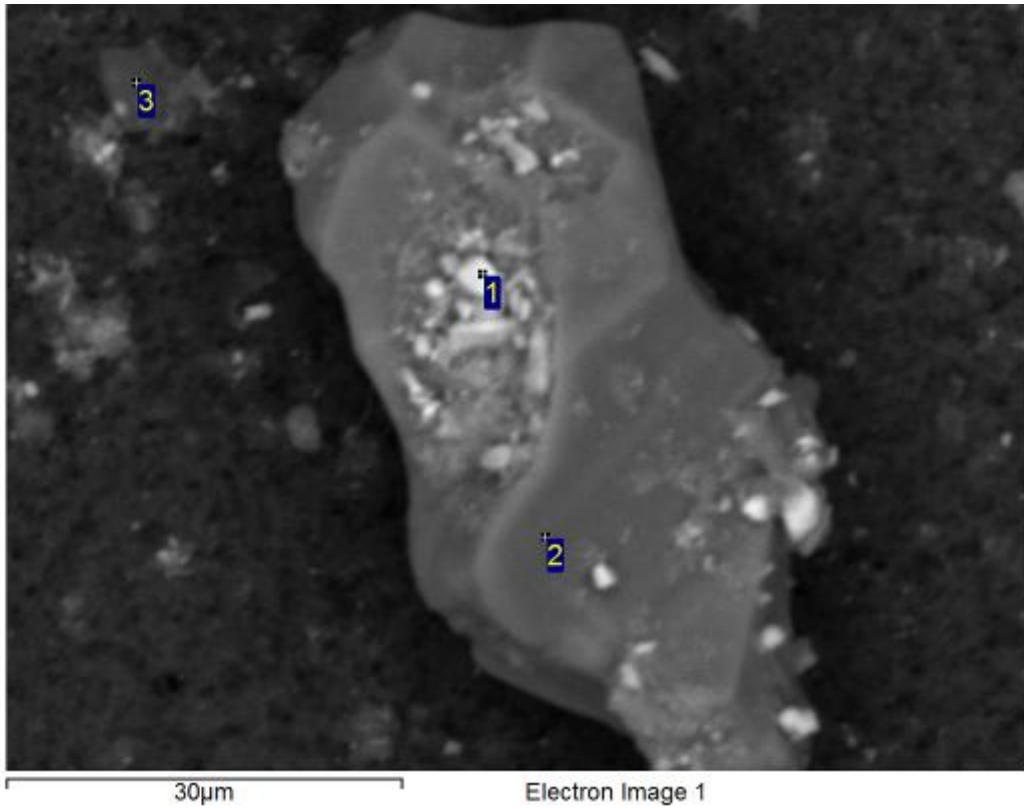
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Ca	Mn	Fe	Total	Mineral ID
1	55.1	19.3	20.5					5.0	100.0	Kaolinite
2	49.7	14.2	15.3		1.8		0.6	18.4	100.0	Kaolinite/Mica/Fe Oxide
3	51.5	6.2	5.7		0.4		0.7	35.5	100.0	Kaolinite/Mica
4	36.2	12.6	10.0	1.0	1.3	0.8	1.3	36.8	100.0	Kaolinite/Fe Oxide
5	63.7	1.2	25.3					9.9	100.0	Quartz
6	44.1	1.5	1.8					52.6	100.0	Fe Oxide

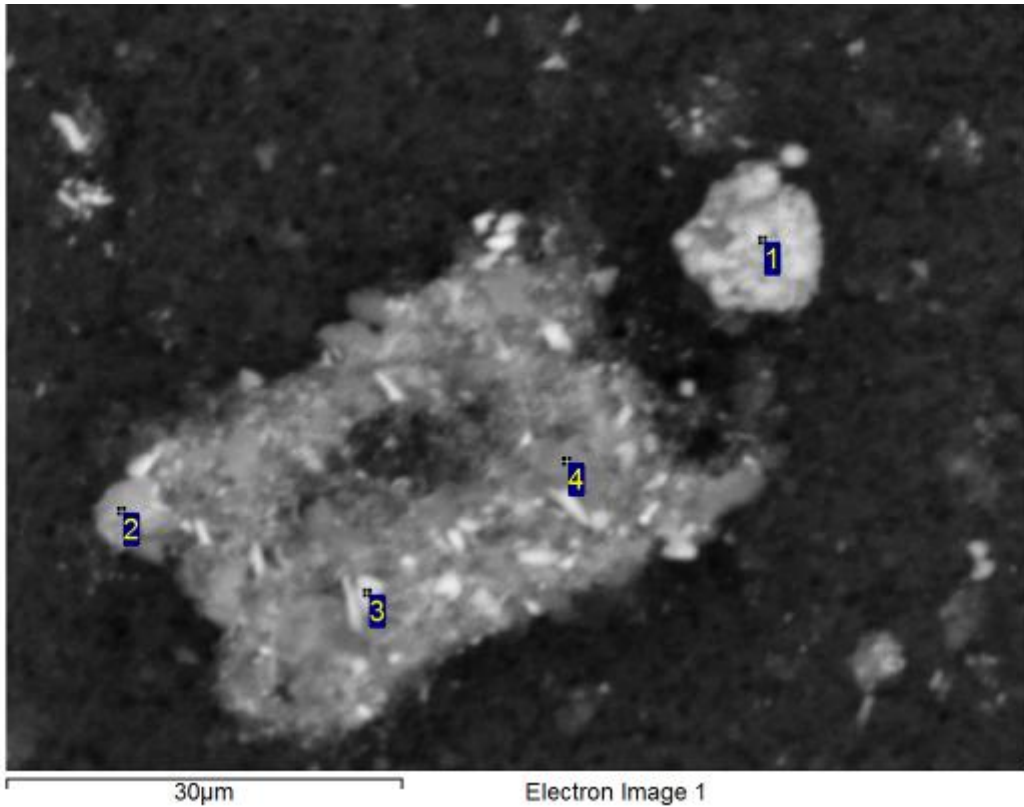
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Fe	Total	Mineral ID
1	44.4	0.7	1.5		53.4	100.0	Fe Oxide
2	27.0		71.2		1.8	100.0	Quartz
3	70.4	10.2	13.1	3.3	3.1	100.0	Kaolinite/Mica

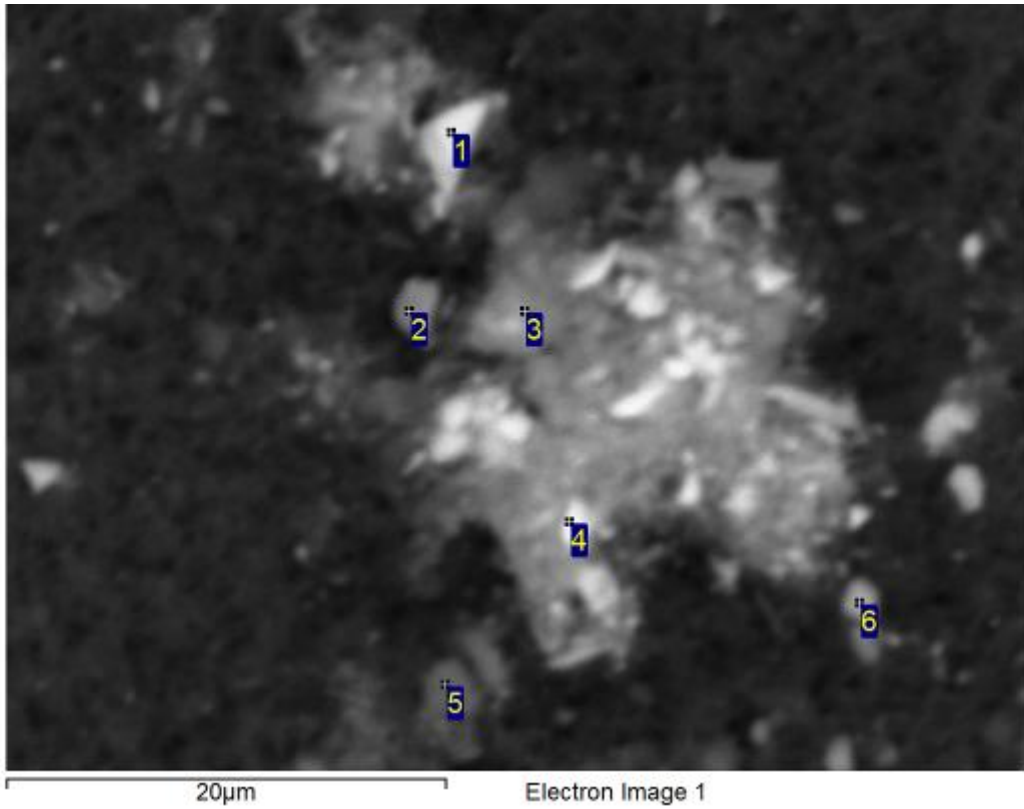
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Fe	Total	Mineral ID
1	47.2	0.9	0.9	1.1		49.9	100.0	Fe Oxide
2	55.0	7.4	6.7			30.9	100.0	Fe Oxide/Kaolinite
3	48.9	6.1	6.0		0.5	38.6	100.0	Fe Oxide/Kaolinite
4	63.6	13.5	14.0			8.9	100.0	Kaolinite

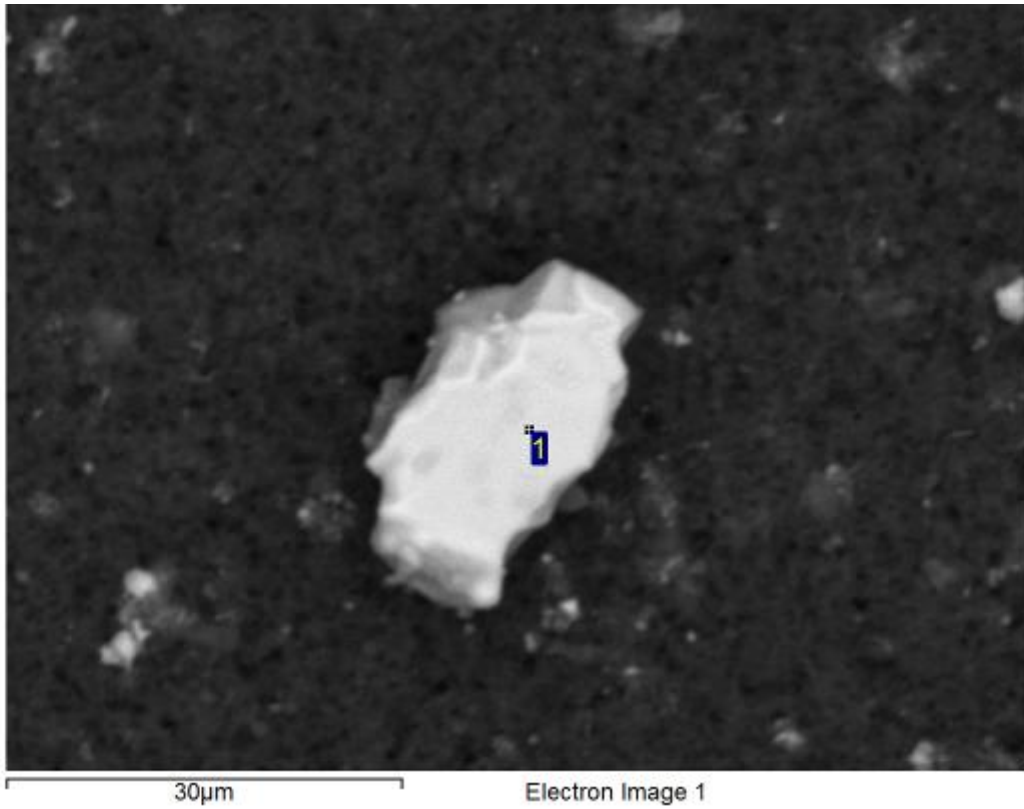
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Mn	Fe	Total	Mineral ID
1	46.4		1.0	0.7			51.8	100.0	Fe Oxide
2	56.7		2.5	2.8		1.6	36.4	100.0	Fe Oxide/Kaolinite
3	62.1	0.5	7.3	16.4	1.4	0.4	11.9	100.0	Fe Oxide/Kaolinite/Mica
4	50.0		6.0	6.1	1.1		36.8	100.0	Fe Oxide/Kaolinite/Mica
5	66.7		10.1	8.0	0.9		14.4	100.0	Fe Oxide/Kaolinite
6	58.3		2.7	2.1		0.5	36.4	100.0	Fe Oxide/Kaolinite

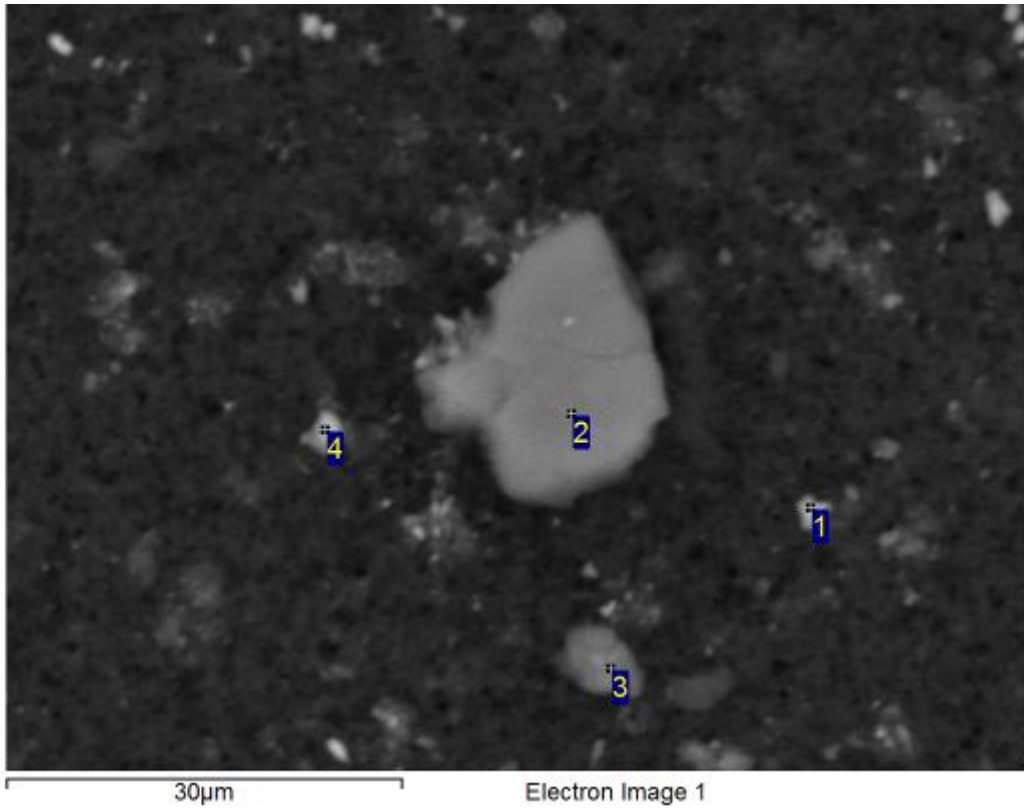
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Fe	Total	Mineral ID
1	20.7	79.3	100.0	Fe Oxide

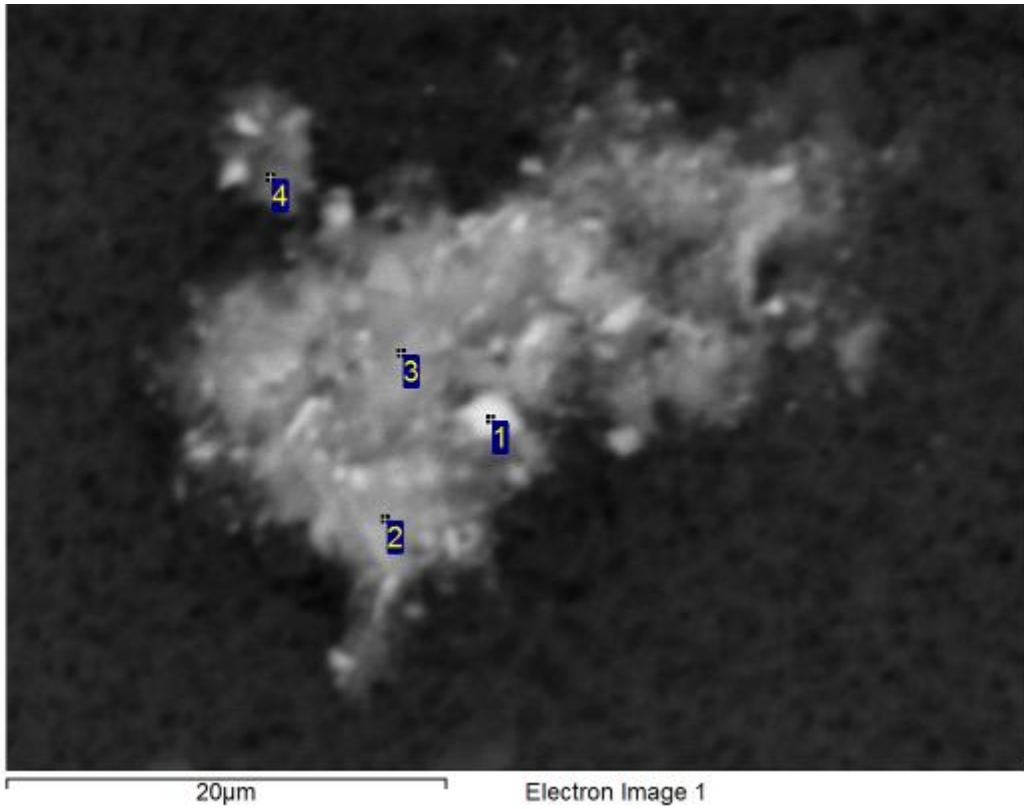
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	58.5			2.9	2.5			0.7	35.5	100.0	Fe Oxide/Kaolinite
2	51.3	0.5	0.5	15.2	18.7	6.1			7.7	100.0	Mica
3	60.3		1.3	9.9	22.9	2.6	0.5		2.4	100.0	Quartz/Mica
4	55.1			2.5	2.3			0.8	39.3	100.0	Fe Oxide/Kaolinite

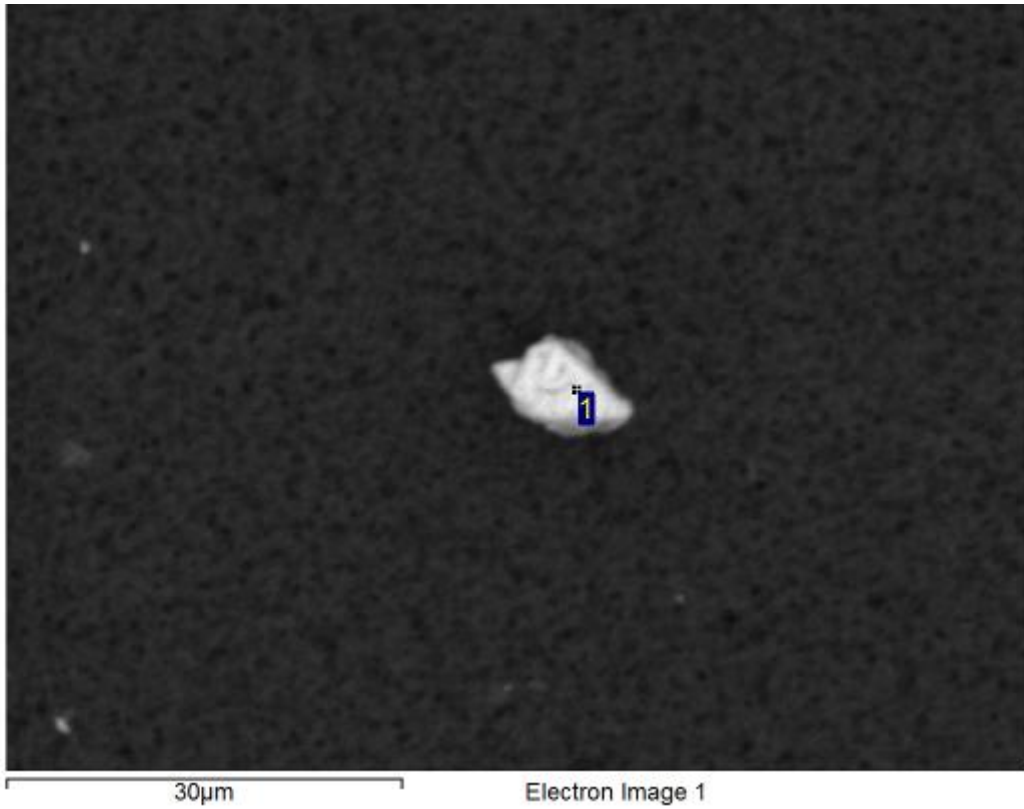
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Mn	Fe	Total	Mineral ID
1	50.1	5.4	4.3	0.3	0.8	39.1	100.0	Fe Oxide/Kaolinite
2	54.2	9.2	8.0	0.6	0.8	27.1	100.0	Fe Oxide/Kaolinite
3	55.8	9.6	9.3	1.2	0.6	23.4	100.0	Fe Oxide/Kaolinite
4	61.0	10.3	9.2			19.5	100.0	Fe Oxide/Kaolinite

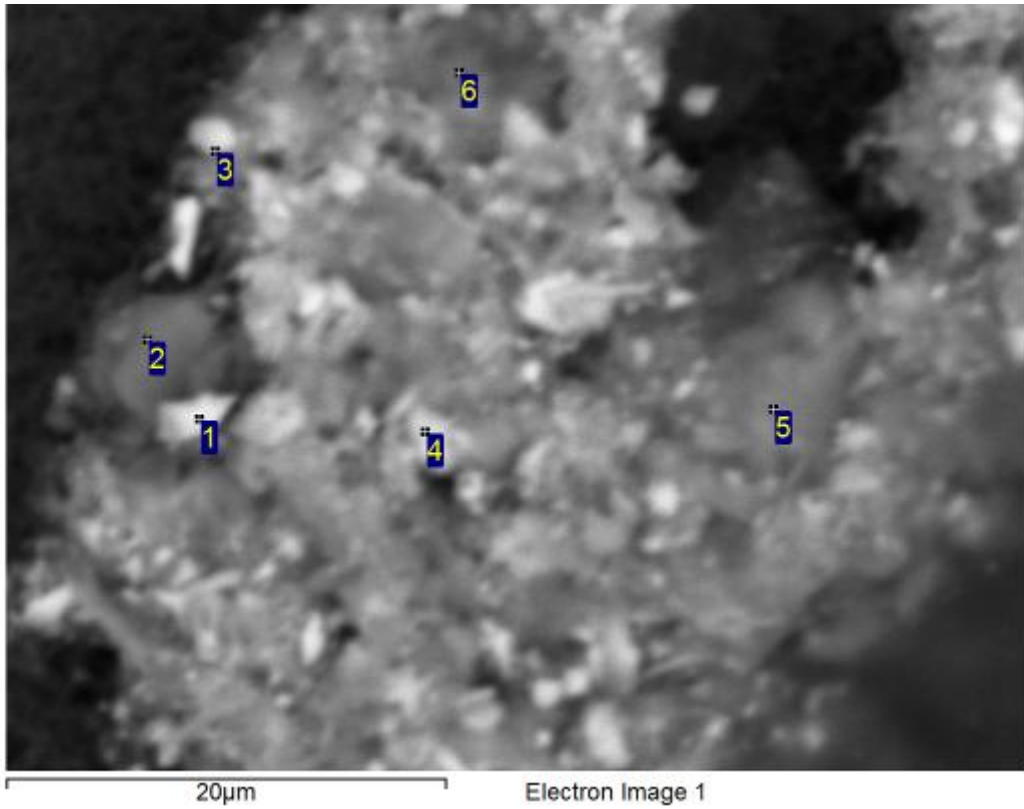
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Fe	Total	Mineral ID
1	36.4	63.6	100.0	Fe Oxide

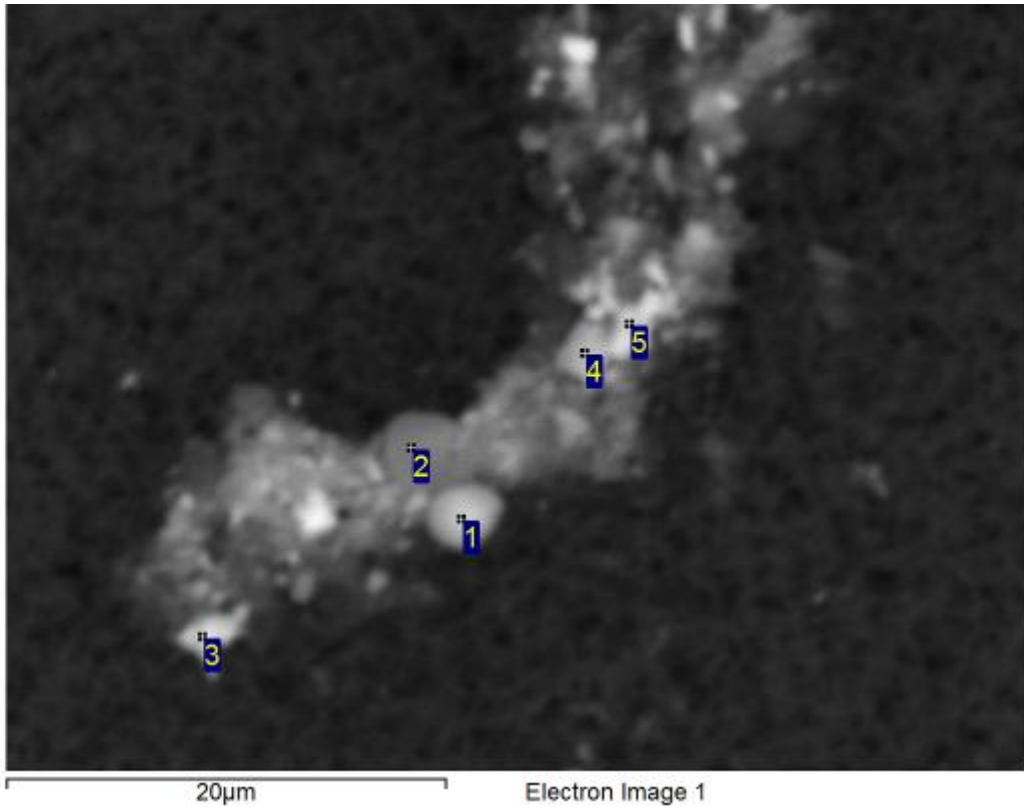
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	40.8		2.1	1.3					55.9	100.0	Fe Oxide
2	67.6	0.4	13.0	15.6		1.4			2.0	100.0	Kaolinite/Mica
3	49.0		4.4	2.9	0.4	0.3		0.5	42.4	100.0	Fe Oxide
4	51.1		6.4	6.0		0.3		0.5	35.7	100.0	Fe Oxide/Kaolinite
5	51.8	0.6	10.8	12.7		2.3	0.2	0.6	20.9	100.0	Fe Oxide/Kaolinite/Mica
6	63.0		11.8	12.7					12.5	100.0	Kaolinite/Fe Oxide

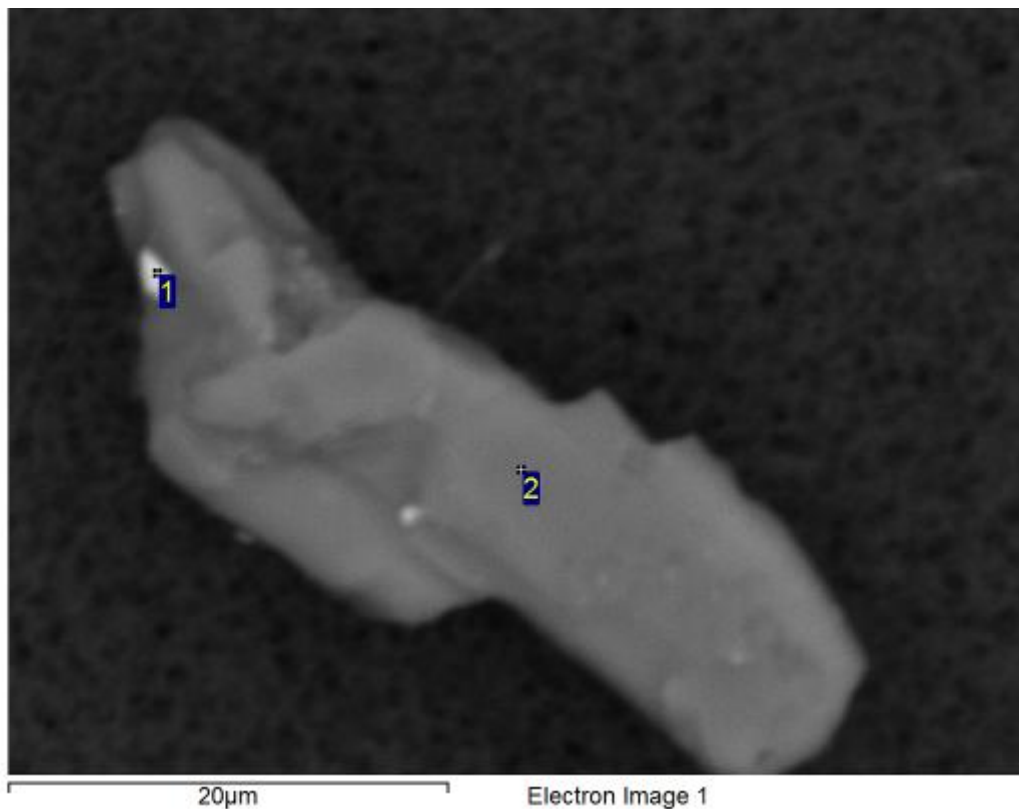
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Ca	Ti	Fe	Total	Mineral ID
1	54.6	2.0	0.7	0.5		0.3	0.2	41.6	100.0	Fe Oxide
2	63.6	14.5	15.1		0.2			6.6	100.0	Kaolinite/Fe Oxide
3	45.7	2.0	1.3					51.0	100.0	Fe Oxide
4	56.3	5.0	3.5		0.3			34.9	100.0	Fe Oxide/Kaolinite
5	49.9	3.4	2.5					44.2	100.0	Fe Oxide

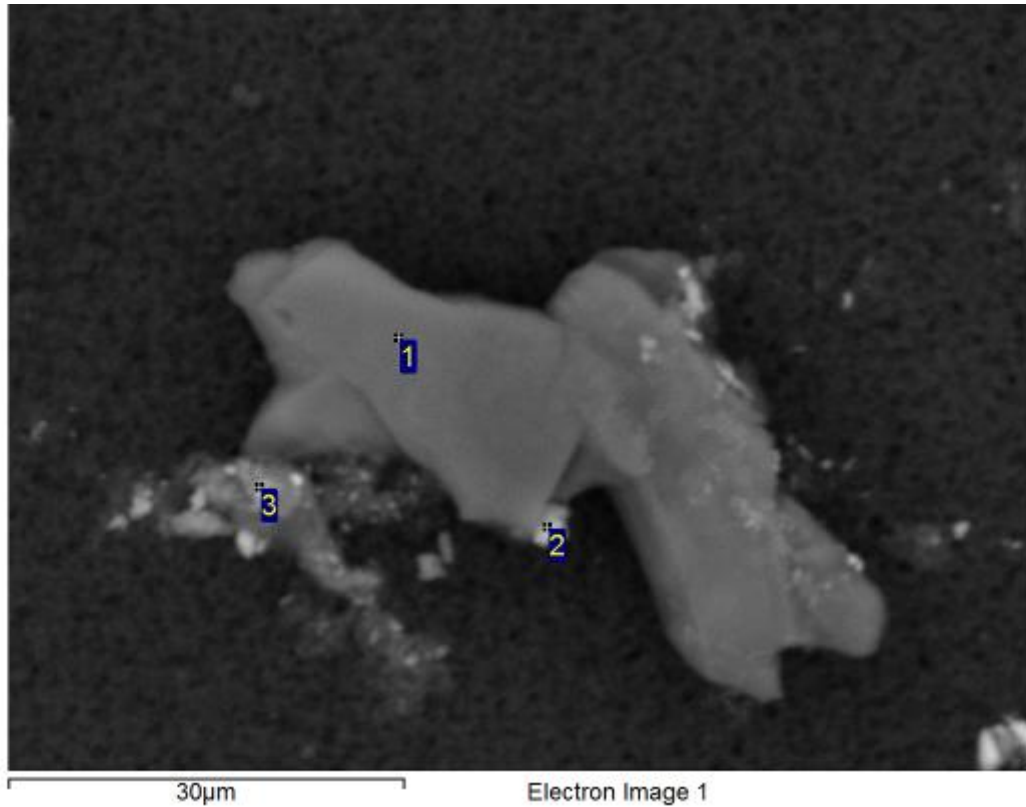
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Fe	Total	Mineral ID
1	51.6		0.6	10.8	13.1	3.5	20.4	100.0	Fe Oxide/Mica
2	51.9	0.3	1.0	15.9	21.7	7.6	1.6	100.0	Mica

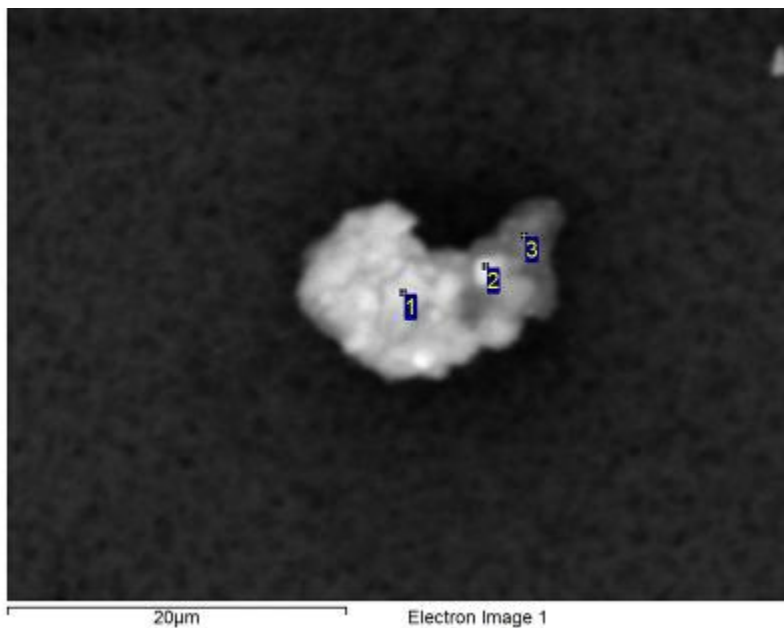
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Mn	Fe	Total	Mineral ID
1	51.0	0.4	0.4	18.3	22.1	6.6		1.2	100.0	Mica
2	22.6			5.3	3.9	0.4		67.8	100.0	Fe Oxide
3	56.7			7.2	5.4	0.4	0.4	29.8	100.0	Fe Oxide/Kaolinite

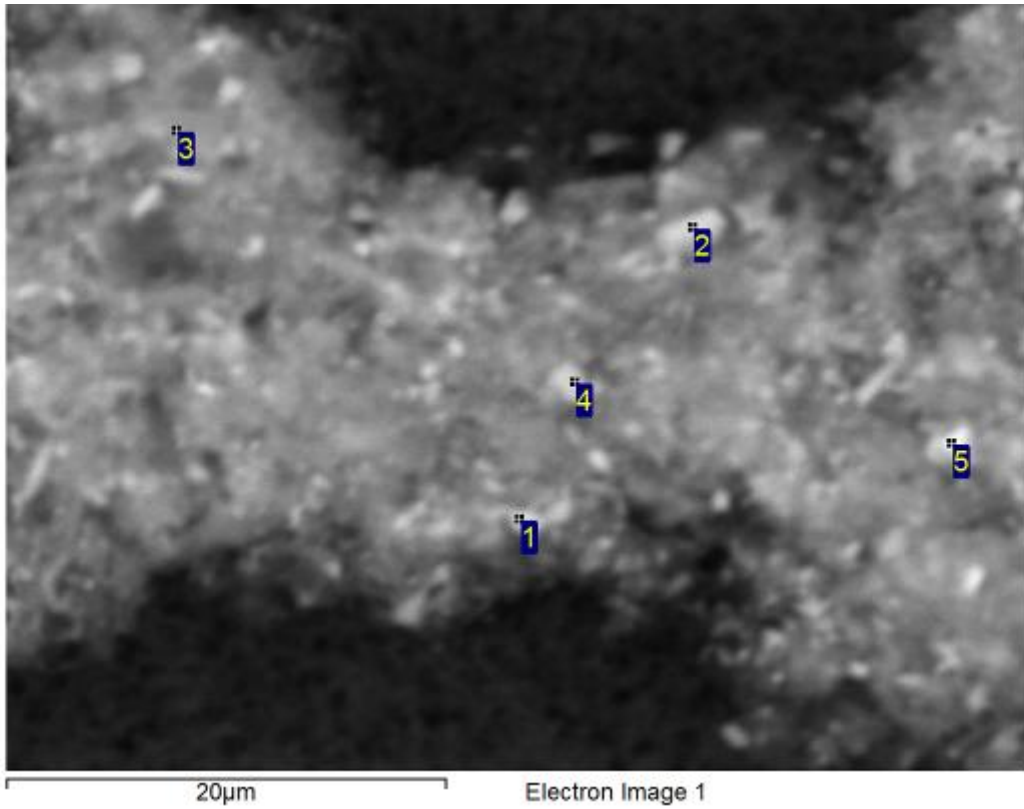
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	S	Cl	Ca	Ti	Cr	Mn	Fe	Zn	Sn	Total	Mineral ID
1	60.0	0.9		0.5	1.3	11.7		0.2	3.3	0.7	3.1	0.4	3.1		14.7	100.0	Unknown
2	54.3			1.0	1.3	4.3		0.2	1.0		1.1		32.9		3.9	100.0	Unknown
3	66.0		0.5	3.4	4.3	5.4	0.5	0.7	1.5	1.1	2.9		7.6	0.5	5.4	100.0	Unknown

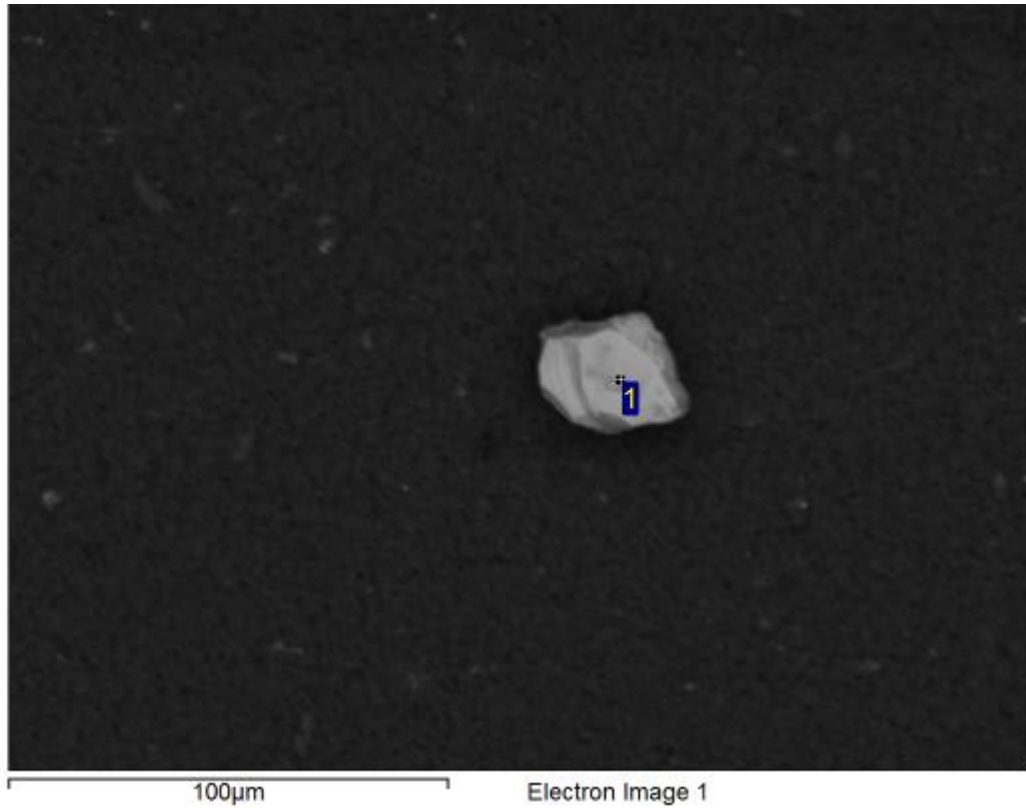
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	51.3	5.3	4.4	0.3		0.5	38.2	100.0	Fe Oxide/Kaolinite
2	55.0	3.4	3.4				38.2	100.0	Fe Oxide/Kaolinite
3	56.9	7.1	16.7	0.8	0.3	0.4	17.7	100.0	Fe Oxide/Kaolinite
4	51.3	6.4	5.7	0.3		0.5	35.8	100.0	Fe Oxide/Kaolinite
5	48.5	5.4	5.1	0.3		0.4	40.3	100.0	Fe Oxide

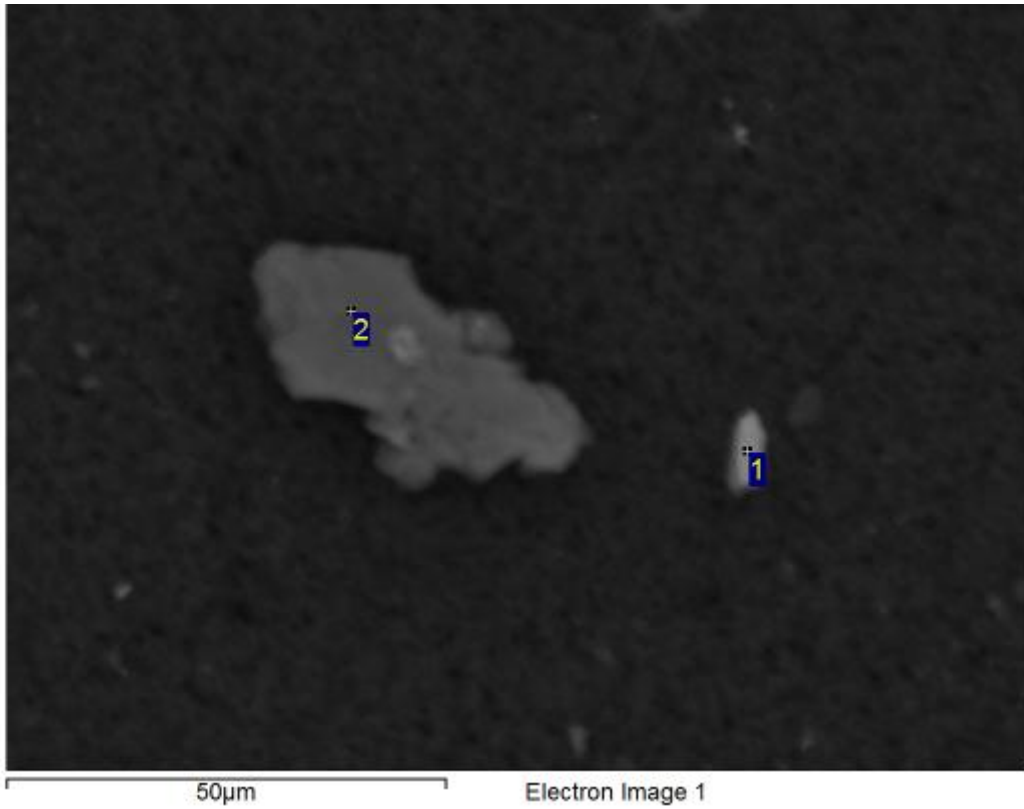
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Ca	Ti	Fe	Total	Mineral ID
1	36.5	0.5	0.6	0.7	0.7	61.1	100.0	Fe Oxide

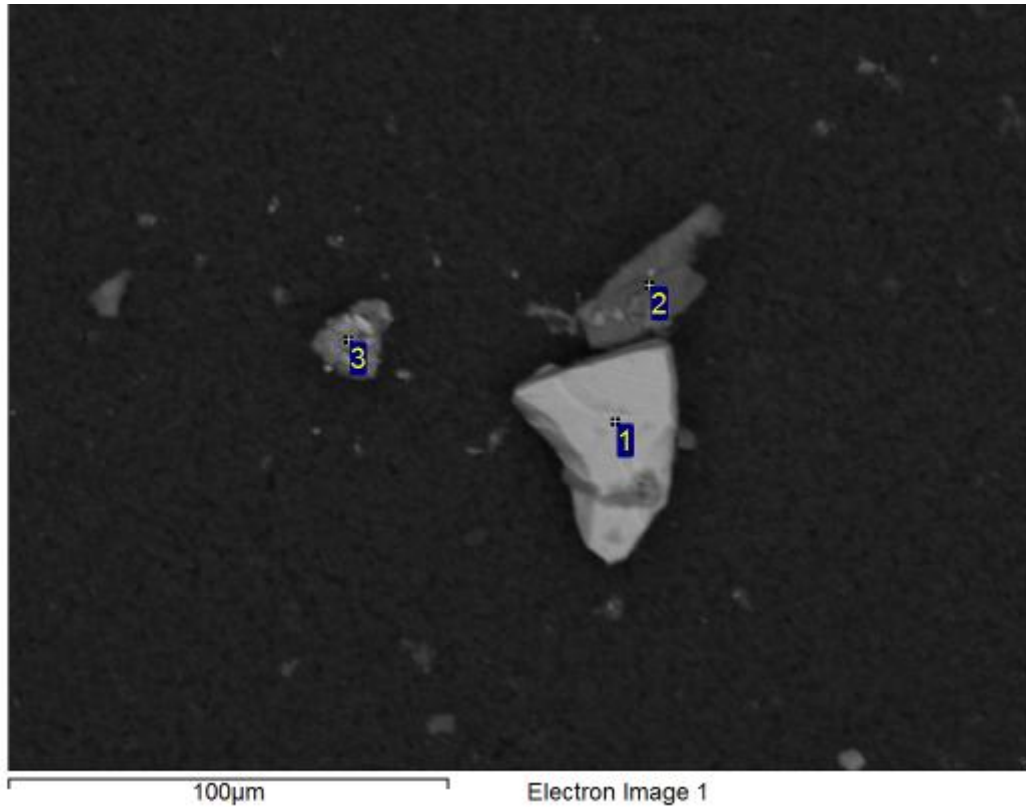
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	P	K	Fe	Total	Mineral ID
1	52.4		0.6	0.6	0.5		45.9	100.0	Fe Oxide
2	57.4	2.4	16.8	18.6		4.0	0.7	100.0	Feldspar

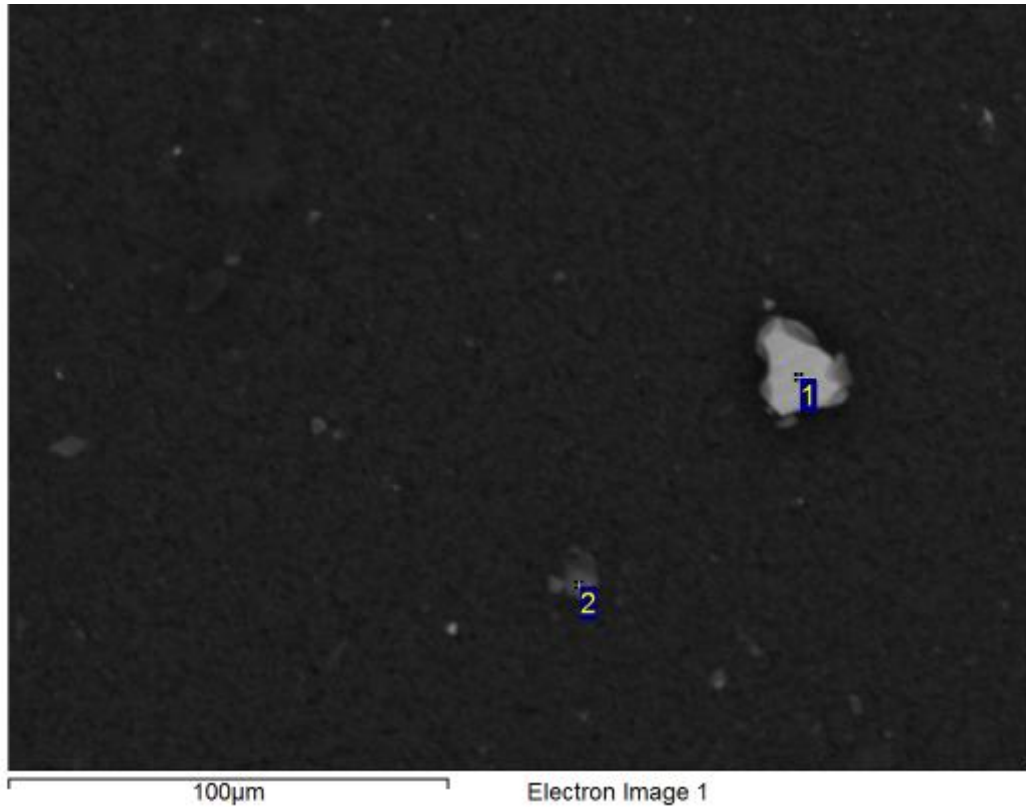
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	29.8			0.4	0.3			0.3		69.2	100.0	Fe Oxide
2	65.0	0.3	0.3	13.5	16.2		2.0	0.1		2.6	100.0	Mica
3	39.6			6.1	8.0	0.3	0.3		0.7	44.9	100.0	Fe Oxide/Kaolinite

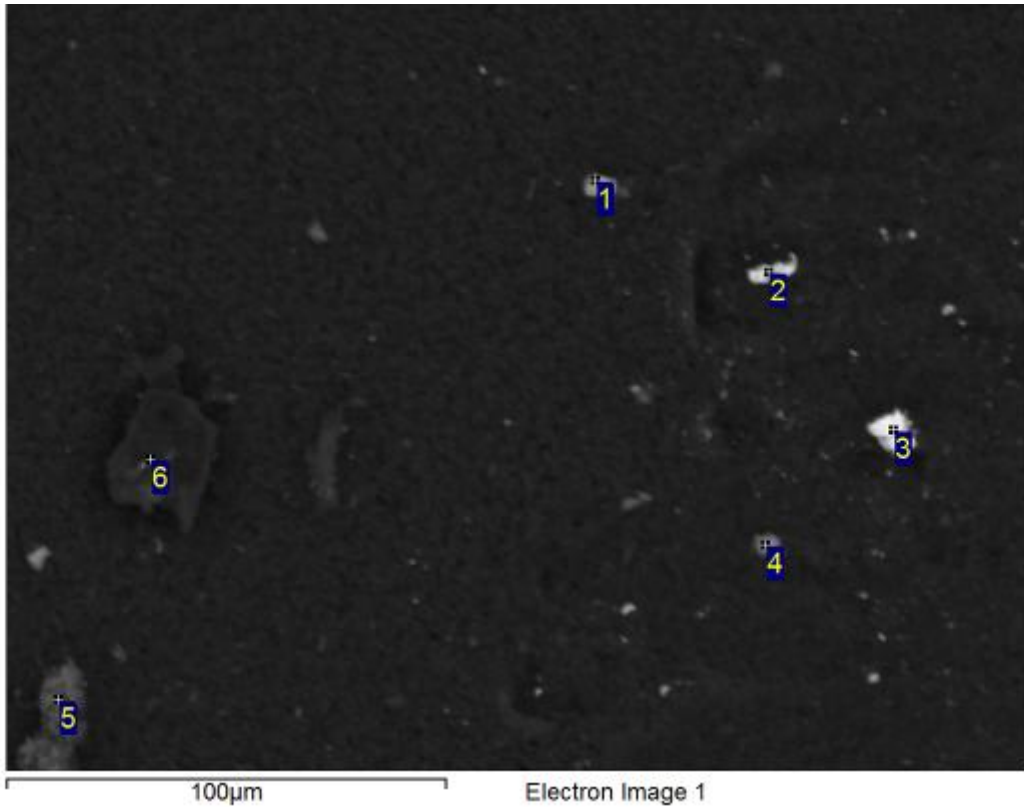
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	37.6		0.3	62.1	100.0	Fe Oxide
2	69.0	14.2	16.3	0.5	100.0	Kaolinite

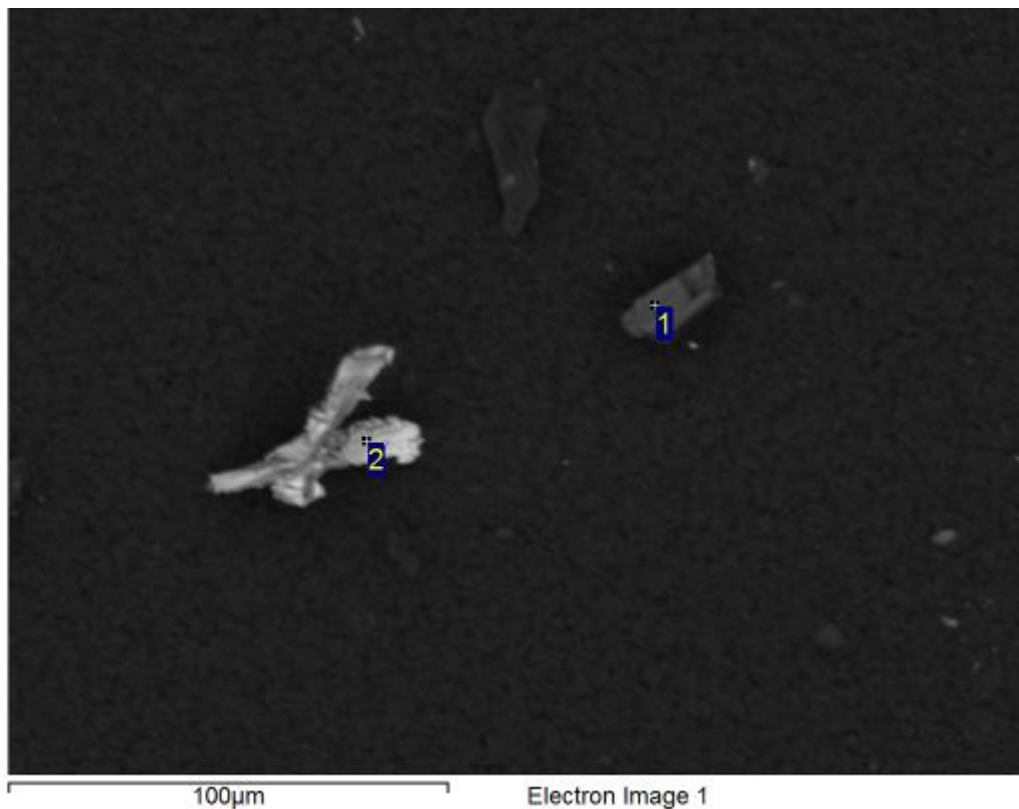
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	S	K	Ca	Mn	Fe	Cu	Zn	Total	Mineral ID
1	41.6	0.3	0.5						57.6			100.0	Fe Oxide
2	11.6	0.3	0.5		0.3					71.3	16.0	100.0	Cu-Zn alloy
3	4.7									61.2	34.0	100.0	Cu-Zn alloy
4	50.5	2.2	6.3	0.8			0.5	4.2	35.6			100.0	Kaolinite/Fe Oxide
5	52.5		7.5		12.4		0.6				27.0	100.0	Quartz/Sphalerite
6	71.7	7.6	12.4			1.0	6.4		1.0			100.0	Plagioclase

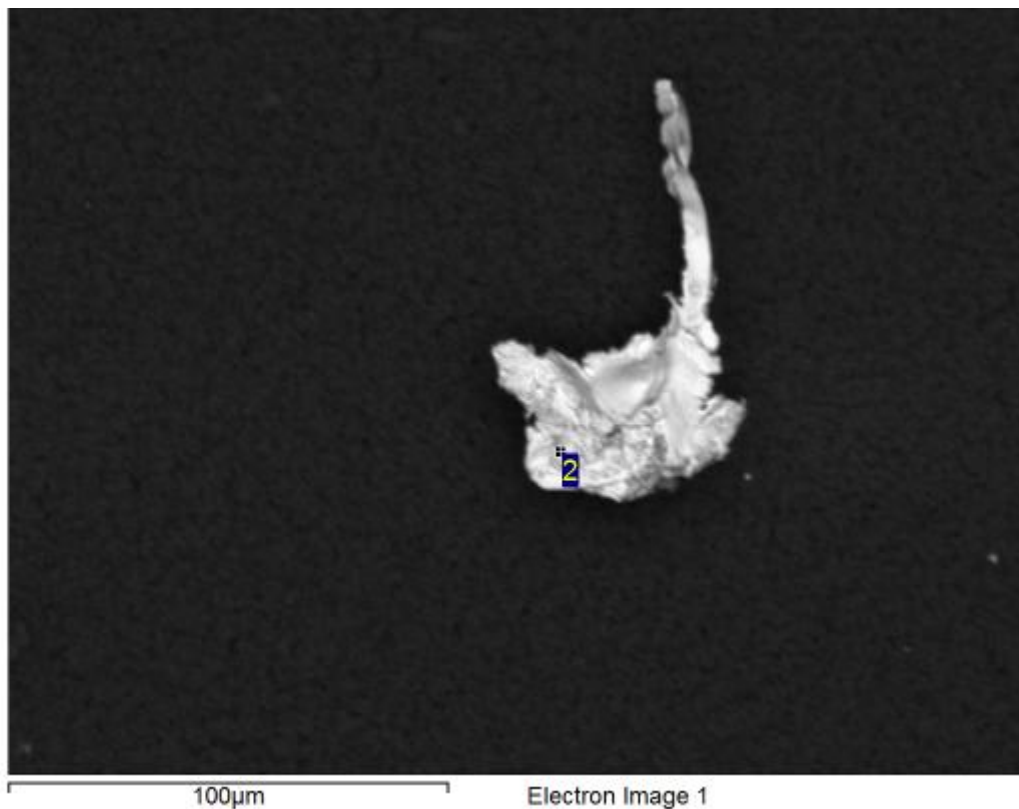
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Ca	Cr	Mn	Fe	Total	Mineral ID
1	61.1	14.9	24.0				100.0	Dolomite
2	0.7			17.7	1.2	80.4	100.0	Fe Oxide

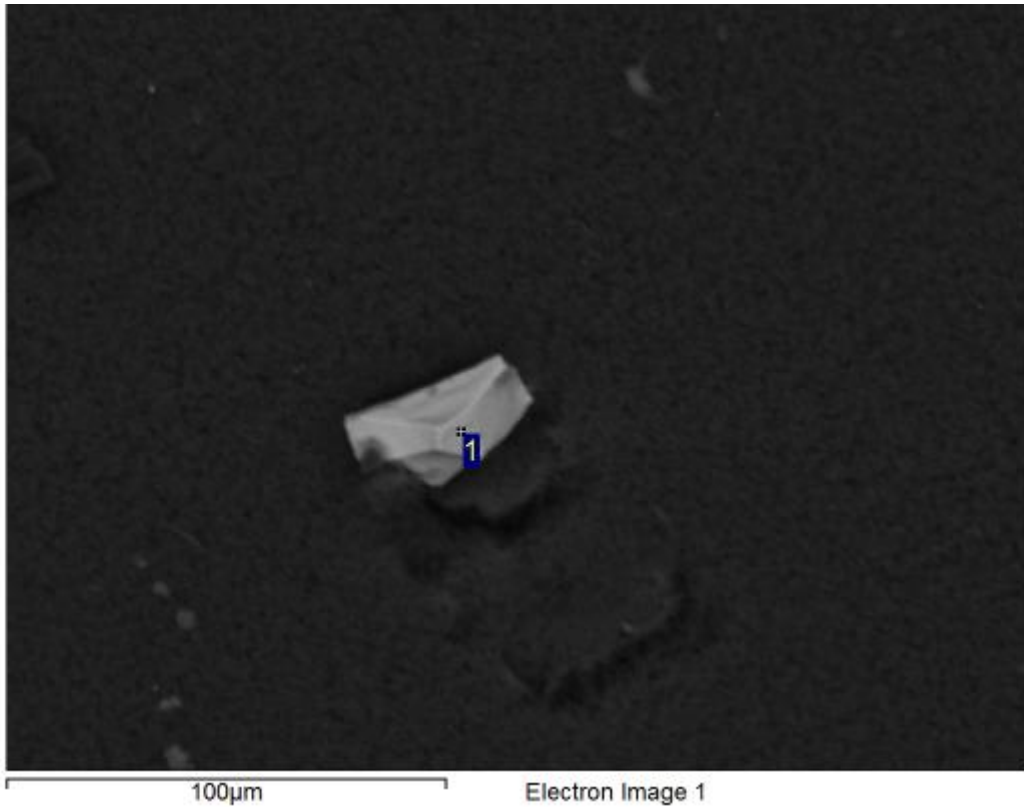
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Cl	Fe	Cu	Zn	Pb	Total	Mineral ID
2	23.9	0.6	1.6	54.9	15.9	3.1	100.0	Cu-Zn-Pb-Oxide

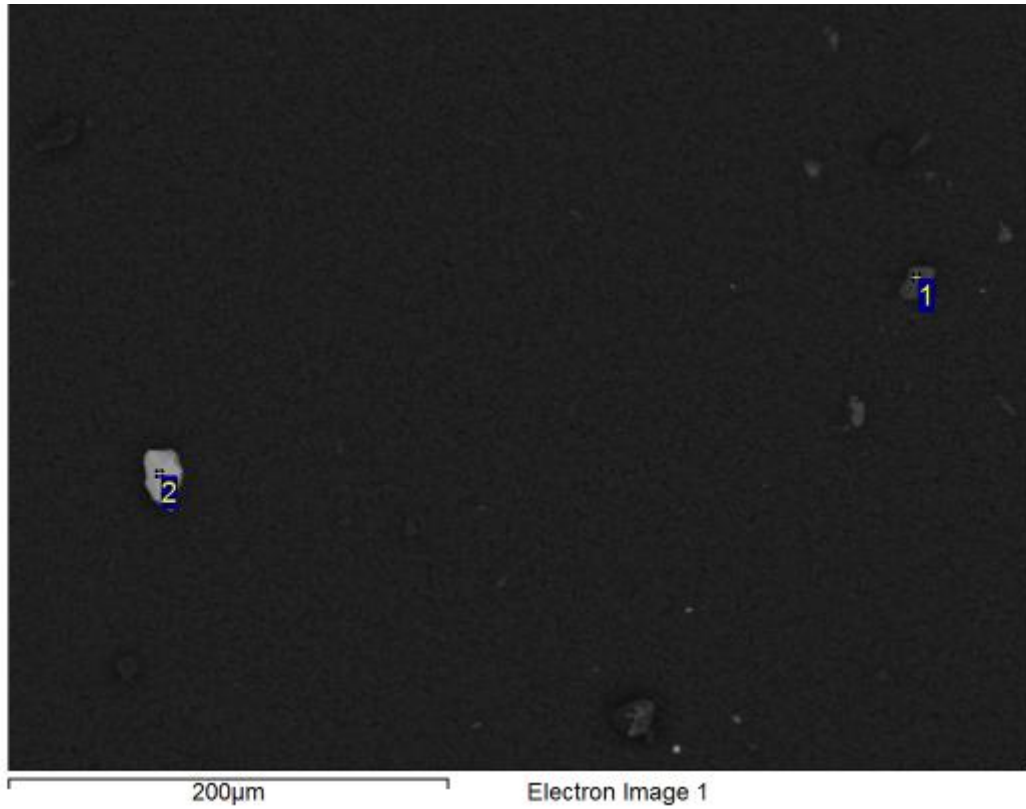
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	3.2	0.2	0.2	96.4	100.0	Iron

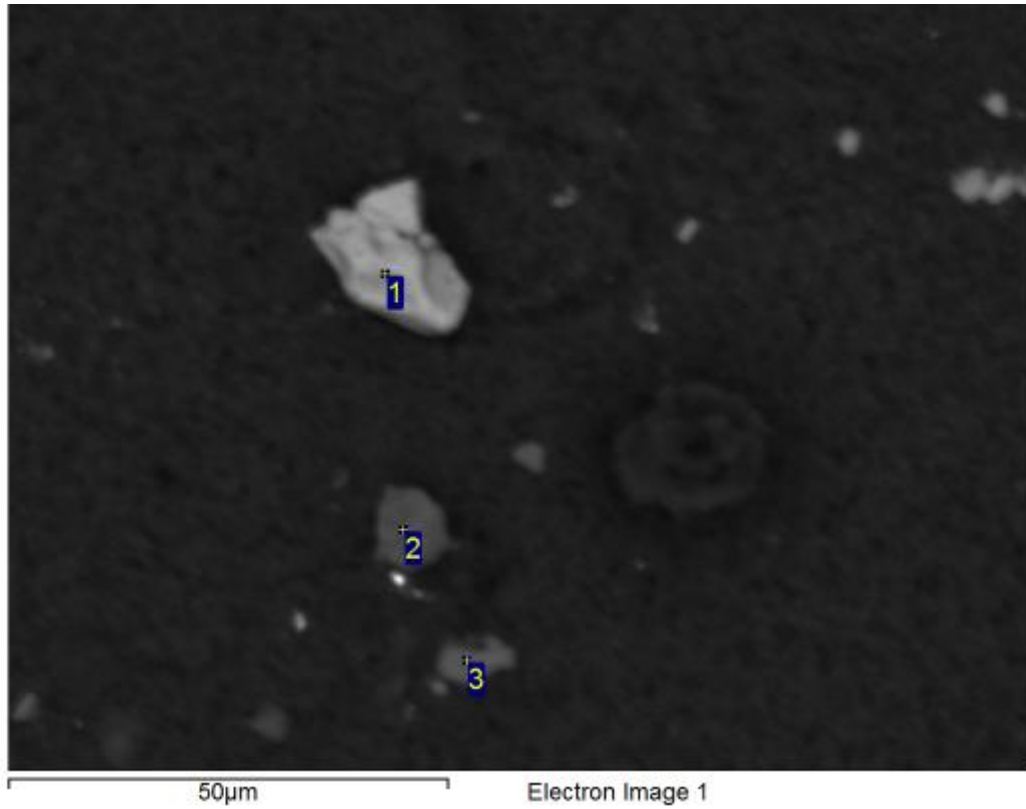
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	76.4	3.1	12.5	8.0	100.0	Fe-Al-Si-O
2	39.8			60.2	100.0	Fe Oxide

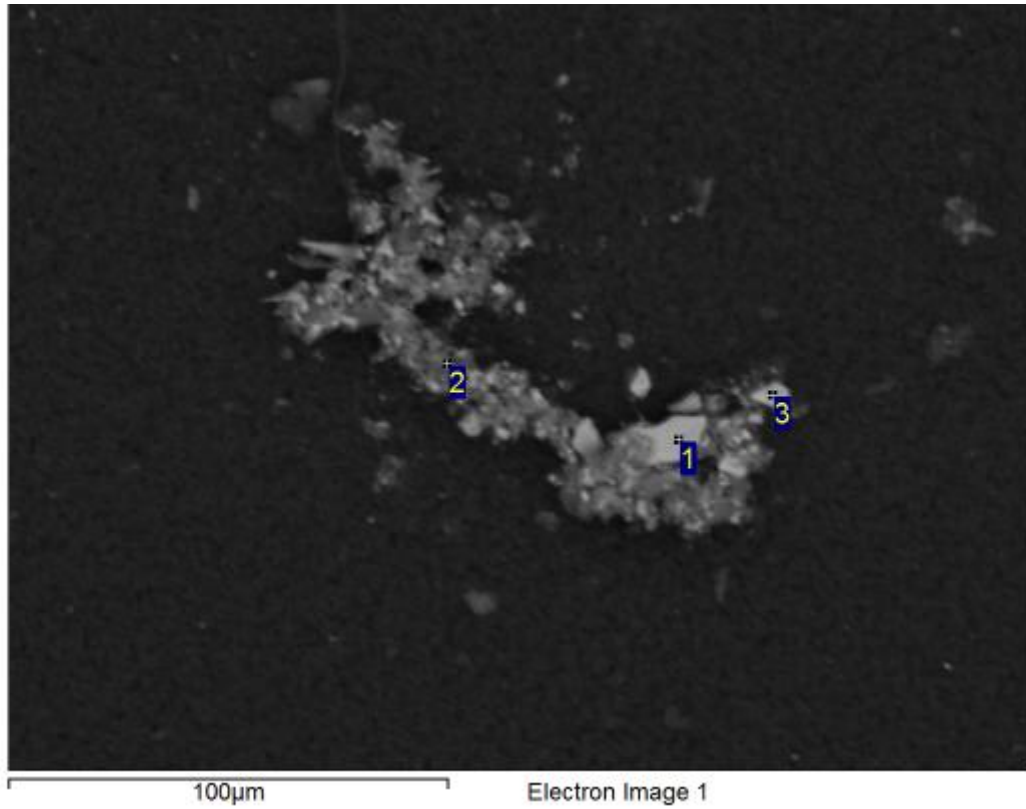
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	Ca	Fe	Total	Mineral ID
1	30.4		0.9	0.8		67.9	100.0	Fe Oxide
2	62.6			37.4			100.0	Quartz
3	61.4	7.8	7.4	22.7	0.3	0.4	100.0	Plagioclase

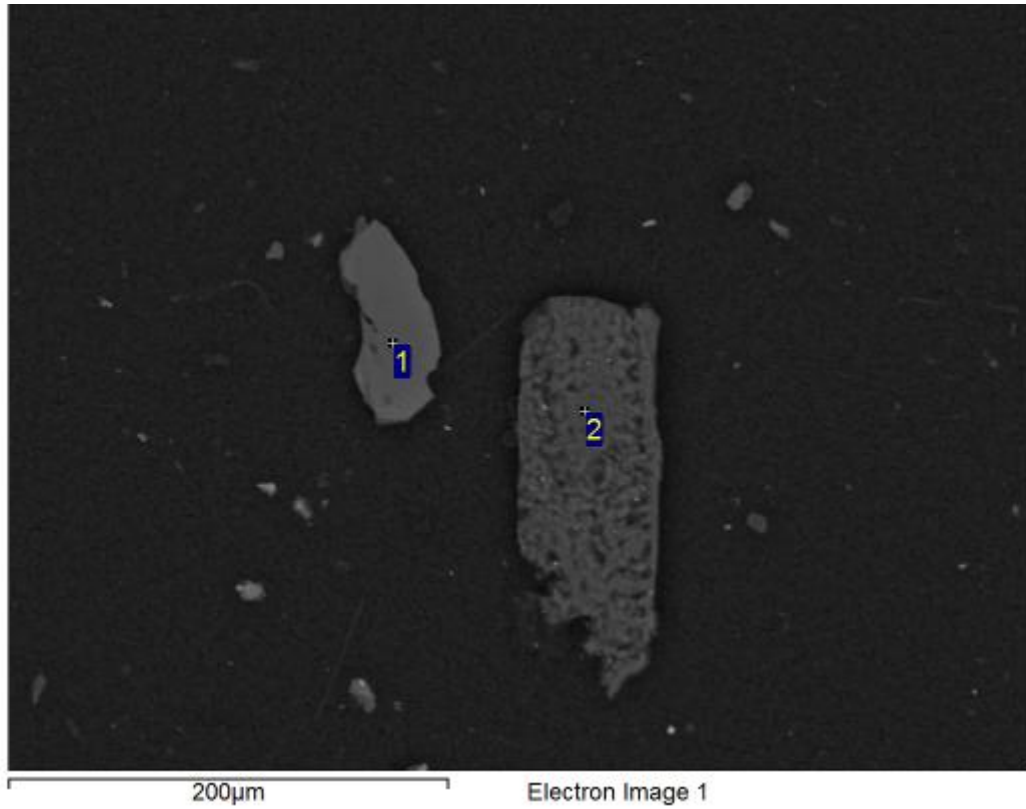
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Fe	Total	Mineral ID
1	39.5					60.5	100.0	Fe Oxide
2	60.7	0.4	11.2	12.2	1.1	14.4	100.0	Mica
3	36.1			0.3		63.5	100.0	Fe Oxide

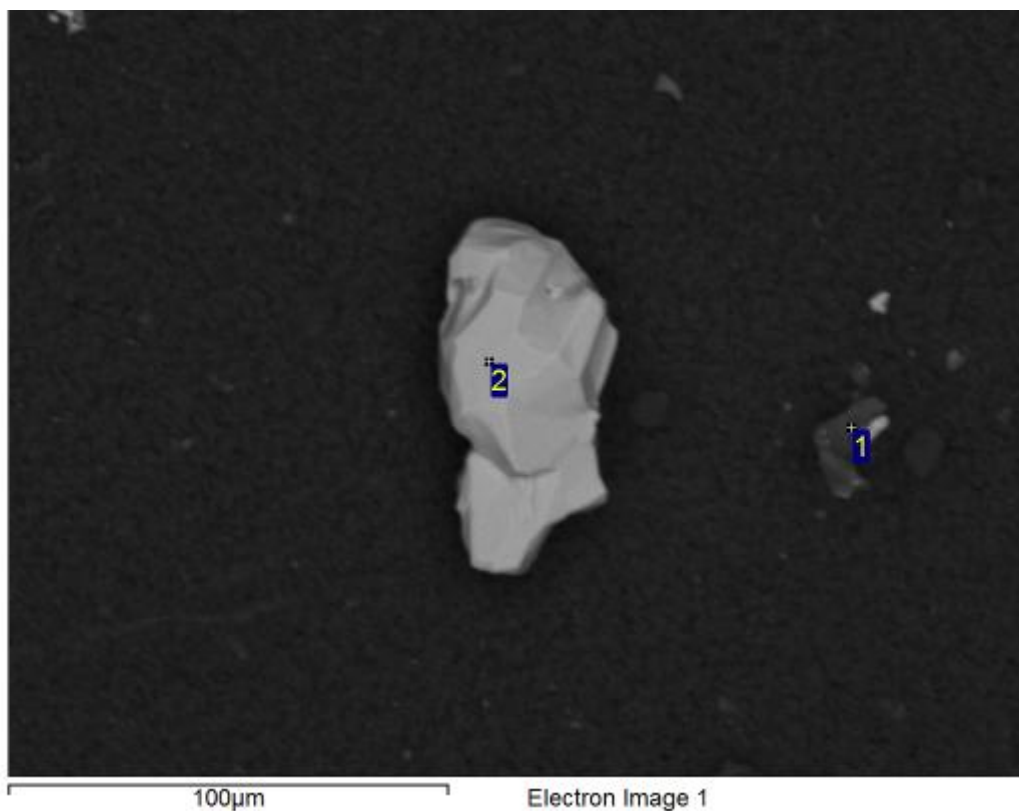
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	58.7	1.4	12.7	18.9	6.6	0.3	1.4	100.0	Mica
2	61.4		18.5	19.6			0.6	100.0	Kaolinite

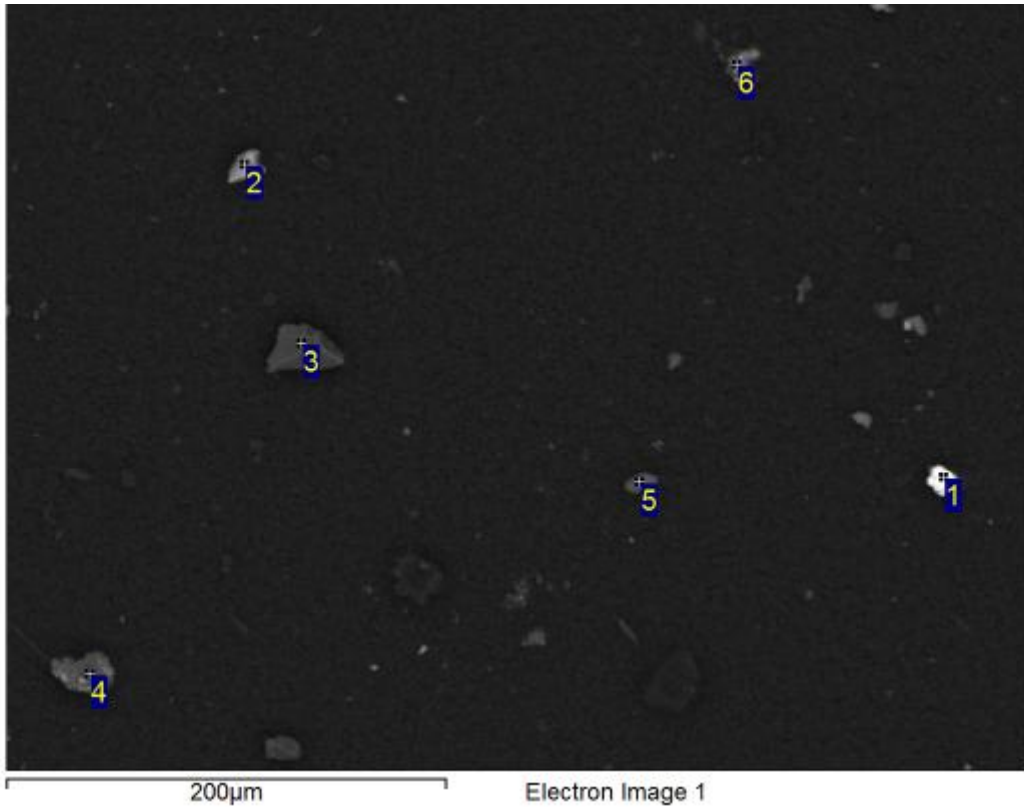
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	S	Ca	Fe	Zn	Total	Mineral ID
1	64.6	22.9	4.2	0.9	1.3	1.0	3.4	1.8	100.0	Al Oxide
2	38.2						61.8		100.0	Fe Oxide

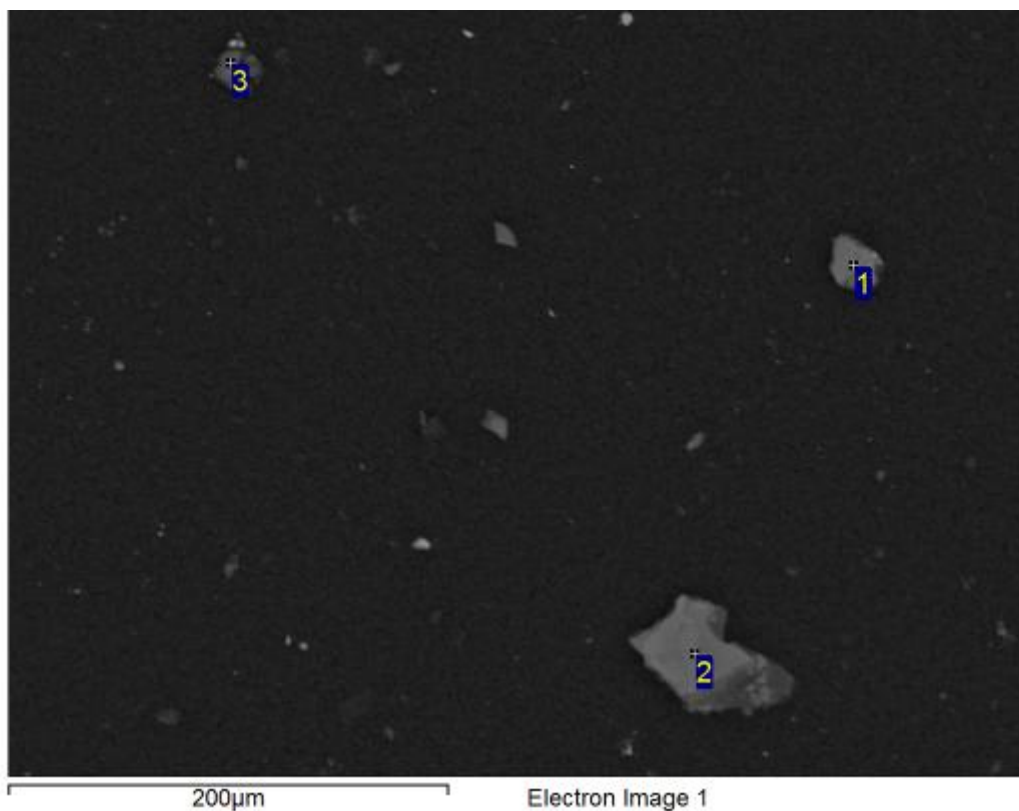
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ca	Ti	Fe	Pb	Total	Mineral ID
1	37.0					1.0			62.0	100.0	Pb Oxide
2	41.6		2.1	1.8				54.5		100.0	Fe Oxide
3	62.9			37.1						100.0	Quartz
4	65.5		13.2	14.4	1.8			5.1		100.0	Mica
5	65.6	0.6	12.6	12.5	2.7		0.3	5.7		100.0	Mica
6	57.9		6.8	6.4	0.3			28.6		100.0	Fe Oxide

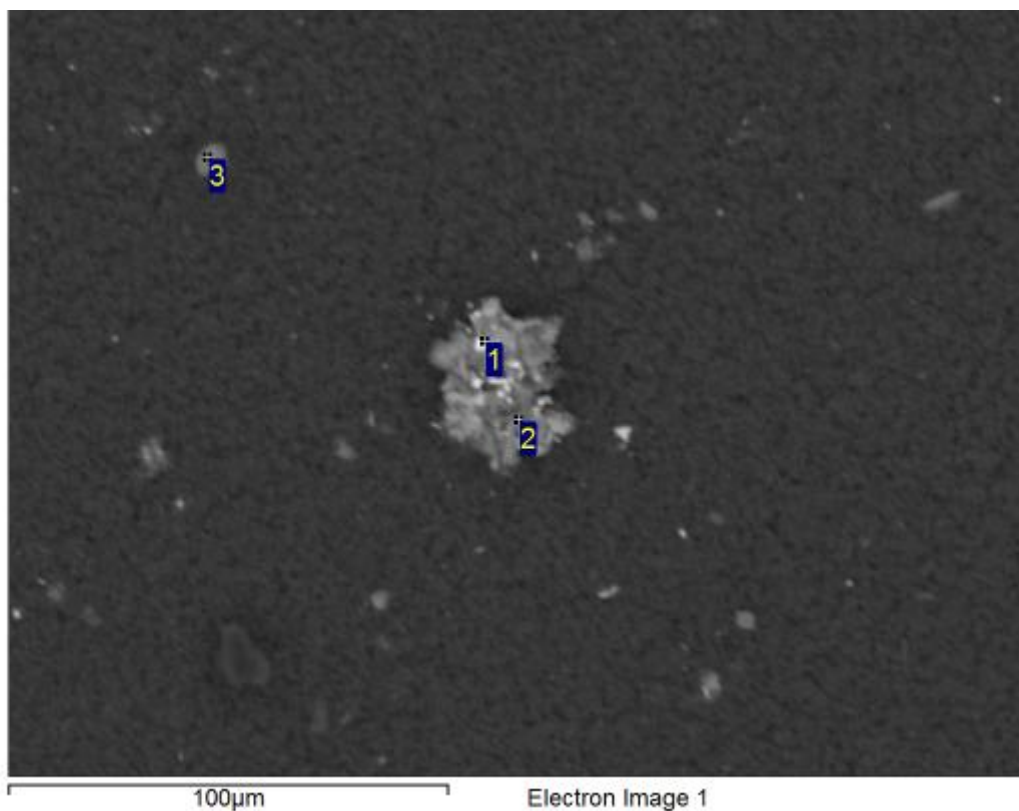
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ca	Ti	Fe	Total	Mineral ID
1	53.1		3.0	7.6	12.7	1.5			22.1	100.0	Mica
2	52.6		4.8	7.6	15.1	5.6		0.9	13.4	100.0	Mica
3	61.9	0.4	0.4	12.3	13.7	1.4	0.2	0.2	9.5	100.0	Clay

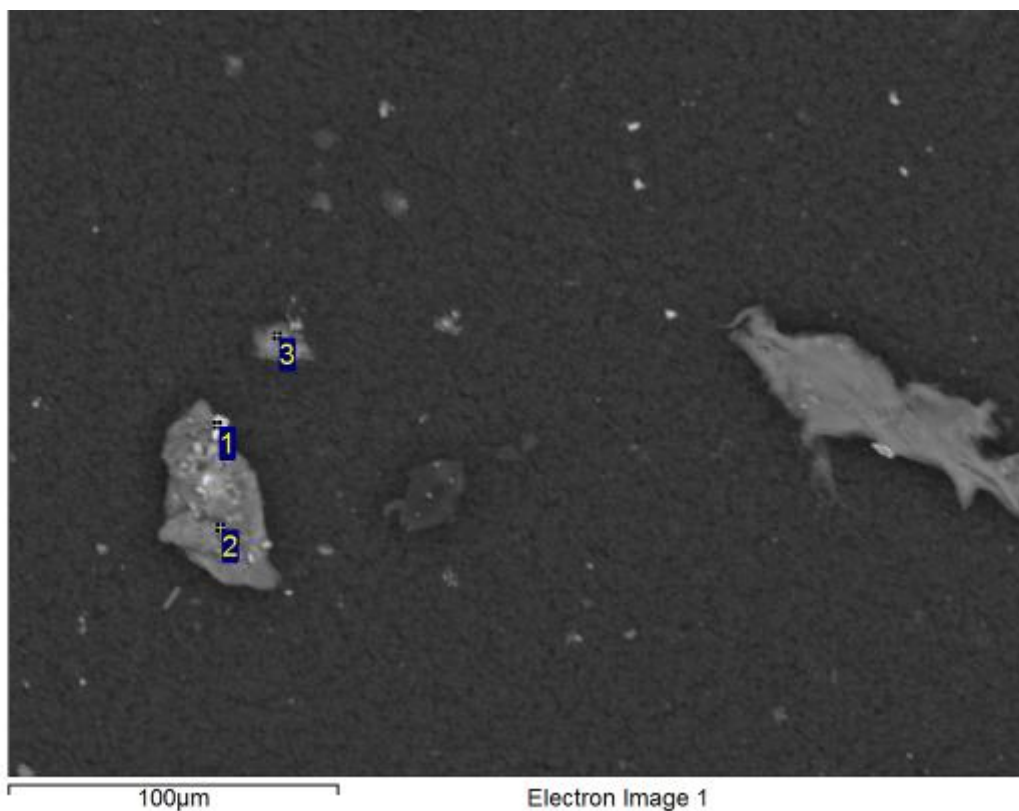
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	S	Ca	Ti	Mn	Fe	Total	Mineral ID
1	49.9			3.0	2.3	1.7		2.0		0.4	40.7	100.0	Fe Oxide
2	64.7	0.5	0.3	2.9	2.4	8.5	0.6	14.4		1.5	4.1	100.0	Apatite
3	65.3			14.9	14.0				0.4		5.4	100.0	Kaolinite

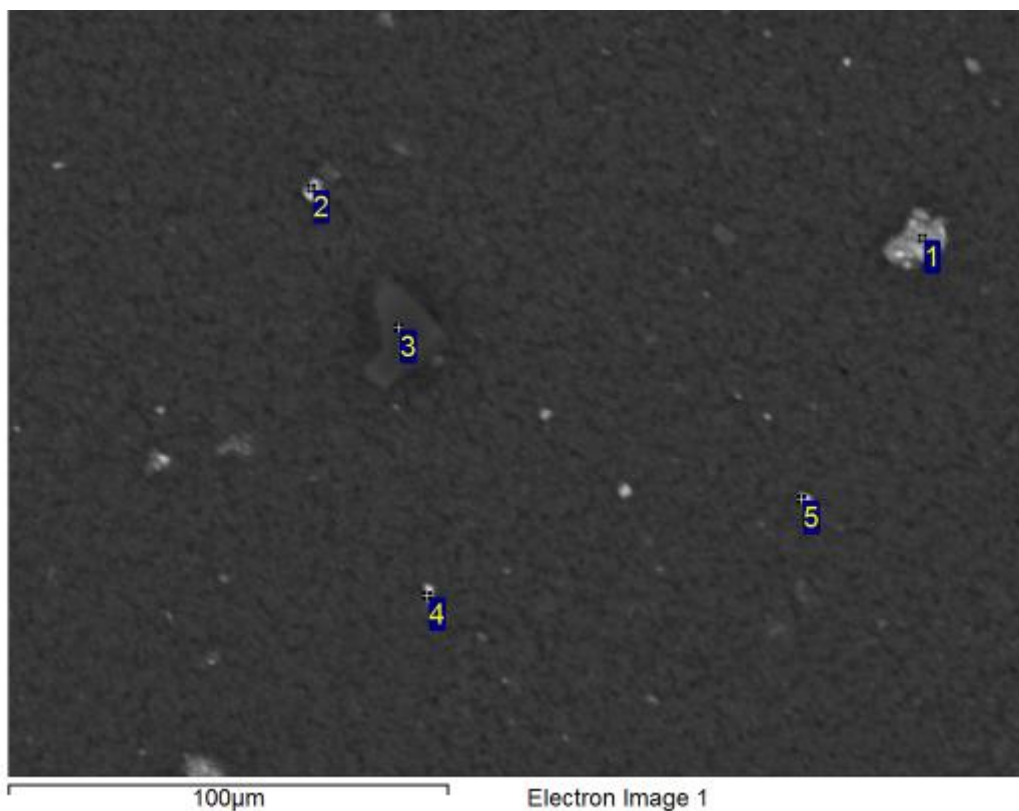
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	44.0		3.8	2.6			49.6	100.0	Fe Oxide
2	57.8		16.5	11.6	2.5	0.4	11.2	100.0	Mica
3	64.7	0.6	11.8	13.7	3.8		5.3	100.0	Mica

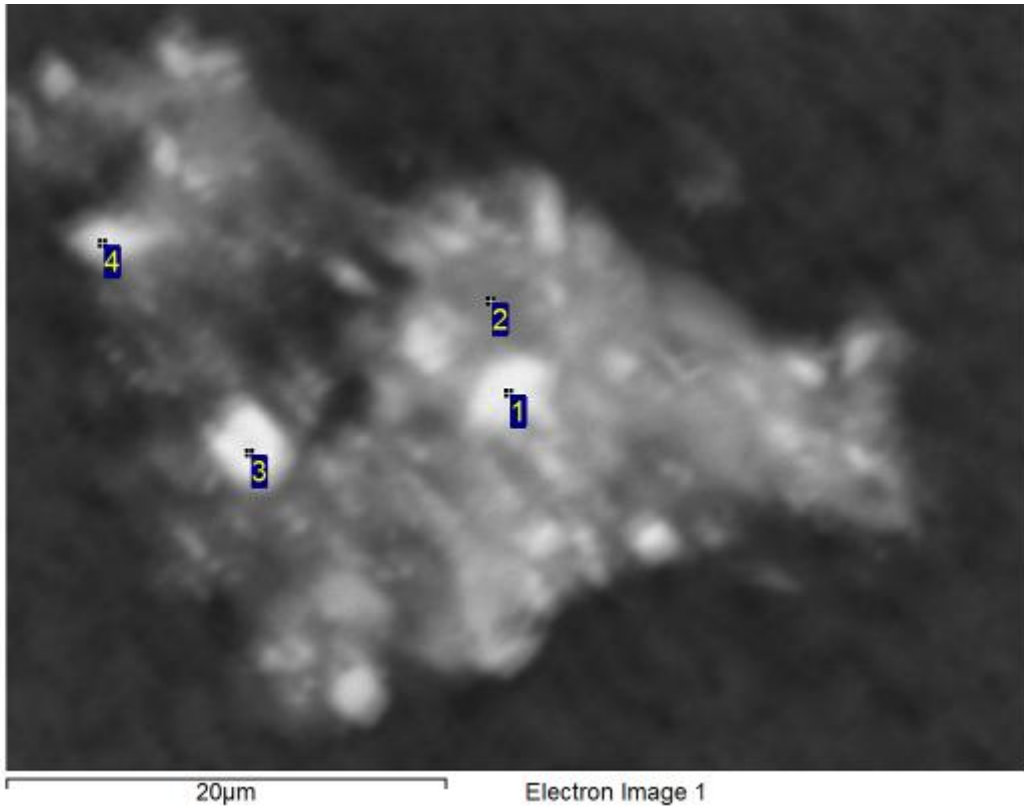
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	61.5	8.8	7.7	0.3	0.2	0.2	2.0	19.2	100.0	Kaolinite/Fe Oxide
2	49.7	0.3	0.3					49.6	100.0	Fe Oxide
3	87.5	3.8	3.6					5.1	100.0	Kaolinite/Fe Oxide
4	51.3	0.6	0.7					47.5	100.0	Fe Oxide
5	50.2	1.1	0.8					47.9	100.0	Fe Oxide

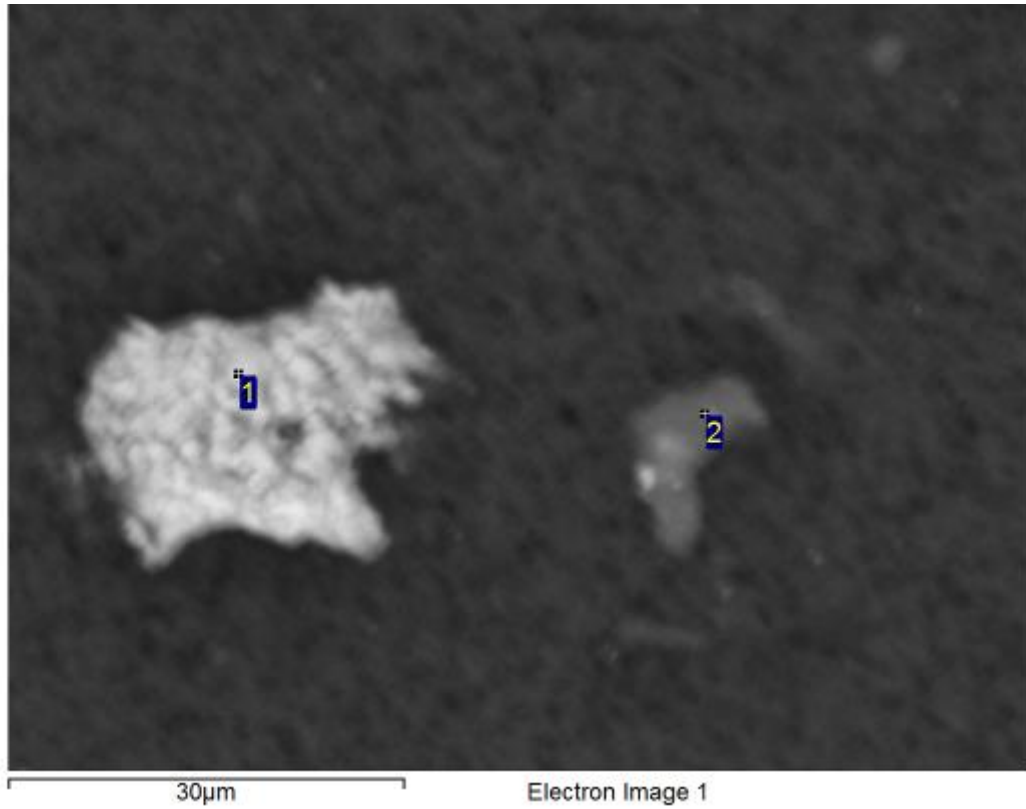
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Mn	Fe	Total	Mineral ID
1	51.4	5.0	4.6	0.2	0.3	38.6	100.0	Fe Oxide/Kaolinite
2	62.9	15.6	7.1	0.3		14.2	100.0	Fe-Al-O
3	45.6	2.1	1.8			50.5	100.0	Fe Oxide
4	54.9	2.2	2.3			40.6	100.0	Kaolinite/Fe Oxide

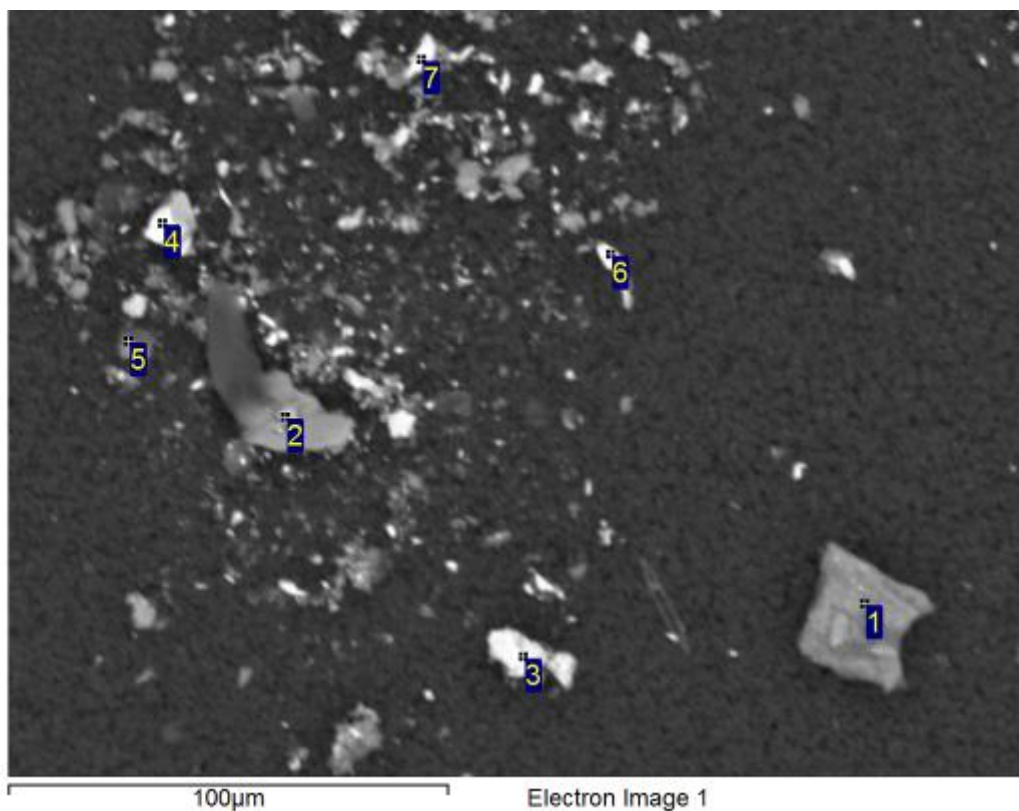
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	S	Ca	Ti	Cr	Fe	Total	Mineral ID
1	49.8	0.4	4.1						45.7	100.0	Fe Oxide
2	64.8	1.8	24.5	0.3	0.3	1.2	0.8	0.4	5.9	100.0	Clay

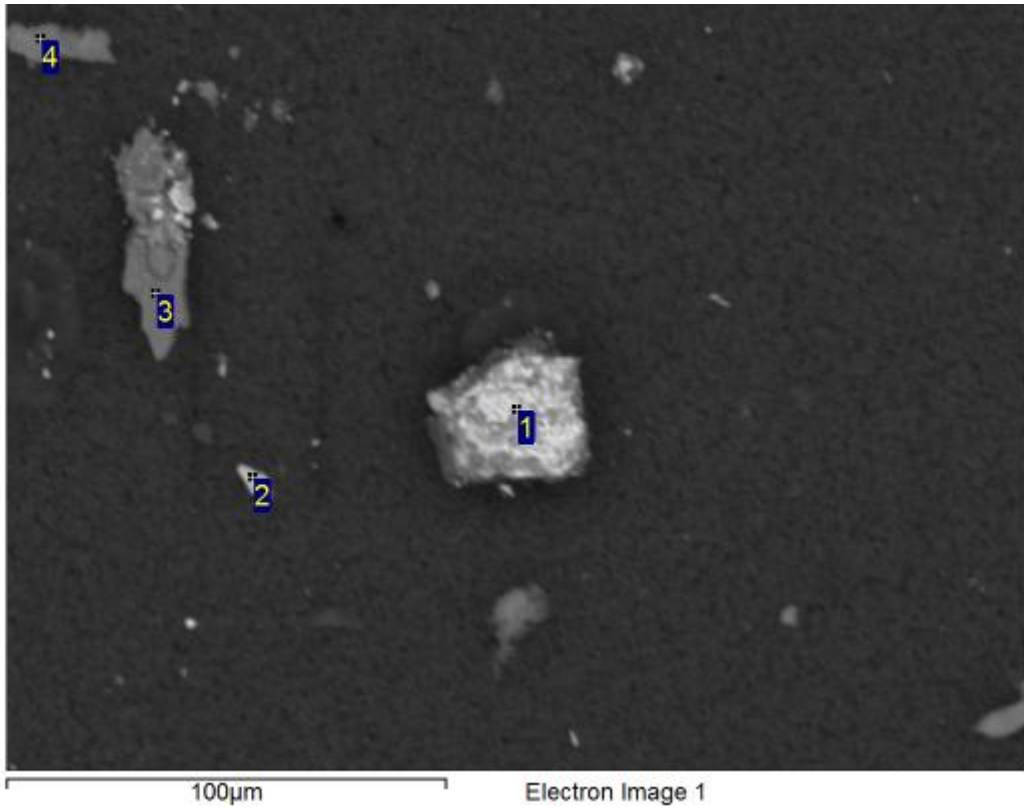
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ca	Ti	Fe	Total	Mineral ID
1	59.2	3.0	10.9	15.9	3.7		0.5	6.8	100.0	Mica
2	57.3	0.5	9.1	12.2	2.9			17.9	100.0	Mica
3	36.0		1.0	2.3		0.3		60.4	100.0	Fe Oxide
4	44.0							56.0	100.0	Fe Oxide
5	70.1		13.2	13.6				3.1	100.0	Kaolinite
6	34.0		0.3	0.4				65.3	100.0	Fe Oxide
7	48.7		4.0	3.7				43.7	100.0	Kaolinite/Fe Oxide

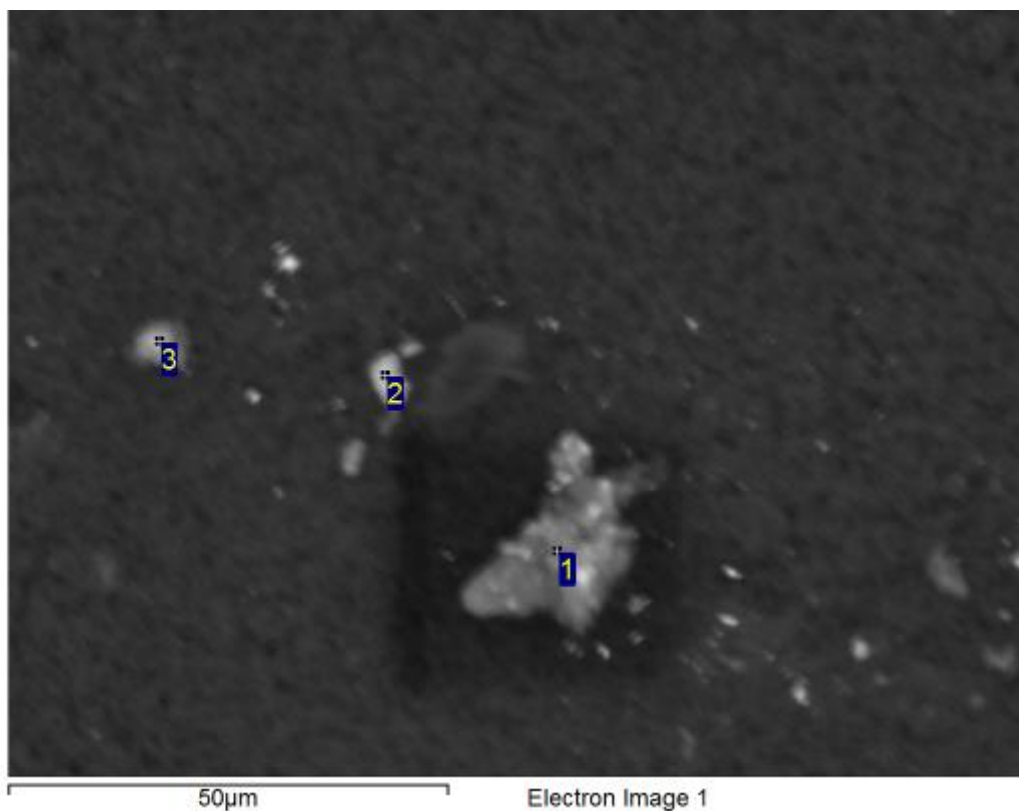
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	26.4			2.2	1.7			69.7	100.0	Fe Oxide
2	47.8			0.5	0.4			51.2	100.0	Fe Oxide
3	55.0	0.6	0.5	15.4	19.8	7.0	0.3	1.4	100.0	Mica
4	63.0	0.4	0.5	13.3	16.9	4.6		1.3	100.0	Mica

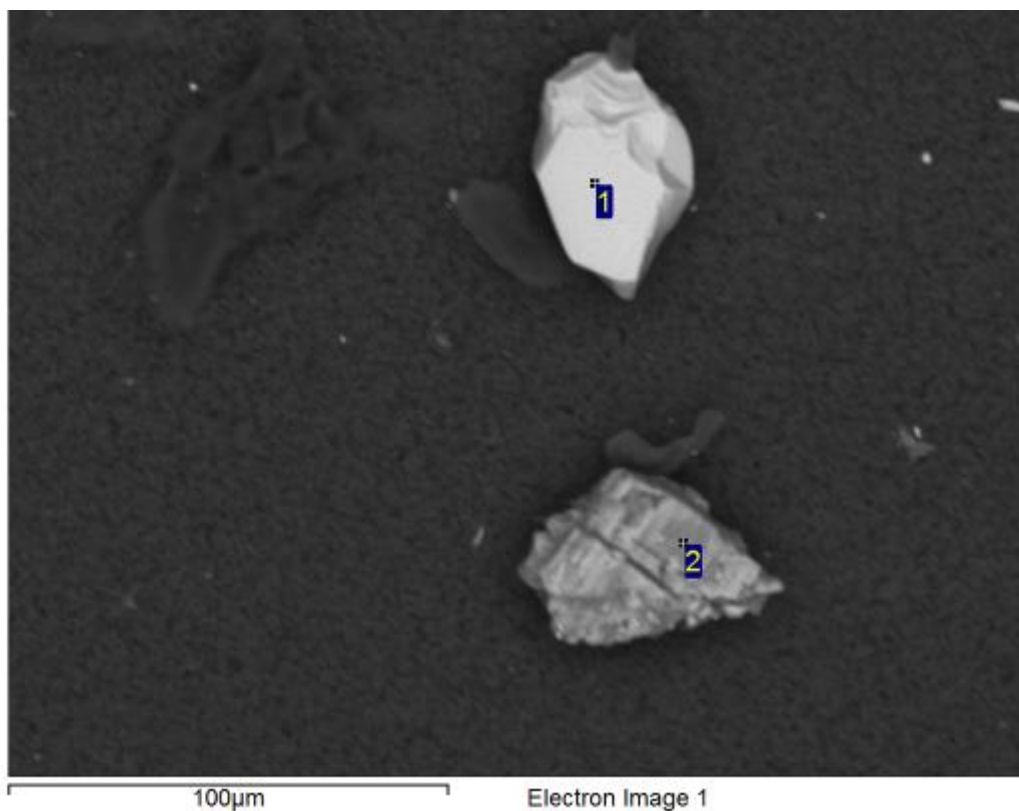
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	59.1	0.3	11.5	11.5	0.3	1.1	0.2	0.3	2.0	13.6	100.0	Kaolinite/Fe Oxide
2	41.8		1.9	2.1						54.2	100.0	Fe Oxide
3	44.1		3.1	1.7	0.8				0.4	49.9	100.0	Fe Oxide

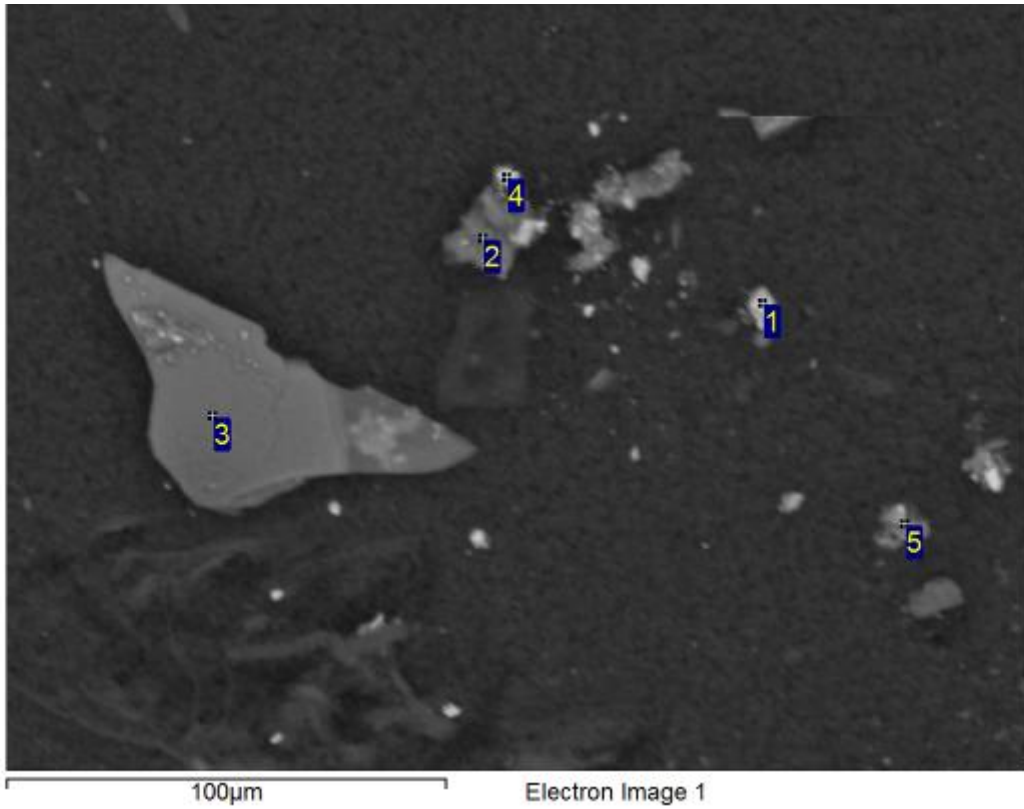
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	Ca	Ti	Fe	Total	Mineral ID
1	37.3						62.7	100.0	Fe Oxide
2	48.4	13.6	13.5	0.4	0.3	0.7	23.0	100.0	Kaolinite/Fe Oxide

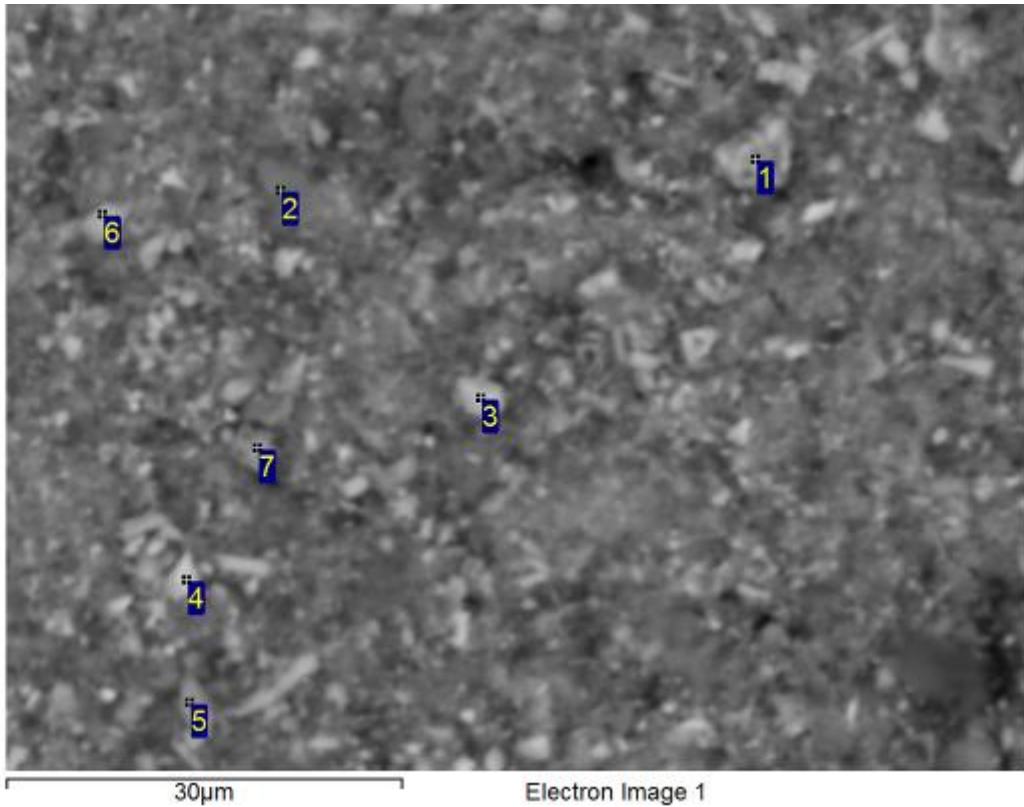
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	K	Mn	Fe	Total	Mineral ID
1	23.4		0.5	0.5			75.6	100.0	Fe Oxide
2	58.2		17.8	19.0	0.6		4.4	100.0	Kaolinite
3	57.9	0.4	16.9	18.9	4.7		1.2	100.0	Mica
4	70.0		5.4	9.5			15.1	100.0	Kaolinite/Fe Oxide
5	50.7		6.1	6.6		1.0	35.6	100.0	Kaolinite/Fe Oxide

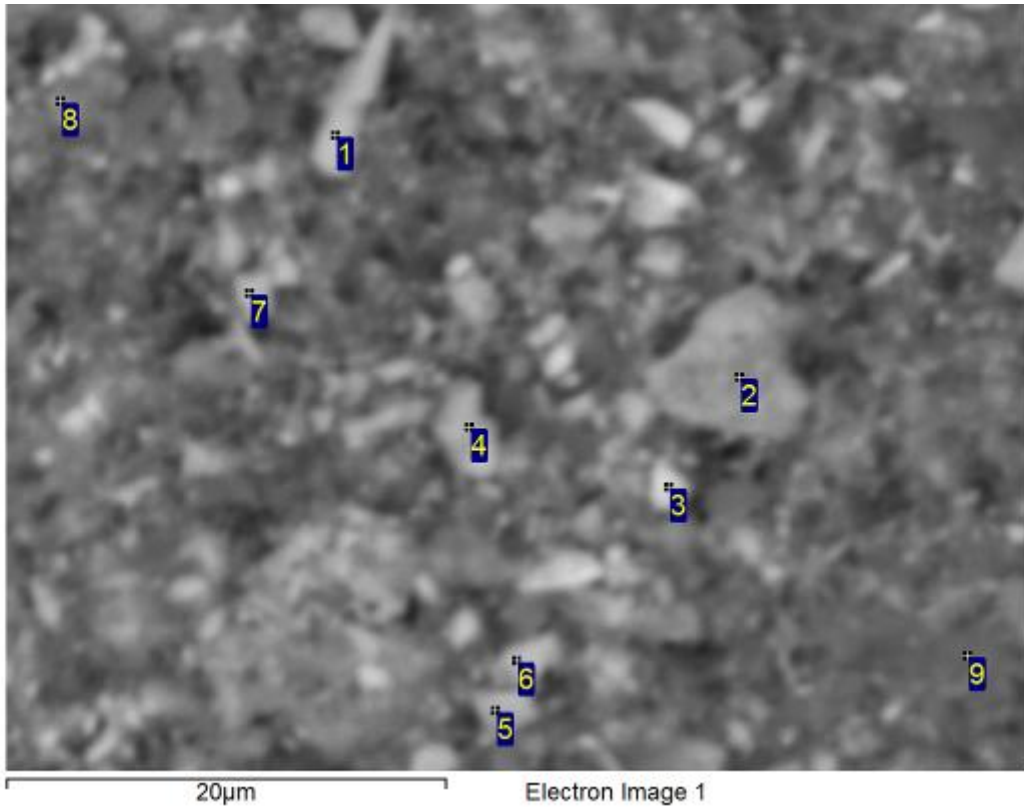
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	37.7		2.3	1.7					58.2	100.0	Fe Oxide
2	52.0	1.0	11.5	14.2		3.3	0.2	0.4	17.4	100.0	Mica
3	42.0		1.8	2.5	0.3				53.3	100.0	Fe Oxide
4	41.7		3.0	2.5		0.3			52.6	100.0	Fe Oxide
5	51.3		9.5	6.4	0.3	0.3			32.1	100.0	Fe Oxide/Kaolinite
6	45.5		3.3	3.6		0.2			47.4	100.0	Fe Oxide
7	48.3		4.9	4.3	0.6	0.3		0.3	41.2	100.0	Fe Oxide

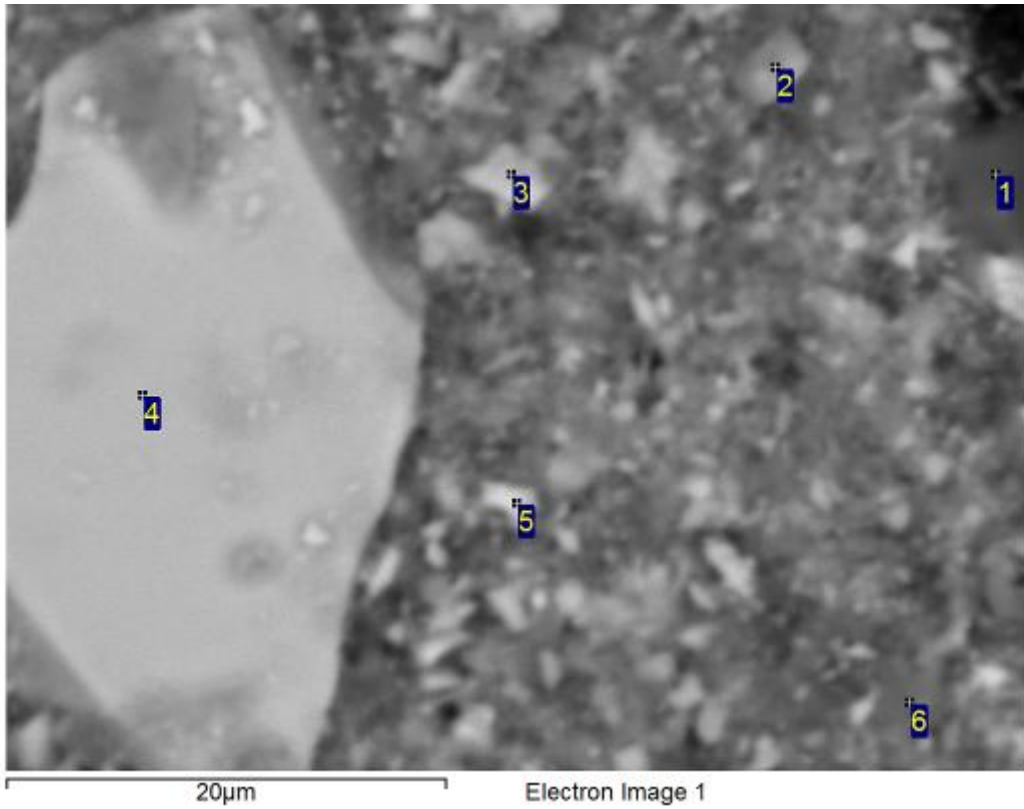
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Mn	Fe	Cu	Total	Mineral ID
1	51.1		3.1	2.9				43.0		100.0	Fe Oxide
2	38.1		5.5	3.9	0.6		0.7	51.3		100.0	Fe Oxide
3	42.5		3.2	1.9				52.1	0.3	100.0	Fe Oxide
4	53.2	0.5	3.3	3.2	0.3		0.4	39.1		100.0	Fe Oxide
5	50.9		2.9	3.1		0.2		42.9		100.0	Fe Oxide
6	48.7		2.5	3.5		0.3		44.9		100.0	Fe Oxide
7	50.7		3.4	2.8	0.8			42.4		100.0	Fe Oxide
8	48.7		7.9	6.6		0.2	0.3	36.2		100.0	Fe Oxide//Kaolinite
9	47.5		12.6	13.4		0.3	0.5	25.8		100.0	Fe Oxide/Kaolinite

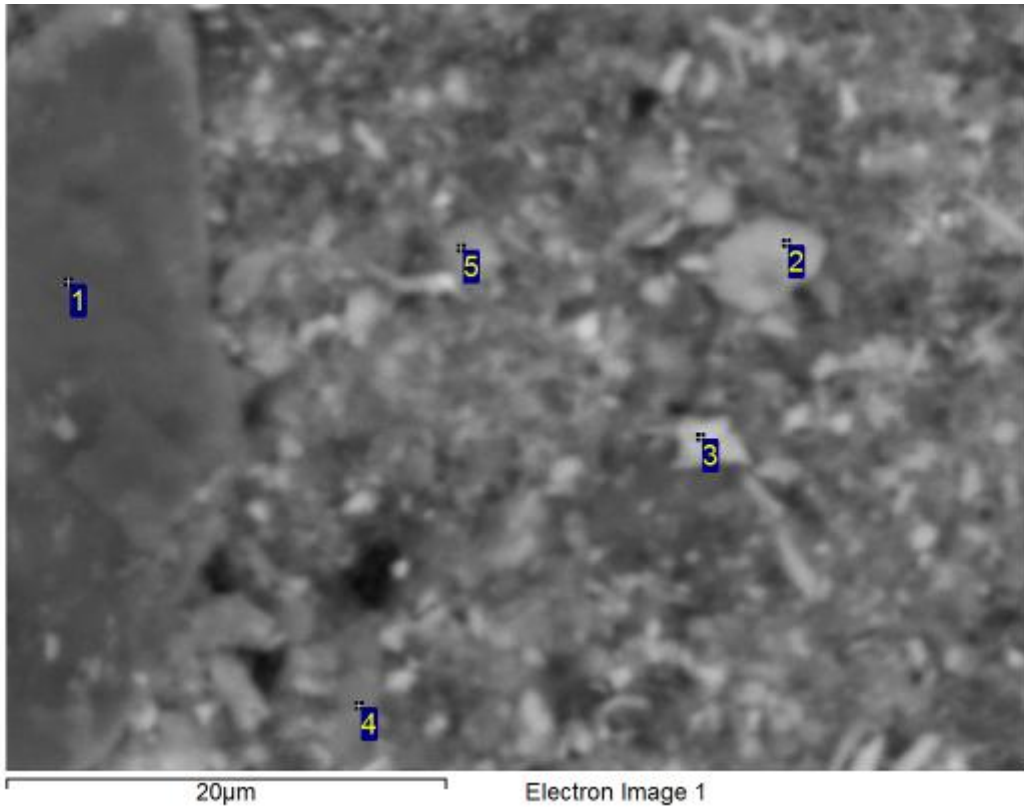
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	56.4	8.6	7.8	0.4	0.7	0.2	0.7	25.2	100.0	Fe Oxide/Kaolinite
2	51.2	8.8	6.1	0.4	0.4			33.2	100.0	Fe Oxide/Kaolinite
3	47.6	3.5	2.5		0.2			46.2	100.0	Fe Oxide
4	34.3	0.3						65.4	100.0	Fe Oxide
5	46.5	3.9	3.9				0.3	45.4	100.0	Fe Oxide
6	47.8	11.3	10.1		0.3			30.6	100.0	Fe Oxide/Kaolinite

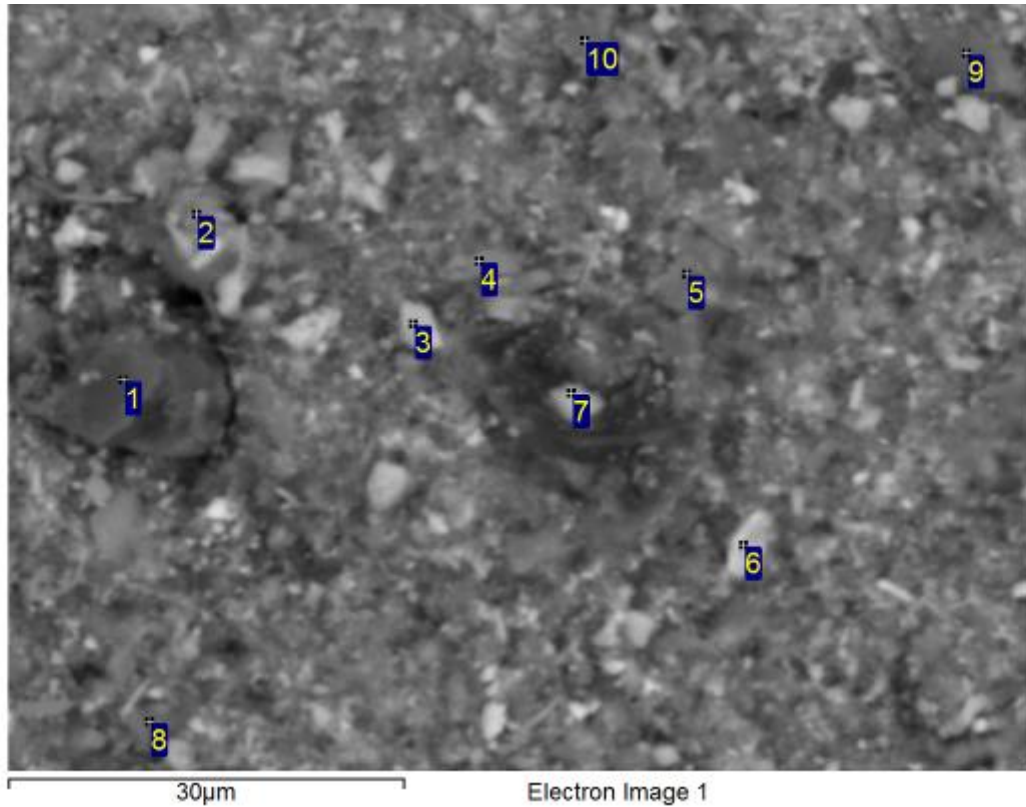
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Ti	Cr	Mn	Fe	Cu	Total	Mineral ID
1	54.3	14.7	16.3		1.7				13.0		100.0	Fe Oxide/Clay/Mica mixture
2	51.6	2.9	2.2	0.3					42.9		100.0	Fe Oxide/Clay mixture
3	49.5	5.5	4.2	0.9				0.3	39.6		100.0	Fe Oxide/Clay mixture
4	49.6	9.9	14.5		1.0				24.4	0.5	100.0	Fe Oxide/Clay/Mica mixture
5	56.2	8.9	7.1		0.3	0.3	0.3		27.0		100.0	Fe Oxide/Clay/Mica mixture

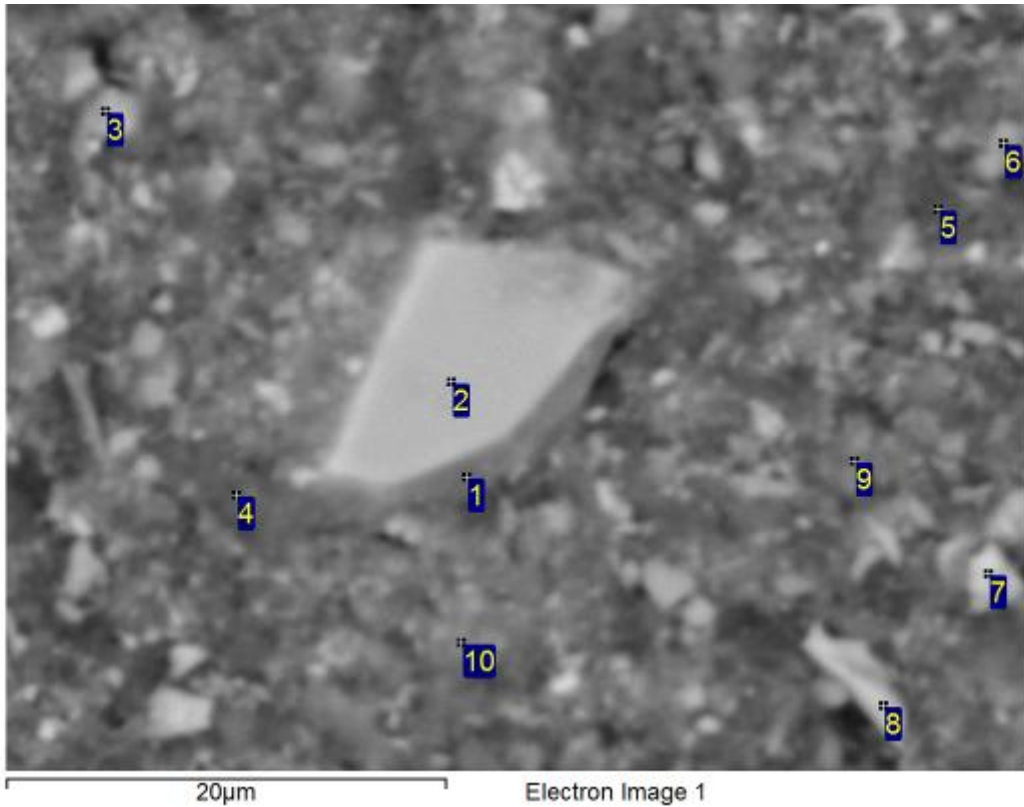
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	61.2				38.4						0.4	100.0	Fe Oxide/Clay mixture
2	57.6			9.5	9.4		0.3				23.2	100.0	Fe Oxide/Clay/Mica mixture
3	50.2			4.2	4.9	0.4	0.2			0.5	39.5	100.0	Fe Oxide/Clay/Mica mixture
4	61.3	4.1		8.2	13.9		0.2	0.7		0.3	11.3	100.0	Fe Oxide/Clay/Albite mixture
5	56.1		0.3	9.8	9.0		1.4			0.4	22.9	100.0	Fe Oxide/Clay/Mica mixture
6	9.9			1.7	2.5						85.9	100.0	Fe Oxide/Clay mixture
7	52.1			4.4	3.6					0.7	39.1	100.0	Fe Oxide/Clay mixture
8	58.8		0.4	10.9	11.8		1.4				16.6	100.0	Fe Oxide/Clay/Mica mixture
9	59.9			13.6	13.7		0.5				12.2	100.0	Fe Oxide/Clay/Mica mixture
10	49.2		0.4	12.1	11.0	0.4	1.0		0.3	0.3	25.4	100.0	Fe Oxide/Clay/Mica mixture

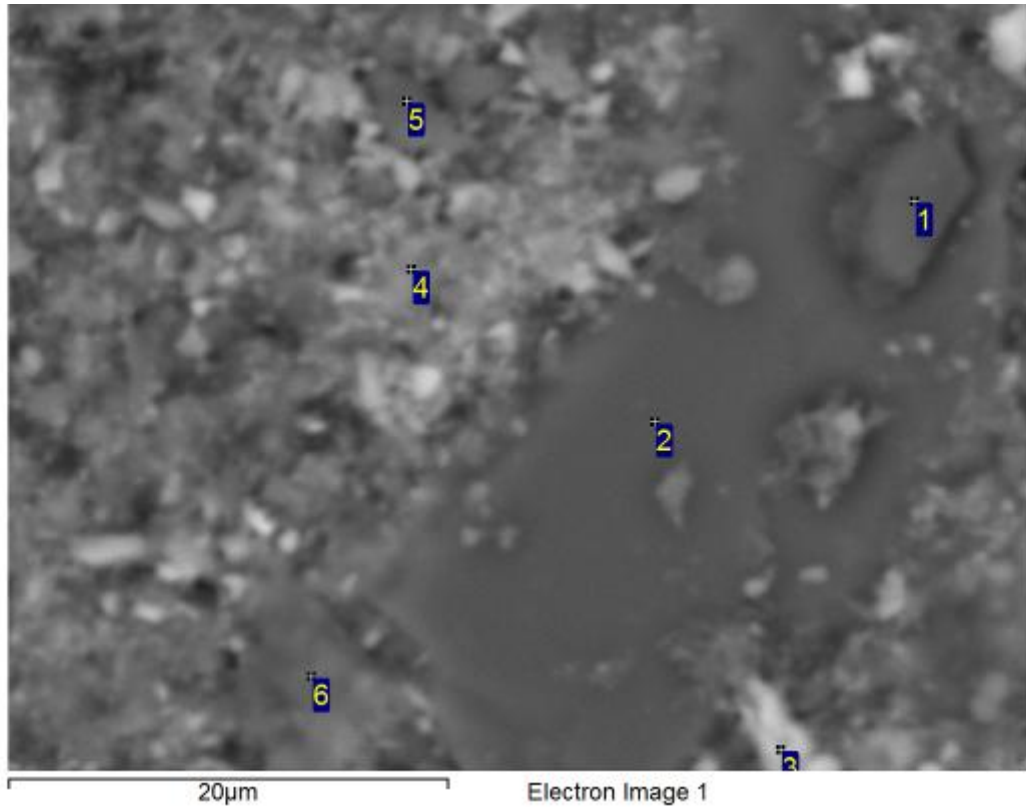
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	14.1	2.8	2.6						80.5	100.0	Fe Oxide/Clay mixture
2	33.8								66.2	100.0	Fe Oxide mixture
3	49.0	3.5	2.9						44.6	100.0	Fe Oxide/Clay mixture
4	48.7	13.4	14.2		0.6				23.0	100.0	Fe Oxide/Clay/Mica mixture
5	55.2	11.9	11.0		0.4	0.2		0.4	20.9	100.0	Fe Oxide/Clay/Mica mixture
6	49.8	6.0	5.7		0.3			0.3	37.9	100.0	Fe Oxide/Clay/Mica mixture
7	39.7	2.5	2.0						55.7	100.0	Fe Oxide/Clay mixture
8	31.9	1.4	1.2						65.4	100.0	Fe Oxide/Clay mixture
9	54.3	7.1	7.4		0.6		6.2	1.5	22.8	100.0	Fe Oxide/Clay/Mica/Rutile mixture
10	49.2	7.6	9.2	0.3				1.5	32.2	100.0	Fe Oxide/Clay mixture

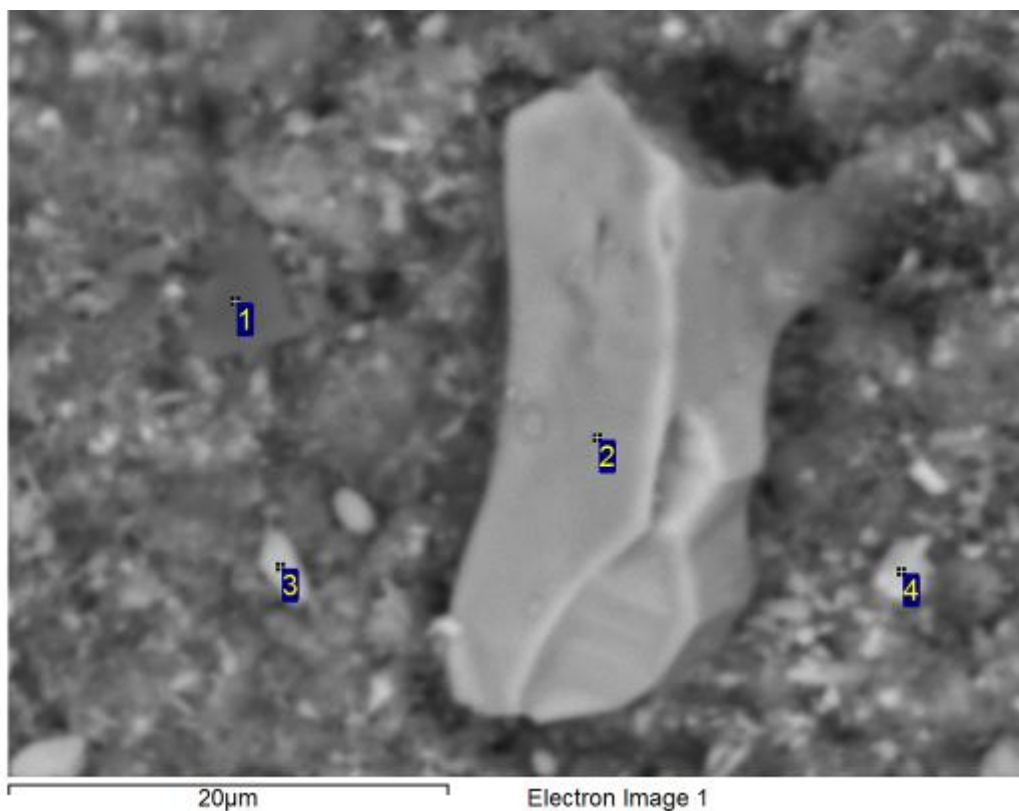
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	59.0	0.3	0.3	16.5	19.1		3.2				1.5	100.0	Fe Oxide/Clay/Mica mixture
2	51.3	0.6	0.5	16.7	20.9		7.4		0.3		2.4	100.0	Fe Oxide/Clay/Mica mixture
3	35.7			2.8	3.0		0.4				58.2	100.0	Fe Oxide/Clay/Mica mixture
4	54.2			7.2	5.8	0.3	0.3	0.2		0.5	31.6	100.0	Fe Oxide/Clay/Mica mixture
5	59.8			12.1	12.3	0.3	0.6			0.3	14.7	100.0	Fe Oxide/Clay/Mica mixture
6	47.1	0.4	0.5	14.0	13.9		2.3			0.4	21.4	100.0	Fe Oxide/Clay/Mica mixture

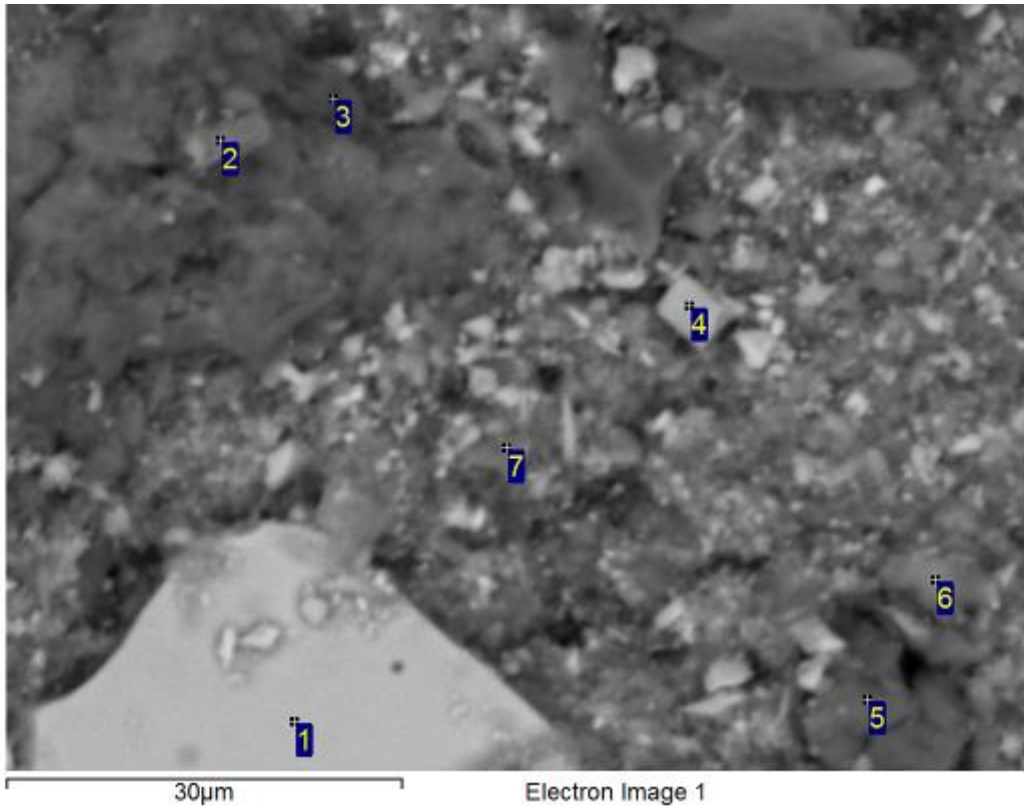
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Mn	Fe	Total	Mineral ID
1	59.3	15.2	16.1	0.3	0.6	8.4	100.0	Fe Oxide/Clay/Mica mixture
2	45.2	0.5	0.3			54.0	100.0	Fe Oxide/Clay mixture
3	52.8	3.7	3.8	0.2		39.5	100.0	Fe Oxide/Clay/Mica mixture
4	50.0	2.6	2.4			45.1	100.0	Fe Oxide/Clay mixture

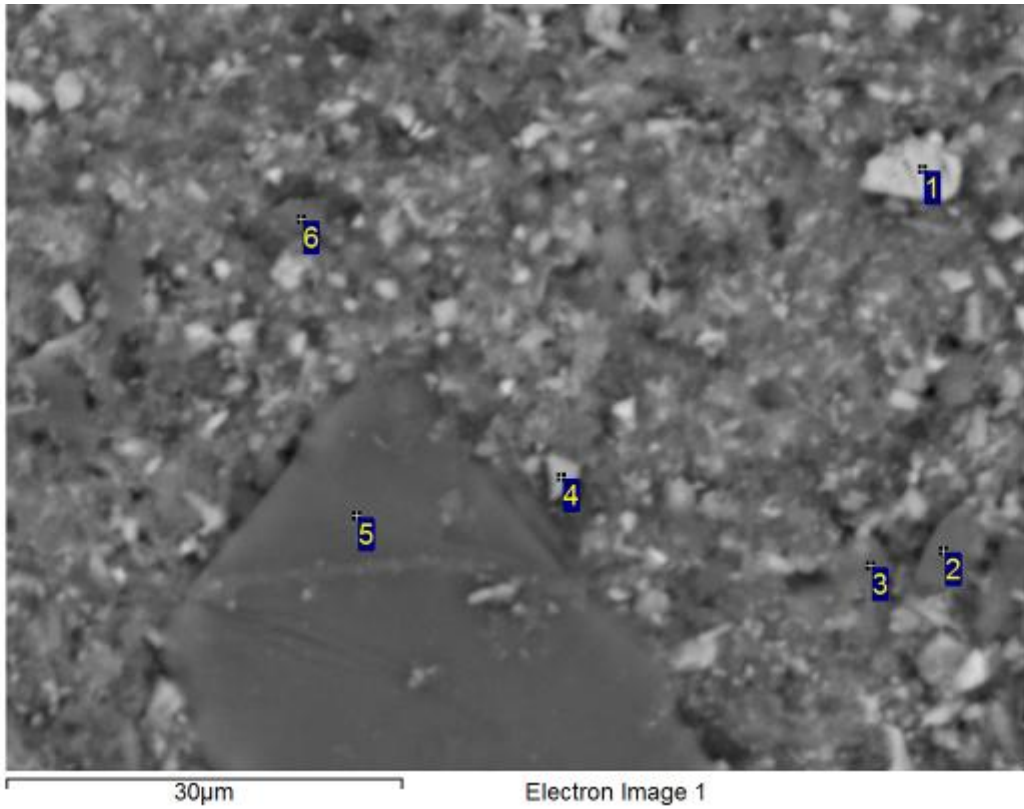
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	36.1									63.9	100.0	Fe Oxide
2	61.8		0.4	11.7	12.3	1.8				12.1	100.0	Fe Oxide/Kaolinite
3	65.1			25.9	4.7	1.1				3.3	100.0	Gibbsite
4	45.8			0.4	1.9					51.9	100.0	Fe Oxide
5	61.4	0.5	1.2	5.7	23.8	0.3	2.7	0.4	0.2	3.8	100.0	Quartz/Kaolinite
6	61.4		0.6	11.1	13.2	0.3	3.3	0.2	0.2	9.7	100.0	Kaolinite
7	46.3			5.0	20.8	0.4				27.4	100.0	Quartz/Kaolinite/Fe Oxide

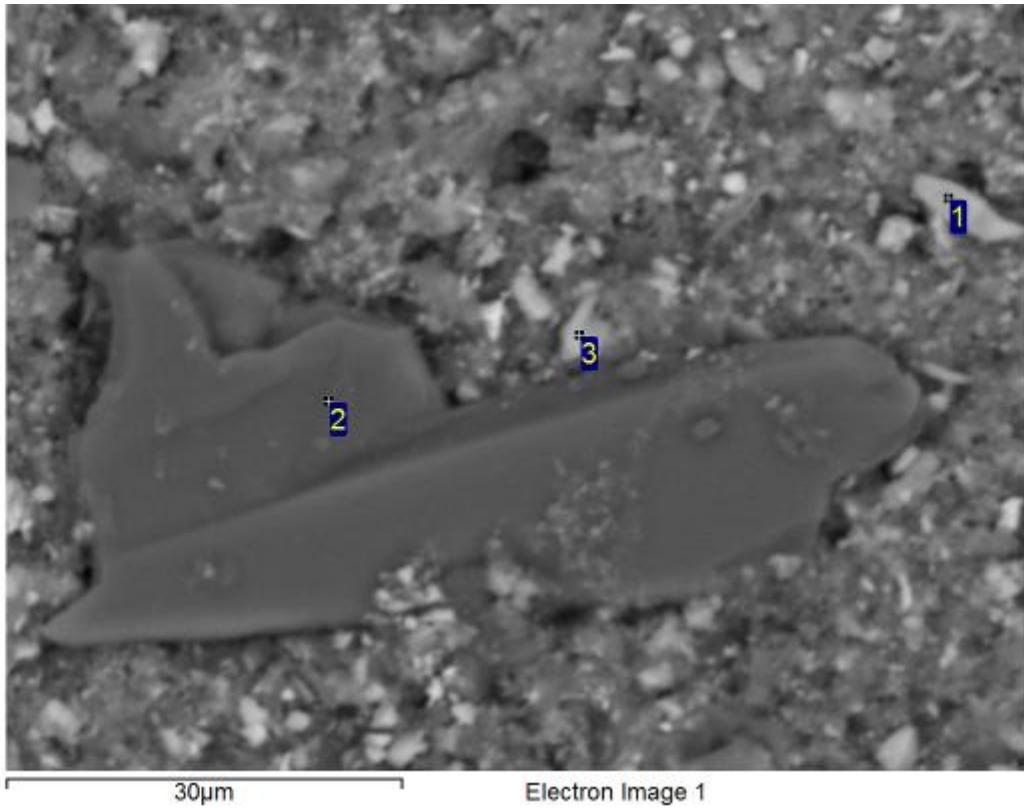
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	38.0				0.3				61.7	100.0	Fe Oxide
2	59.7			3.5	27.7	0.4			8.8	100.0	Quartz/Fe Oxide
3	52.4			5.1	28.5	1.3		0.3	12.4	100.0	Quartz/Fe Oxide
4	47.3			2.5	2.3				47.9	100.0	Fe Oxide
5	50.2	0.4	0.8	14.4	18.8	5.9	0.3		9.3	100.0	Mica
6	62.6			3.4	26.2	0.4			7.4	100.0	Quartz/Fe Oxide

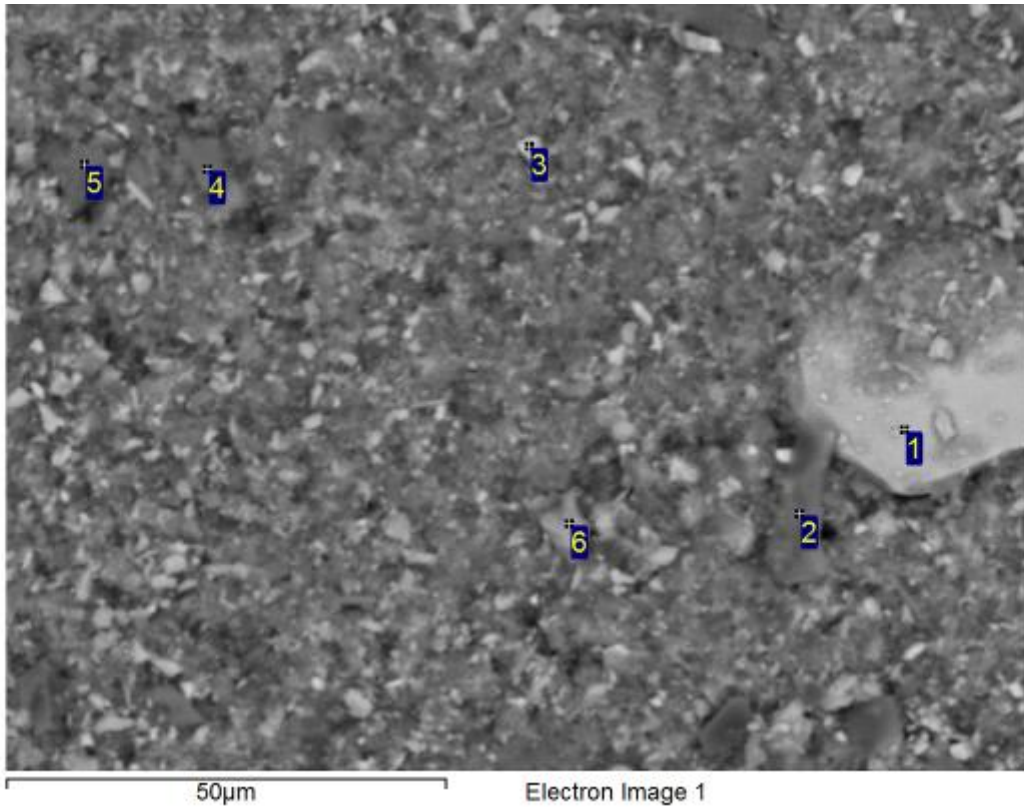
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	42.5		1.9	1.2	0.4			54.0	100.0	Fe Oxide
2	40.2	0.9	15.8	23.2		13.9		6.0	100.0	Mica
3	50.9	0.4	3.9	3.3	0.4	0.2	0.3	40.6	100.0	Fe Oxide

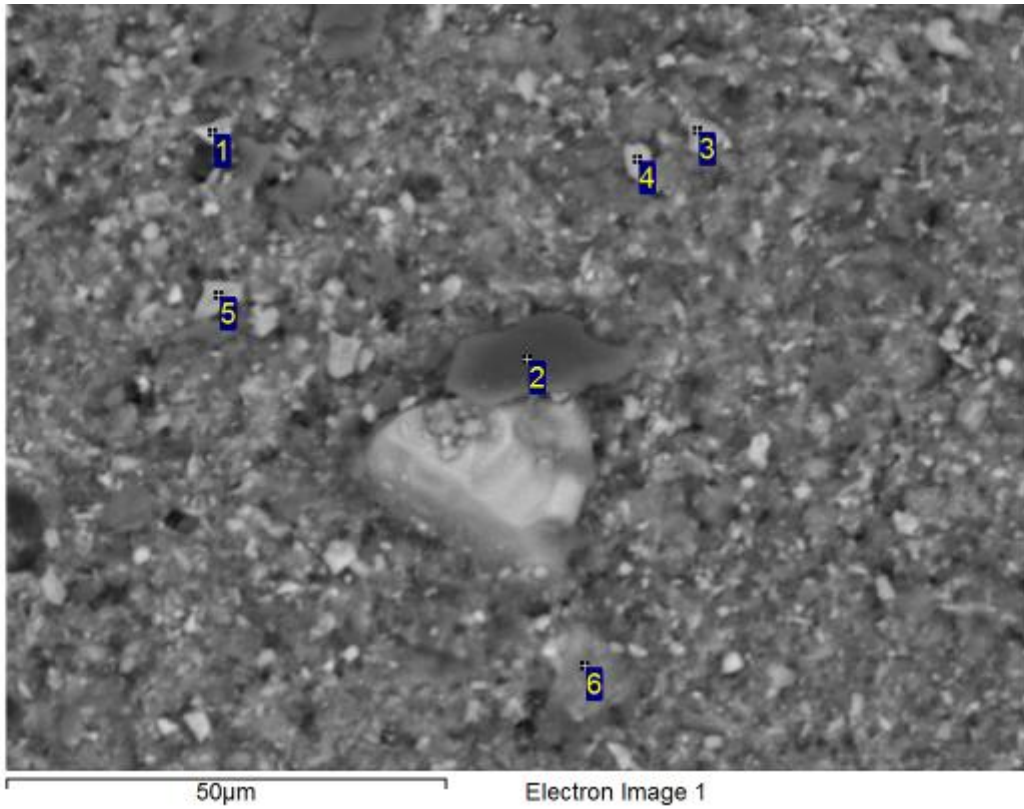
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	35.2			0.5	0.3					64.0	100.0	Fe Oxide
2	52.3	0.7	0.5	11.9	13.9		2.7			17.9	100.0	Fe Oxide/Kaolinite/Mica
3	36.4			2.4	1.7					59.5	100.0	Fe Oxide
4	55.5	0.5	0.7	11.6	17.7		3.1	0.2	0.3	10.5	100.0	Fe Oxide/Kaolinite/Mica
5	55.8	0.4	0.3	14.5	16.2		2.5			10.3	100.0	Fe Oxide/Kaolinite/Mica
6	50.1			5.6	3.8	0.4		0.2		40.0	100.0	Fe Oxide

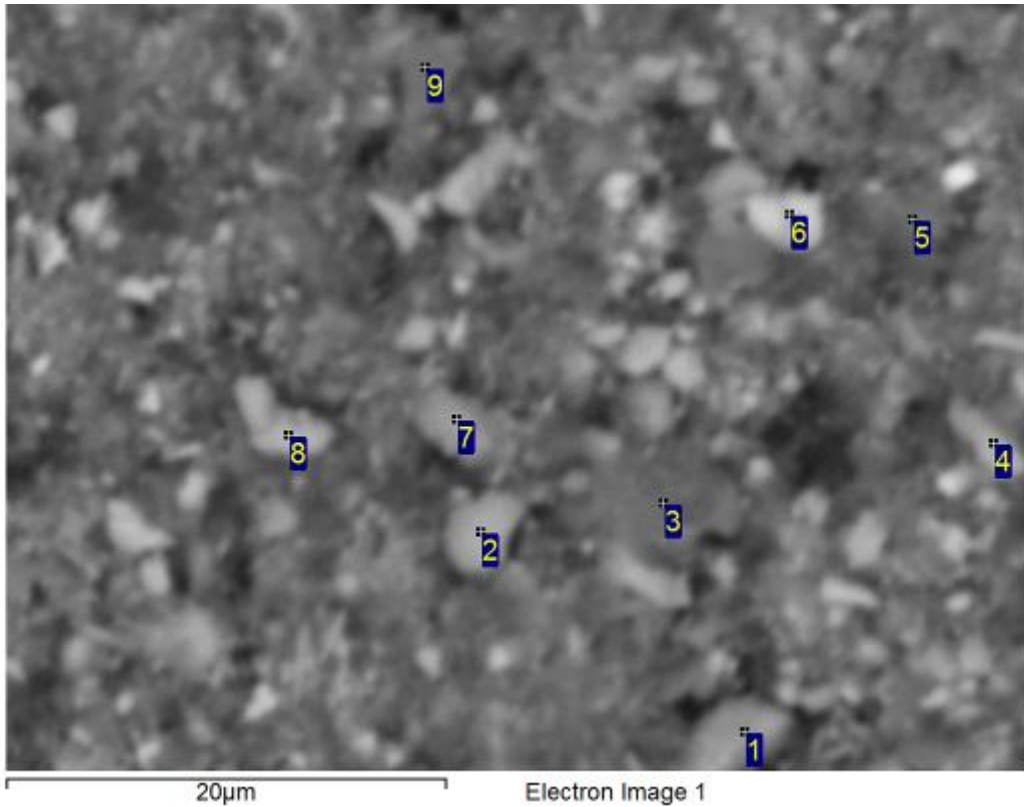
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Fe	Total	Mineral ID
1	44.8			1.9	1.8				51.5	100.0	Fe Oxide
2	60.4	0.4	1.0	12.5	16.0		4.3	0.2	5.2	100.0	Mica
3	51.6			5.4	5.1	0.3	0.3		37.3	100.0	Fe Oxide/Clay
4	45.9			1.4	1.4				51.3	100.0	Fe Oxide
5	36.9			2.9	3.1				57.0	100.0	Fe Oxide
6	43.3			6.0	5.1		0.5		45.0	100.0	Fe Oxide

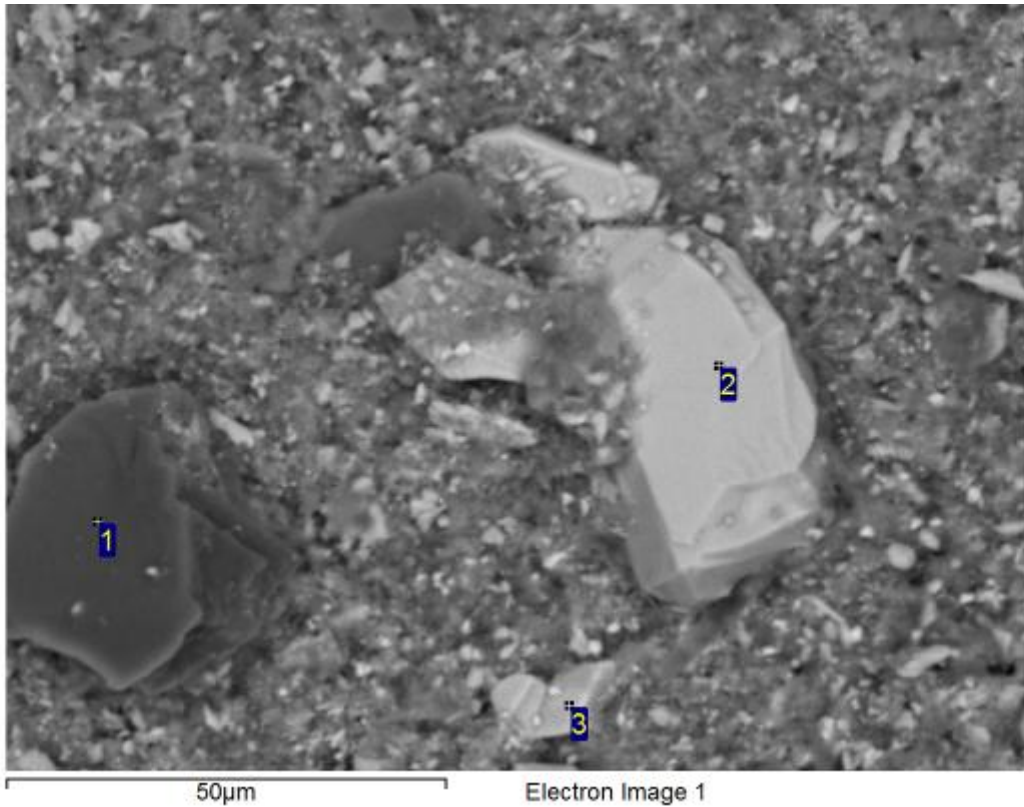
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ca	Mn	Fe	Total	Mineral ID
1	45.6			3.8	3.8		0.4			46.4	100.0	Fe Oxide
2	52.8		0.4	2.1	2.3	0.3			1.6	40.4	100.0	Fe Oxide
3	56.6	0.6	0.4	12.5	14.5		3.8			11.6	100.0	Fe Oxide/Kaolinite/Mica
4	53.7			5.4	5.5		0.3			35.1	100.0	Fe Oxide/Kaolinite
5	51.9			12.0	12.5	0.3	0.5		0.9	21.8	100.0	Fe Oxide/Kaolinite
6	40.0			3.8	3.6		0.4			52.3	100.0	Fe Oxide
7	55.6			8.9	4.1	0.5	0.2			30.8	100.0	Fe Oxide/Kaolinite
8	47.6			2.5	2.6	0.4			0.3	46.7	100.0	Fe Oxide
9	58.3			5.1	22.0	0.4	0.8	0.3		13.2	100.0	Quartz/Kaolinite/Fe Oxide

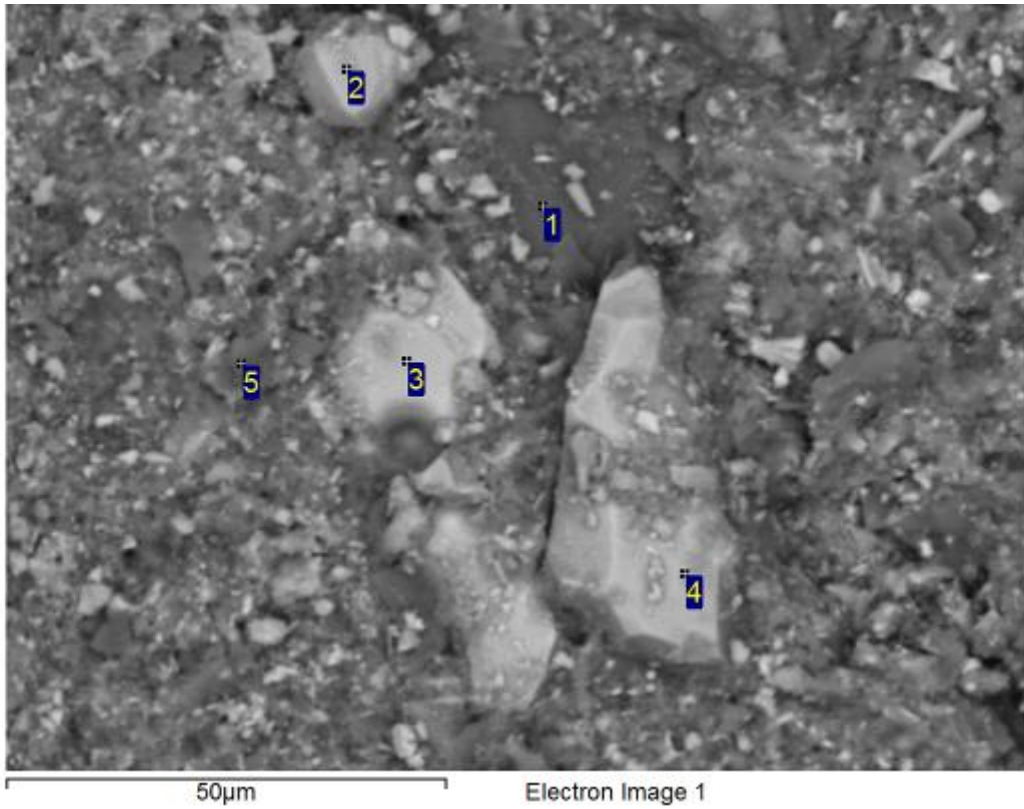
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Si	Fe	Total	Mineral ID
1	62.6	37.0	0.4	100.0	Quartz
2	36.8		63.2	100.0	Fe Oxide
3	44.0		56.0	100.0	Fe Oxide

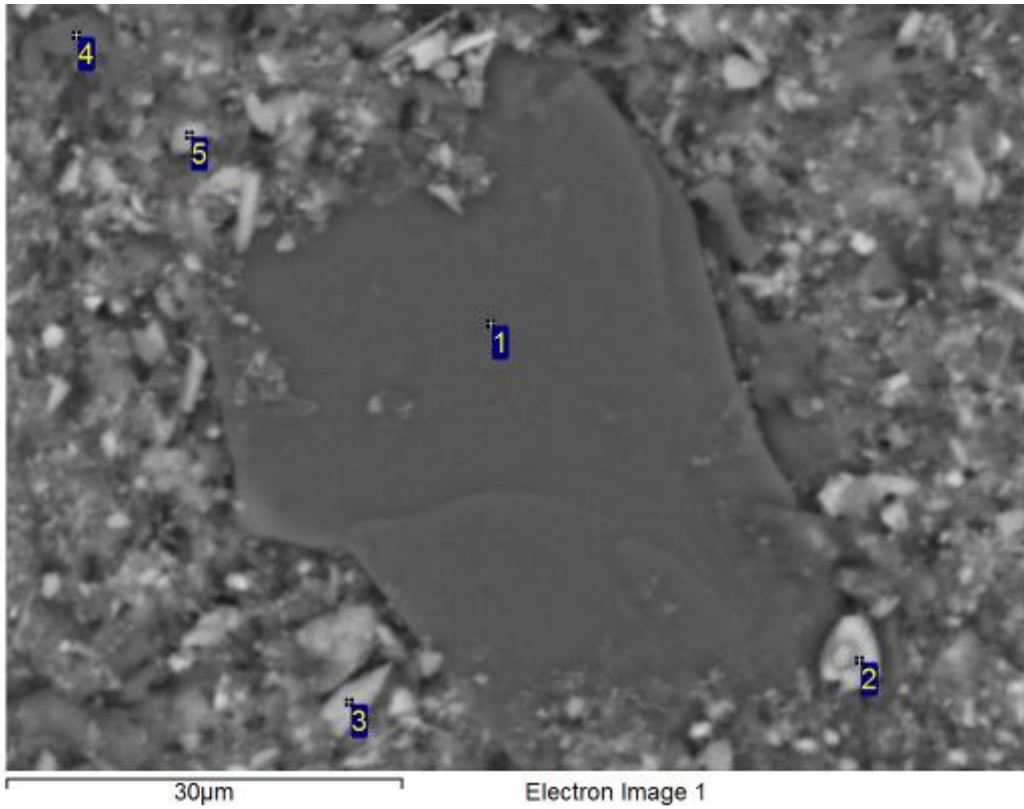
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	51.9	1.4	13.7	21.8	8.6	0.4	2.2	100.0	Mica
2	30.5		1.0	0.7			67.8	100.0	Fe Oxide
3	34.7		2.1	1.9			61.3	100.0	Fe Oxide
4	30.3		0.6	0.3			68.8	100.0	Fe Oxide
5	53.1		14.1	16.1	1.1		15.5	100.0	Fe Oxide/Kaolinite/Mica

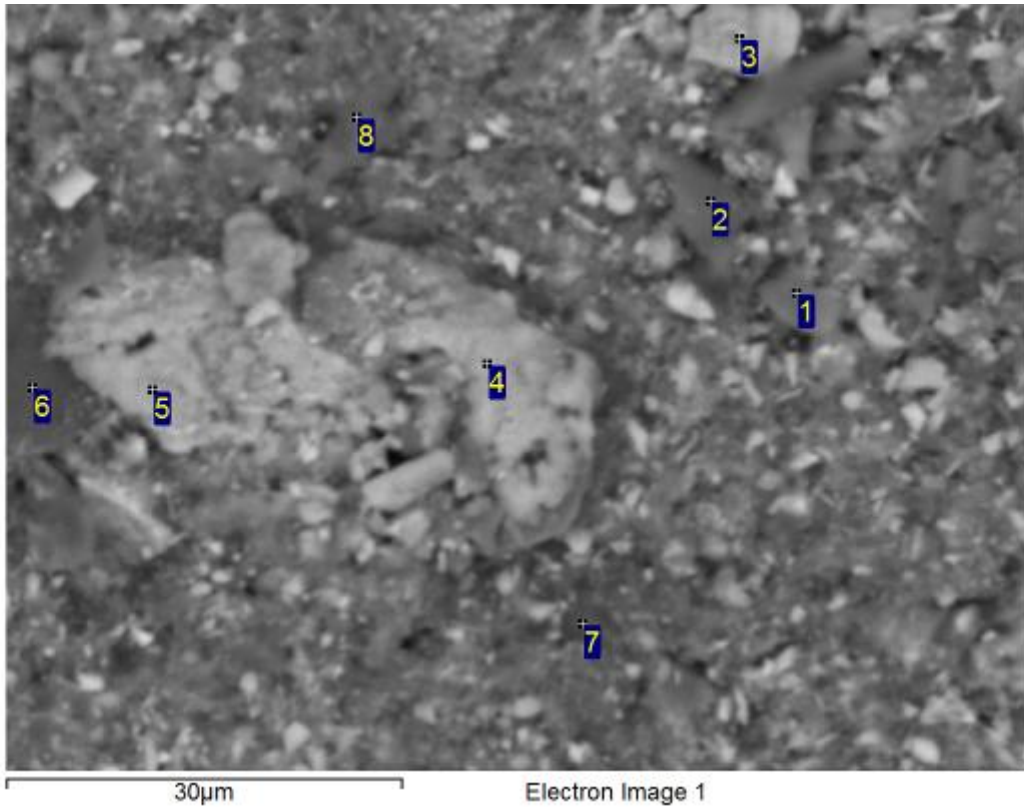
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	51.9	0.3	1.1	14.9	20.9		7.9	0.3		2.8	100.0	Mica
2	21.6			1.0	1.1		0.4			75.9	100.0	Fe Oxide
3	45.5			5.0	4.5	0.4	0.5			44.1	100.0	Fe Oxide
4	59.0		0.8	12.2	14.9		3.8			9.3	100.0	Kaolinite/Mica
5	51.6			3.6	2.2	0.4	0.2		0.3	41.7	100.0	Fe Oxide

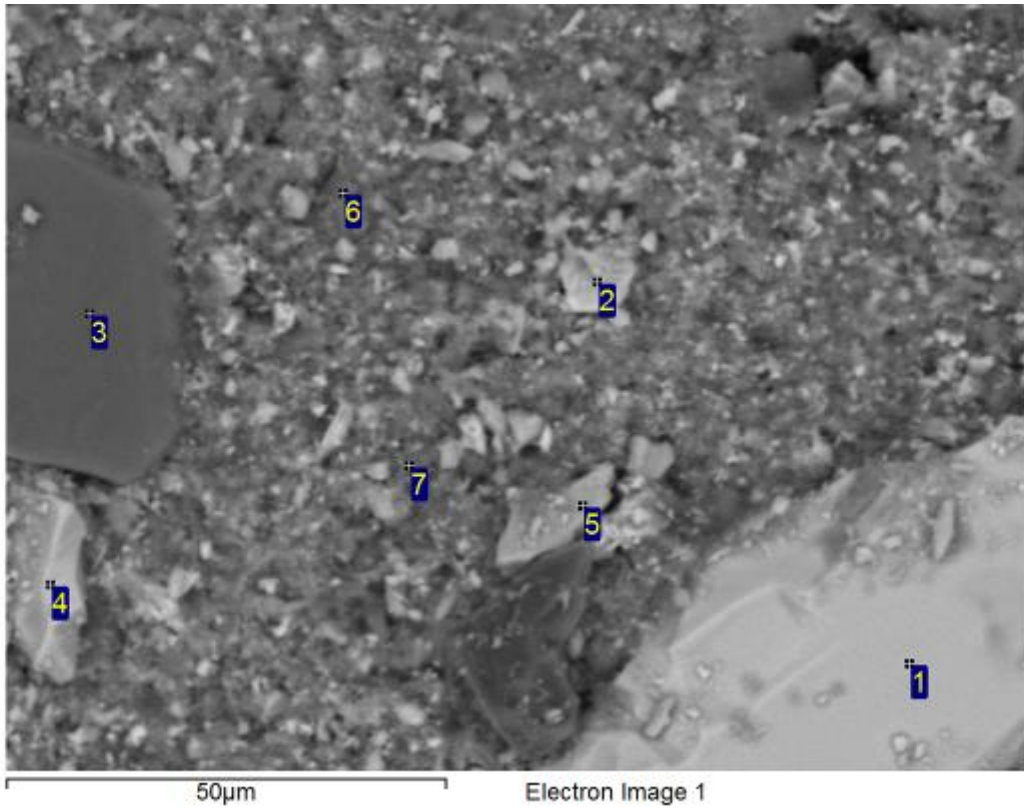
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	59.5			13.5	14.1		1.6			11.3	100.0	Kaolinite/Mica
2	57.0		0.3	13.7	16.2		1.8			11.0	100.0	Kaolinite/Mica
3	48.6			4.1	4.7		0.5		0.4	41.6	100.0	Fe Oxide
4	44.5			4.5	4.4	0.3	1.0			45.2	100.0	Fe Oxide
5	48.0			4.8	5.4	0.4	1.0			40.4	100.0	Fe Oxide
6	60.1	0.2	0.4	15.9	19.2		2.8	0.2		1.3	100.0	Kaolinite/Mica
7	8.4			6.1	8.2		7.0			70.3	100.0	Fe Oxide
8	55.7			12.9	16.3		1.0			14.2	100.0	Kaolinite/Mica

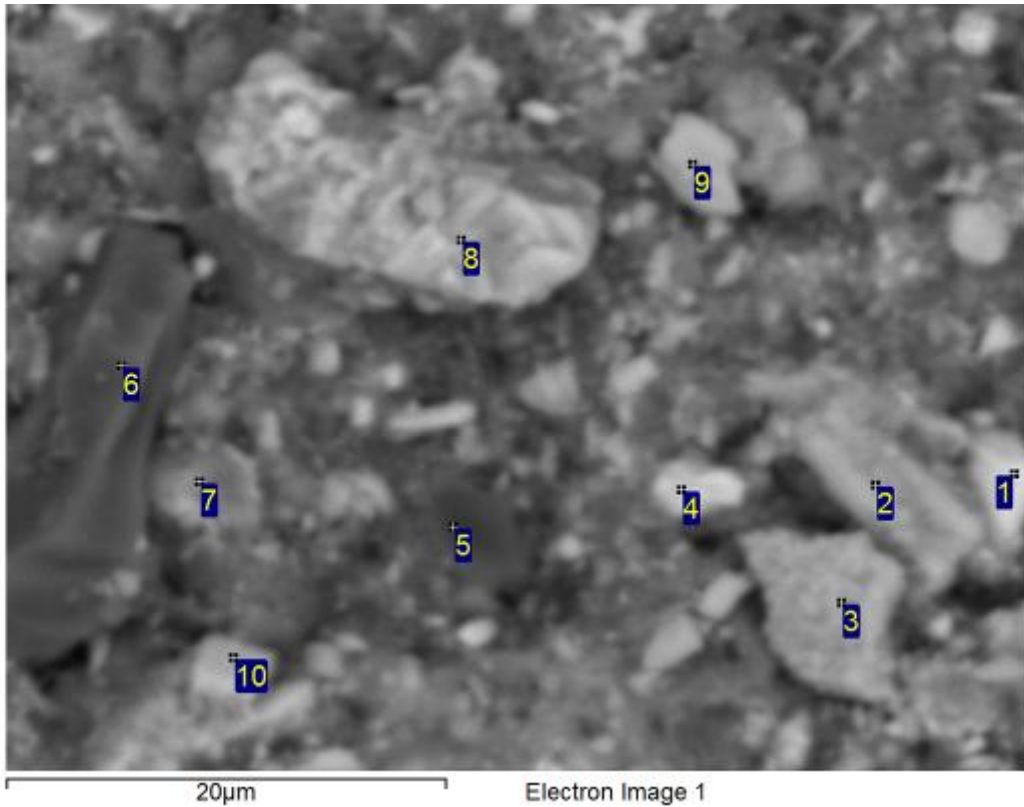
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	27.3							72.7	100.0	Fe Oxide
2	36.2			2.5	3.3	0.4		57.6	100.0	Fe Oxide
3	48.3	0.3	1.1	14.5	19.5	6.3	0.4	9.7	100.0	Mica
4	34.4							65.6	100.0	Fe Oxide
5	48.9			0.4	0.6			50.2	100.0	Fe Oxide
6	54.8	1.4		15.1	17.2	4.3		7.1	100.0	Mica
7	54.2			10.1	12.3	0.6		22.8	100.0	Fe Oxide/Kaolinite

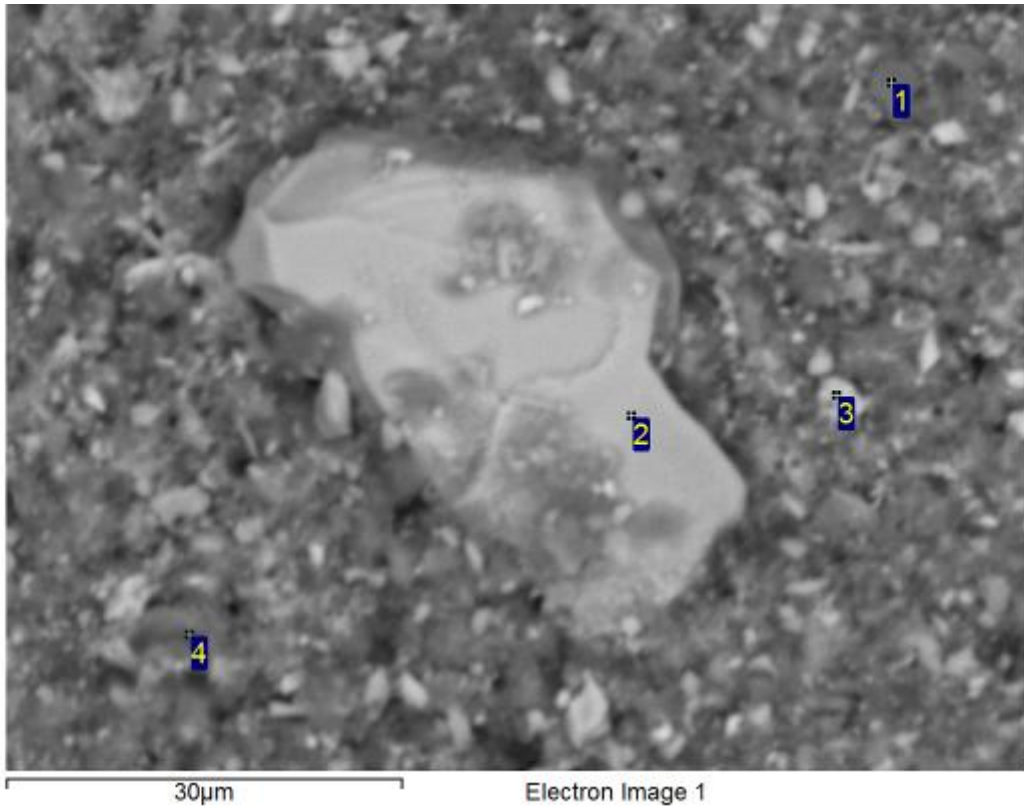
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Fe	Total	Mineral ID
1	42.1	1.1	1.0		55.7	100.0	Fe Oxide
2	39.9	2.2	1.8		56.1	100.0	Fe Oxide
3	44.2	0.8	0.8		54.3	100.0	Fe Oxide
4	38.2	2.6	2.5		56.8	100.0	Fe Oxide
5	57.1	8.1	11.1	0.6	23.0	100.0	Kaolinite
6	60.2	0.4	37.8		1.6	100.0	Quartz
7	4.2	2.7	8.0	0.5	84.6	100.0	Fe Oxide
8	26.9	1.5	1.4		70.3	100.0	Fe Oxide
9	43.9	1.8	1.6	0.2	52.5	100.0	Fe Oxide
10	49.7	1.6	2.0		46.6	100.0	Fe Oxide

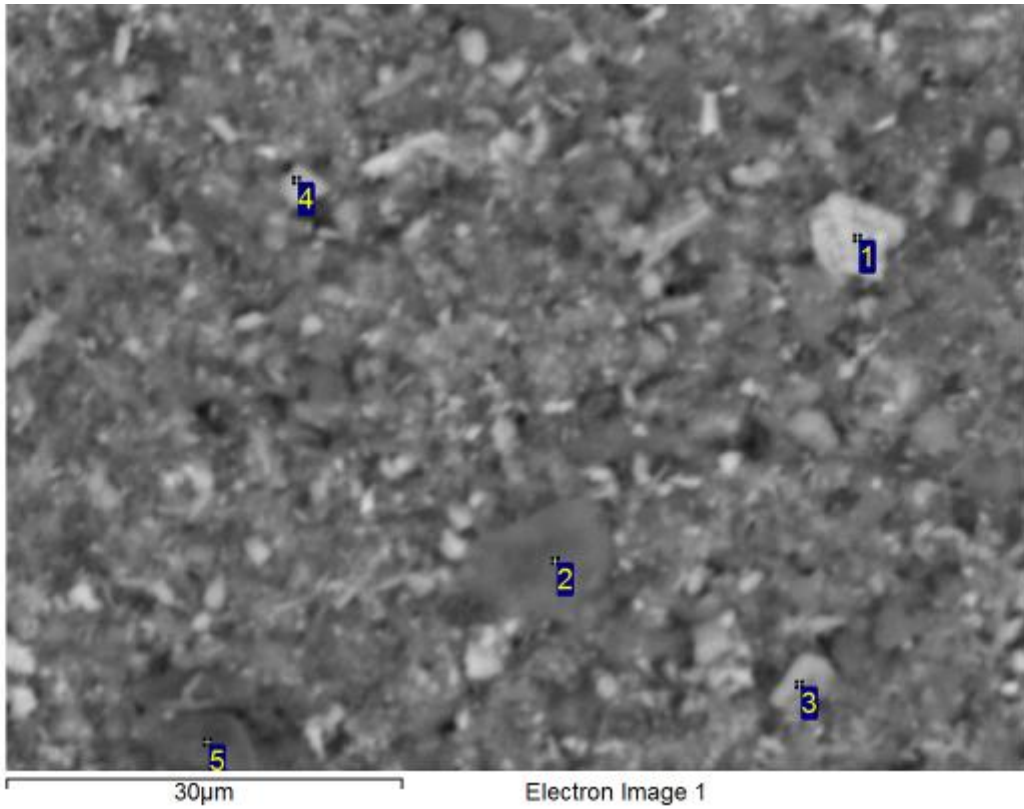
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	62.0	13.2	13.0	0.2		1.0	10.6	100.0	Fe Oxide/Kaolinite
2	28.3						71.7	100.0	Fe Oxide
3	38.7	2.0	1.8				57.5	100.0	Fe Oxide
4	38.9	9.5	11.8	0.9	0.3		38.5	100.0	Fe Oxide/Kaolinite

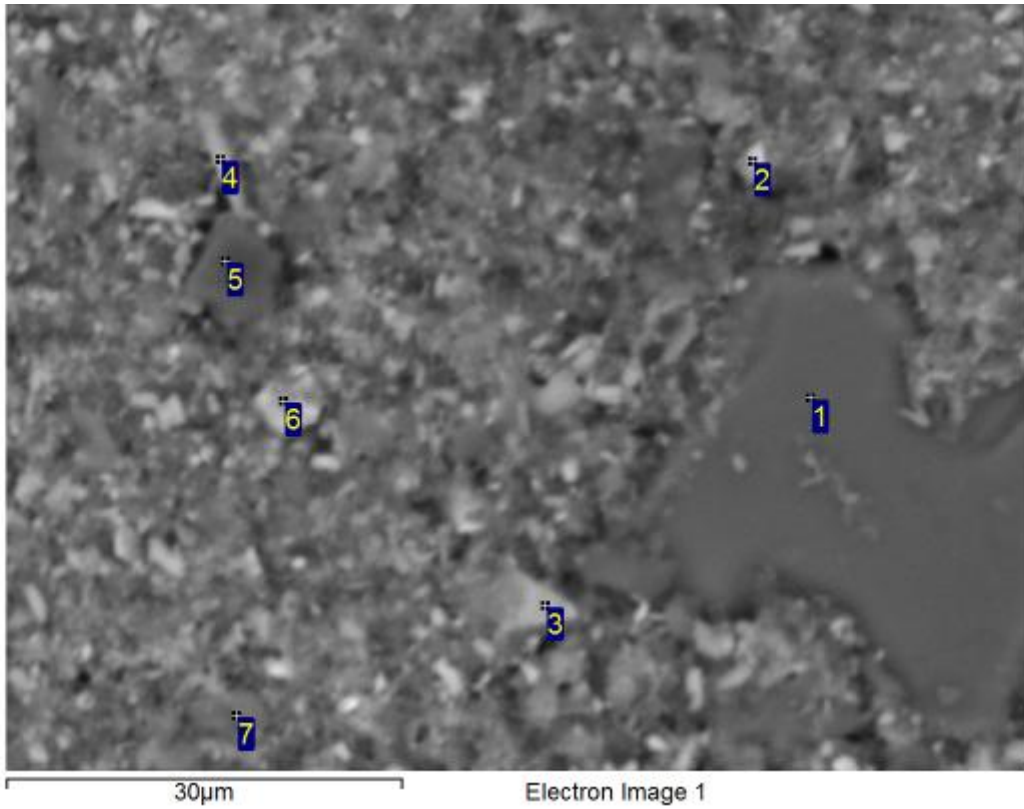
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	31.1		1.1	1.2					66.6	100.0	Fe Oxide
2	51.7	0.4	12.4	13.5		2.9	0.3	0.3	18.5	100.0	Kaolinite/Mica
3	49.1		4.4	2.7	0.3				43.5	100.0	Fe Oxide
4	50.7		4.2	3.8		0.3		0.3	40.8	100.0	Fe Oxide
5	62.9		0.4	35.7					1.0	100.0	Quartz

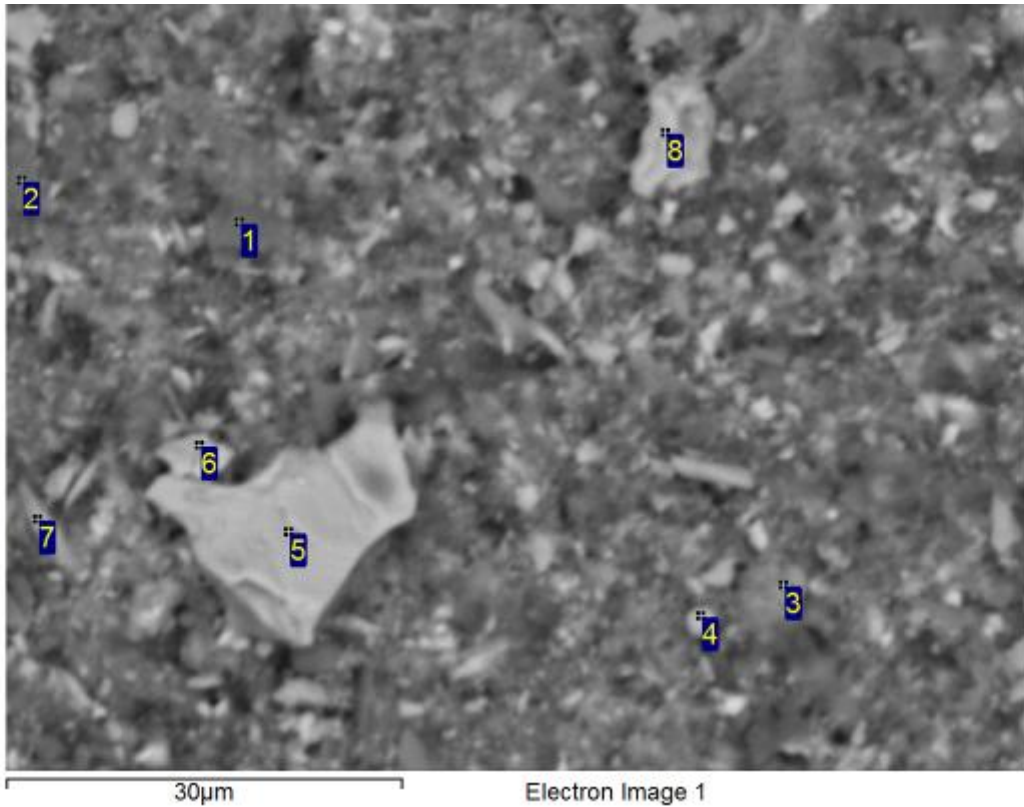
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	50.4	0.3	0.7	14.3	20.7		8.9	0.5		4.2	100.0	Mica
2	48.2			5.1	4.6	0.4	0.4			41.3	100.0	Fe Oxide
3	47.4			2.1	1.8		0.2			48.6	100.0	Fe Oxide
4	43.3			4.1	4.0		0.3			48.2	100.0	Fe Oxide
5	63.3			16.9	18.6					1.2	100.0	Kaolinite
6	47.6			0.6	1.9					49.9	100.0	Fe Oxide
7	50.3			9.7	10.2		1.5	0.5	0.3	27.5	100.0	Fe Oxide/Kaolinite

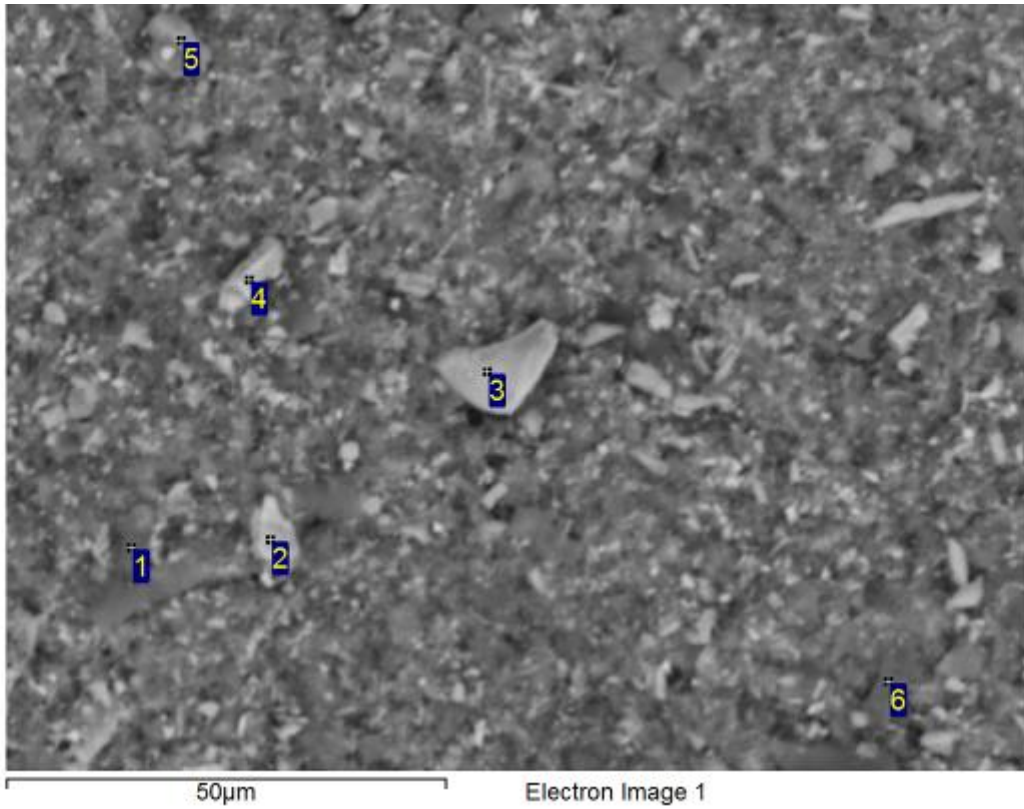
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	55.9	0.8	12.7	14.0	0.3	3.3	0.2	0.3	12.6	100.0	Kaolinite/Mica
2	58.1		3.7	22.8		0.3		0.6	14.6	100.0	Quartz/Mica
3	45.2		7.7	6.1	0.5	0.3		0.4	39.7	100.0	Fe Oxide/Kaolinite
4	54.8		4.7	4.4	0.3				35.9	100.0	Fe Oxide/Kaolinite
5	43.3								56.7	100.0	Fe Oxide
6	45.7		1.3	1.5					51.4	100.0	Fe Oxide
7	57.2		3.4	13.5					25.9	100.0	Fe Oxide/Kaolinite
8	39.5		0.7	0.8					59.0	100.0	Fe Oxide

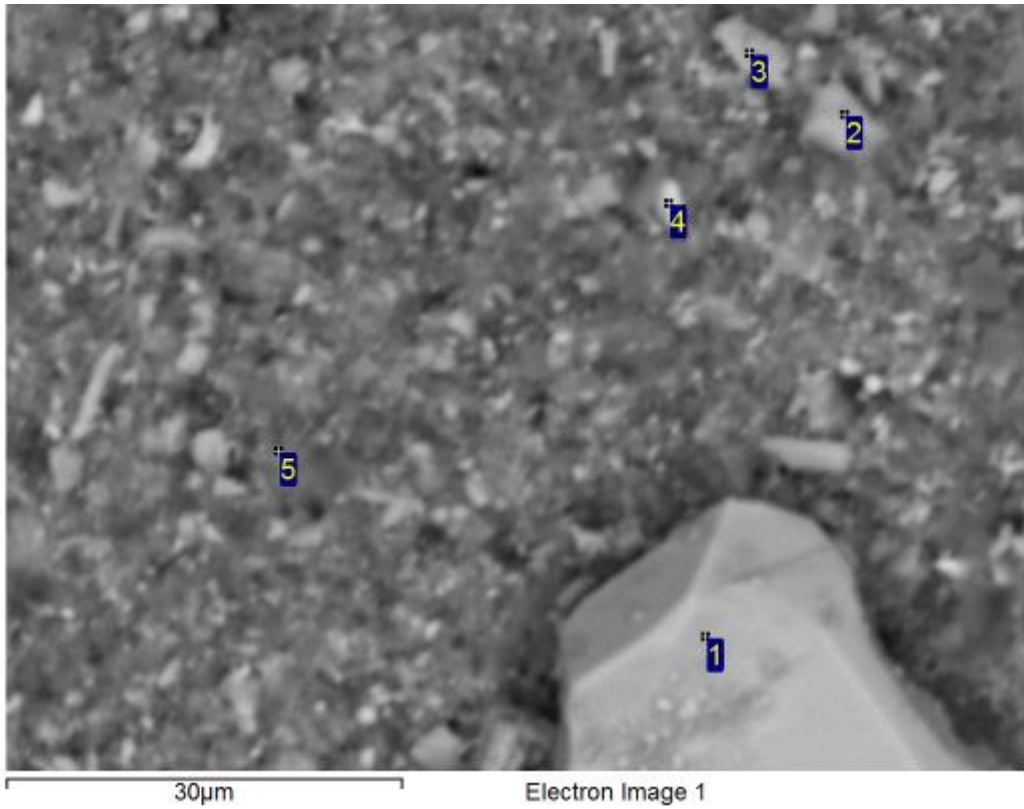
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	54.8	0.3	11.9	12.4		1.9			18.6	100.0	Fe Oxide/Kaolinite
2	41.9		0.4	0.3					57.5	100.0	Fe Oxide
3	45.7		0.4						53.9	100.0	Fe Oxide
4	38.6		0.9	1.0			0.6		58.9	100.0	Fe Oxide
5	50.2		3.7	2.0	0.3				43.9	100.0	Fe Oxide
6	57.5		12.7	15.3		0.2		0.3	13.8	100.0	Fe Oxide/Kaolinite

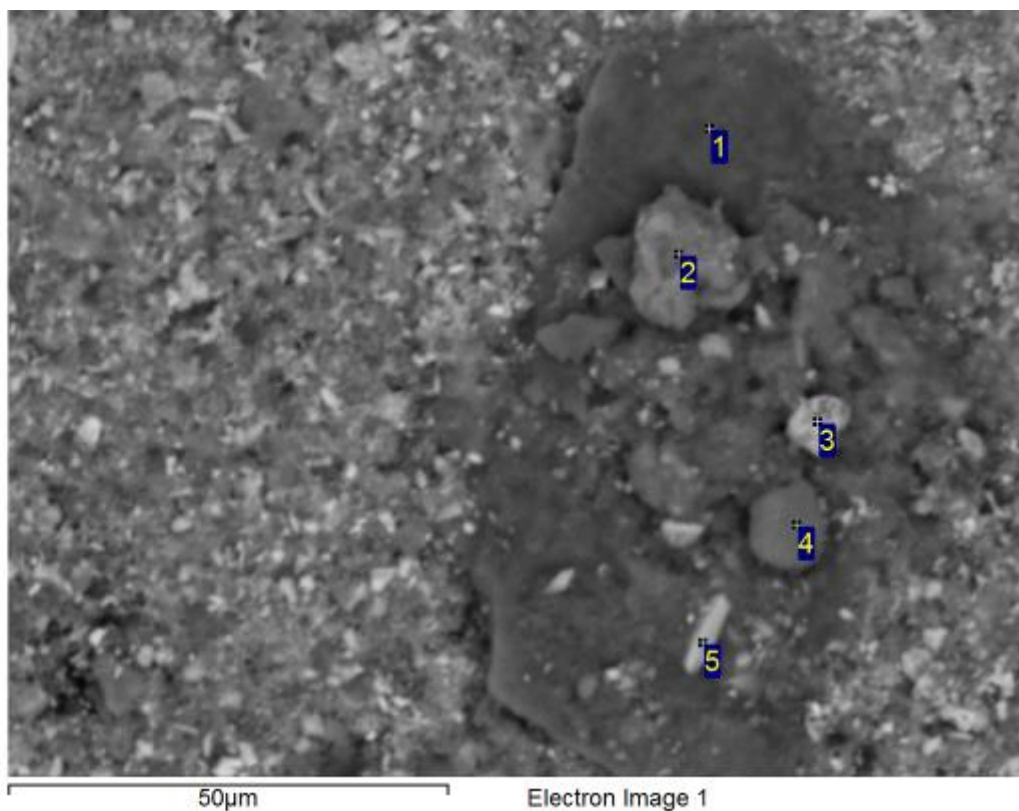
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	21.9						78.1	100.0	Fe Oxide
2	54.7	3.8	3.2	0.9	0.2		37.2	100.0	Fe Oxide/Kaolinite
3	46.4	3.5	2.6	0.5	0.2		46.8	100.0	Fe Oxide
4	38.6	6.1	7.5		0.3	0.3	47.1	100.0	Fe Oxide
5	45.3	9.5	7.1		0.5	0.8	36.9	100.0	Fe Oxide/Kaolinite

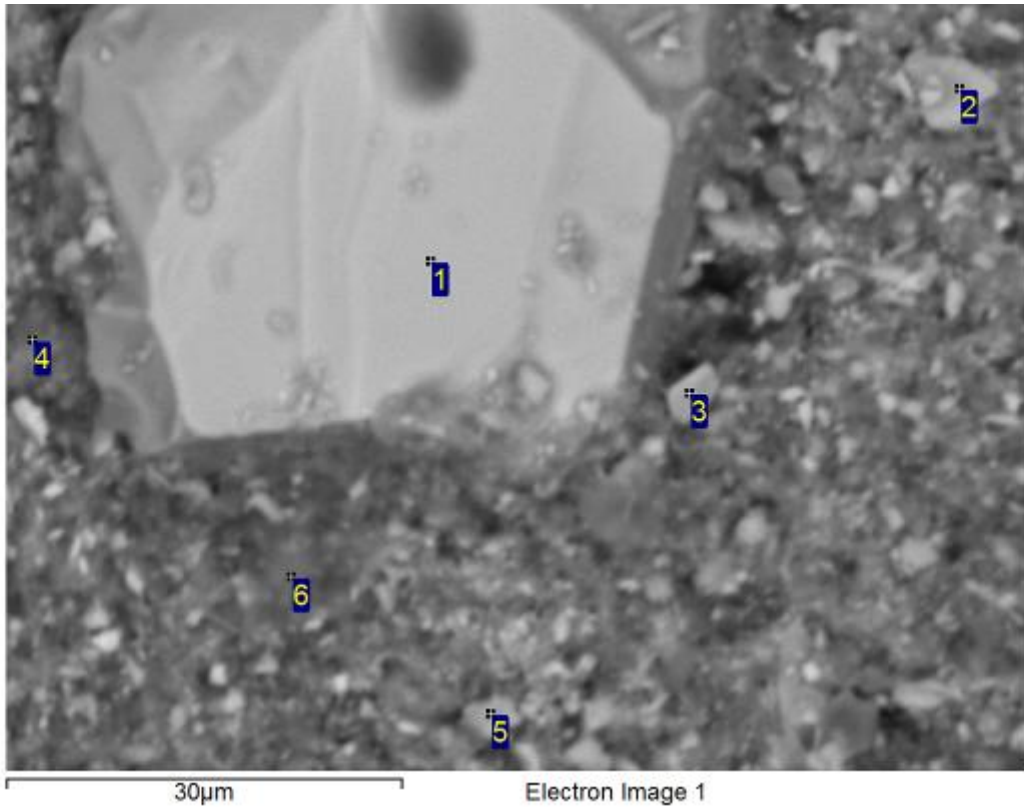
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Ti	Fe	Zn	Total	Mineral ID
1	58.4	17.9	19.0			4.7		100.0	Kaolinite
2	41.9	10.1	10.8	0.3	0.5	35.2	1.2	100.0	Fe Oxide/Kaolinite
3	48.9	1.1	0.9			49.1		100.0	Fe Oxide
4	57.5	14.5	15.2	0.2	0.8	11.9		100.0	Fe Oxide/Kaolinite
5	45.8	5.0	5.1			44.1		100.0	Fe Oxide

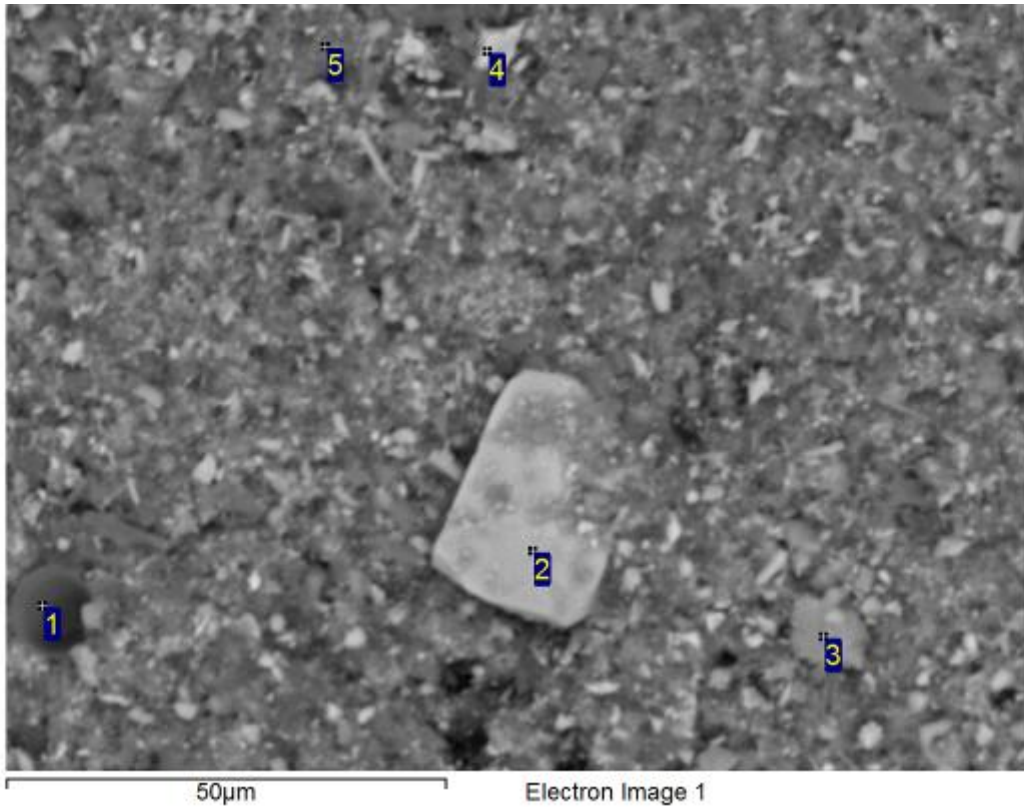
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Mn	Fe	Total	Mineral ID
1	29.1					70.9	100.0	Fe Oxide
2	50.9	3.7	2.2			43.2	100.0	Fe Oxide
3	3.6	0.6	0.6			95.2	100.0	Fe Oxide
4	56.2	9.2	8.5	0.5		25.6	100.0	Fe Oxide/Kaolinite
5	55.0	5.0	2.7		0.7	36.6	100.0	Fe Oxide/Kaolinite
6	9.8	3.5	3.2	3.5	1.7	78.3	100.0	Fe Oxide

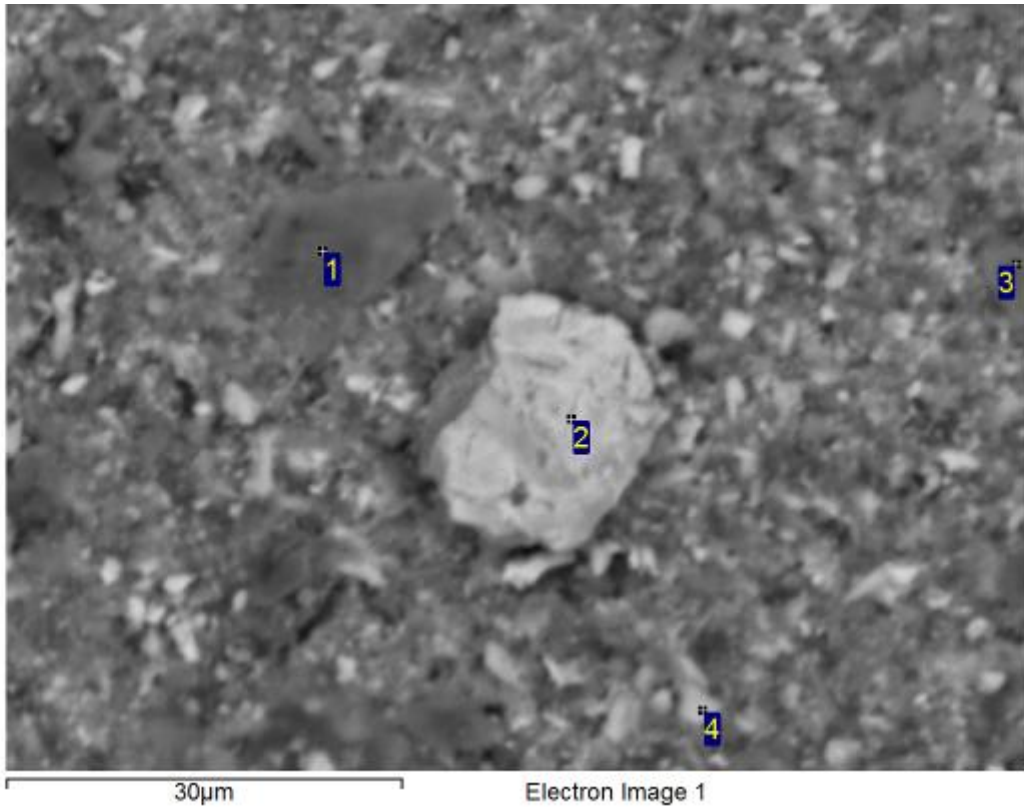
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	51.6	5.8	15.9		0.5		26.1	100.0	Fe Oxide/Kaolinite
2	29.0	0.4					70.6	100.0	Fe Oxide
3	51.1	4.5	3.7	0.3	0.3	1.1	39.1	100.0	Fe Oxide/Kaolinite
4	38.1	0.9	1.6				59.5	100.0	Fe Oxide
5	54.9	3.9	23.6				17.6	100.0	Quartz/Kaolinite/Fe Oxide

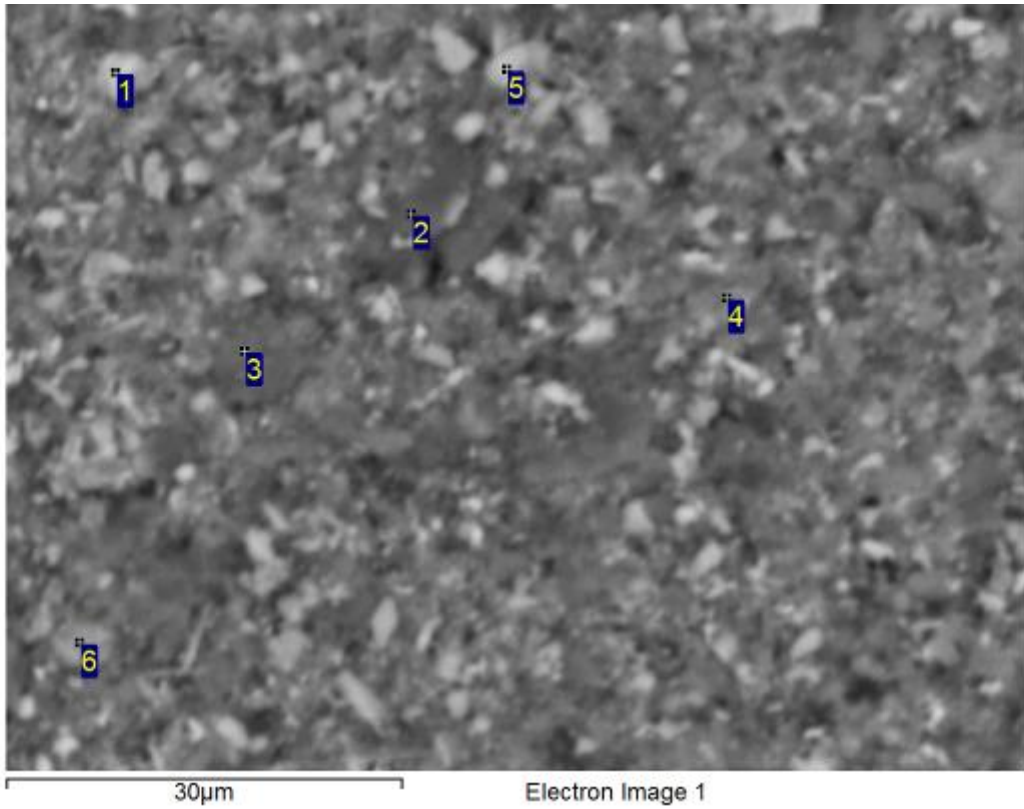
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	P	K	Ti	Fe	Total	Mineral ID
1	49.2	0.4	15.8	16.4		3.3		14.8	100.0	Kaolinite/Mica
2	35.6		0.4					63.9	100.0	Fe Oxide
3	50.8	1.3	13.9	15.2		3.1	0.3	15.4	100.0	Kaolinite/Mica
4	50.7		3.8	3.0	0.3			42.2	100.0	Fe Oxide

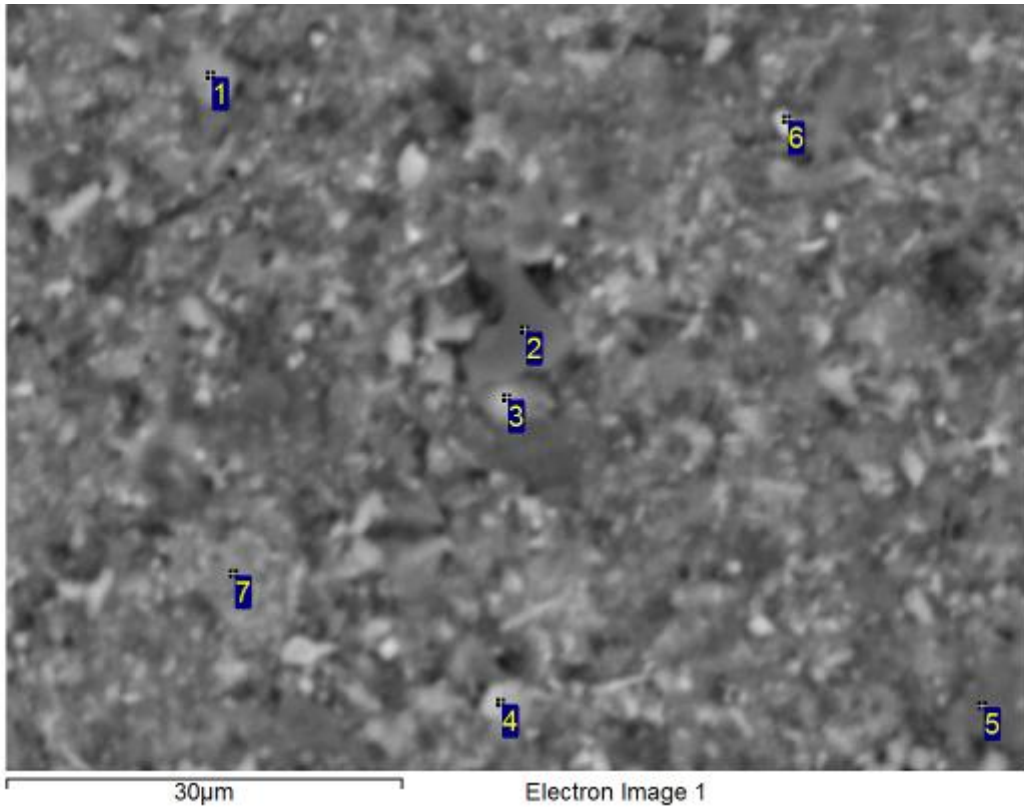
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	48.1	4.6	3.8	0.3		0.2		43.0	100.0	Fe Oxide
2	56.0	13.1	14.5	1.0				15.4	100.0	Kaolinite/Mica
3	54.1	13.0	11.0	0.7	0.2	0.3	0.6	20.2	100.0	Fe Oxide/Kaolinite
4	50.5	7.9	6.6	0.4		0.2		34.4	100.0	Fe Oxide/Kaolinite
5	49.3	3.5	2.5					44.7	100.0	Fe Oxide
6	49.9	5.0	7.9	0.4		0.3		36.5	100.0	Fe Oxide/Kaolinite

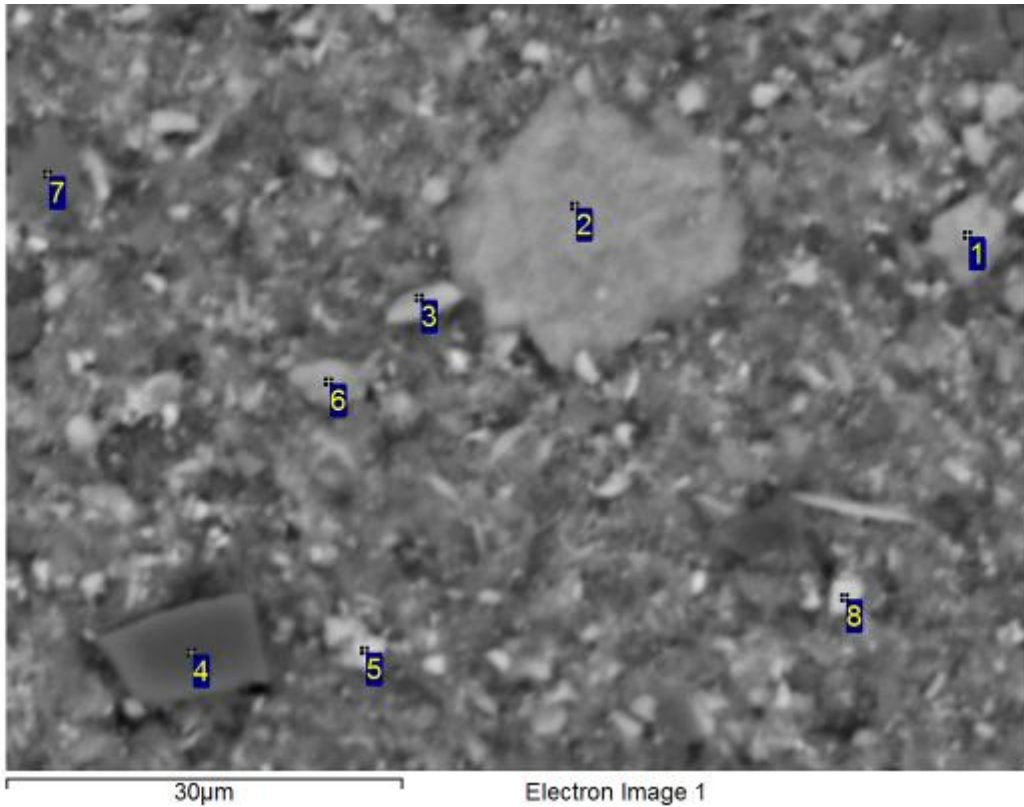
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	42.5		6.0	3.2	0.4		0.3		47.6	100.0	Fe Oxide
2	58.9	1.3	10.8	18.6		4.8			5.6	100.0	Kaolinite/Mica
3	28.7		4.0	5.0		0.4		0.9	61.0	100.0	Fe Oxide
4	44.0		3.0	2.3	0.3			0.5	49.9	100.0	Fe Oxide
5	53.6	0.3	11.7	12.7		1.4		0.9	19.4	100.0	Kaolinite/Fe Oxide
6	50.9		5.8	5.0		0.5			37.8	100.0	Fe Oxide/Kaolinite
7	49.6		6.3	8.4	0.3	0.2		0.7	34.4	100.0	Fe Oxide/Kaolinite

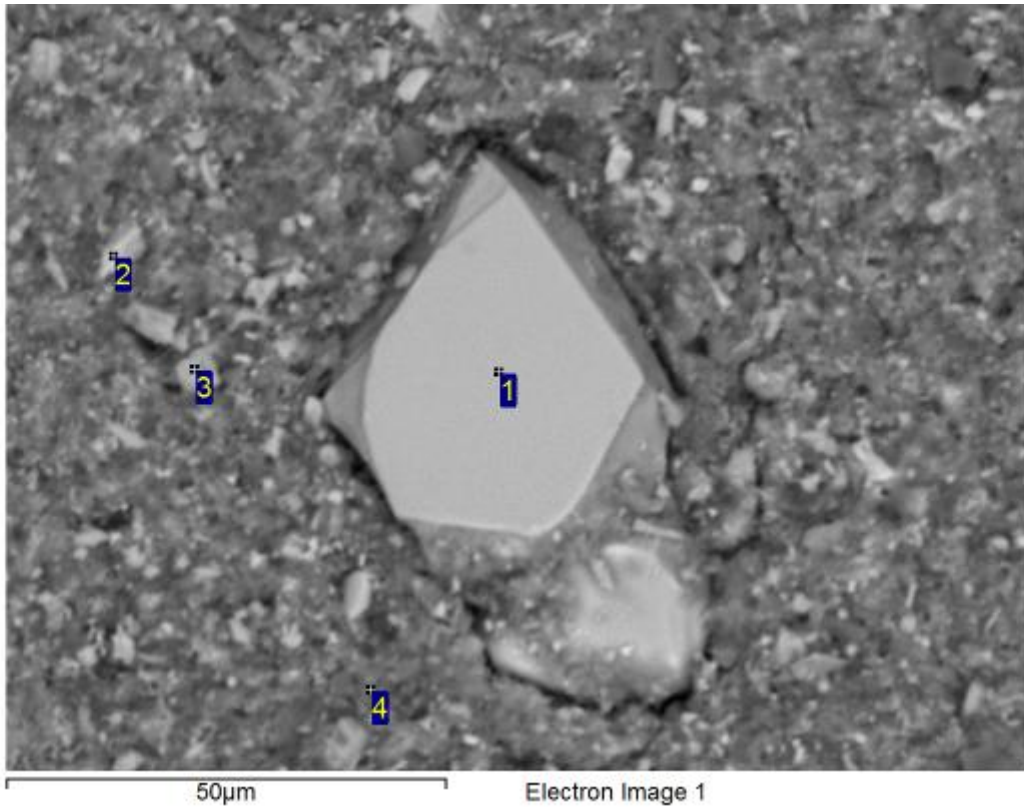
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	41.8	2.5	2.2			0.6	52.8	100.0	Fe Oxide
2	45.9	7.1	2.3	0.4			44.3	100.0	Fe Oxide
3	56.1	1.5	1.5	0.3	0.2		40.4	100.0	Fe Oxide
4	54.9		44.6				0.4	100.0	Quartz
5	40.9	2.3	2.0				54.8	100.0	Fe Oxide
6	46.6	4.2	2.7				46.5	100.0	Fe Oxide
7	50.6	3.2	30.6		0.3	0.7	14.5	100.0	Quartz
8	41.1	3.5	3.0				52.4	100.0	Fe Oxide

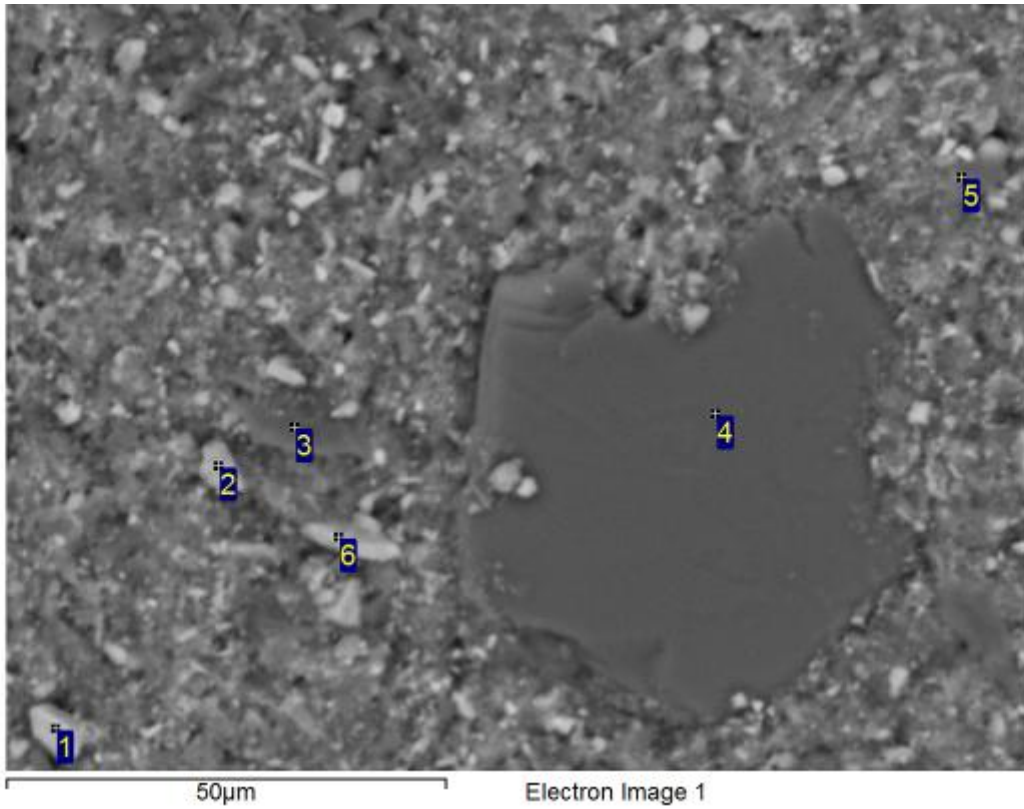
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	35.6						64.4	100.0	Fe Oxide
2	41.0	1.3	1.2				56.6	100.0	Fe Oxide
3	45.2	1.8	1.7	0.7			50.6	100.0	Fe Oxide
4	53.3	8.2	11.6		0.6	0.5	25.8	100.0	Fe Oxide/Kaolinite

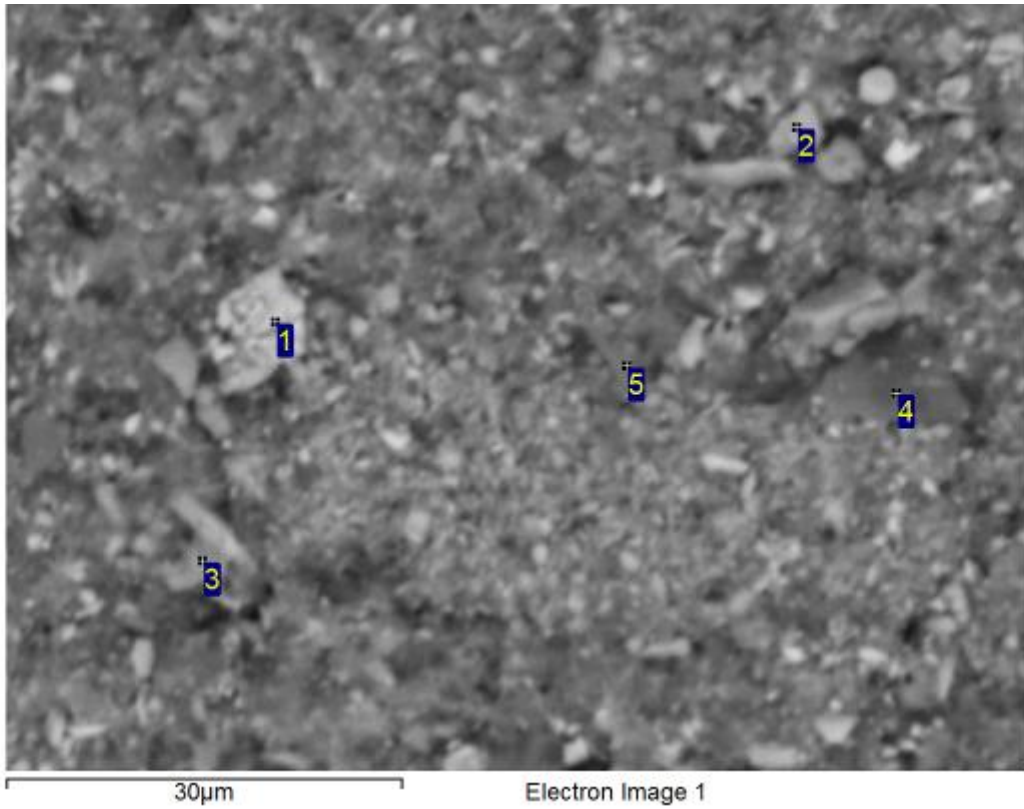
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	37.2			0.5	0.3					62.0	100.0	Fe Oxide
2	45.5			1.4	1.2					51.9	100.0	Fe Oxide
3	55.2	0.4	0.5	13.0	16.4		4.0			10.5	100.0	Mica
4	49.6		1.0	14.9	21.3		9.5	0.3		3.4	100.0	Mica
5	43.3		0.3	11.2	11.9		2.2		0.3	30.7	100.0	Fe Oxide/Kaolinite/Mica
6	50.4			1.3	1.3	0.3				46.8	100.0	Fe Oxide

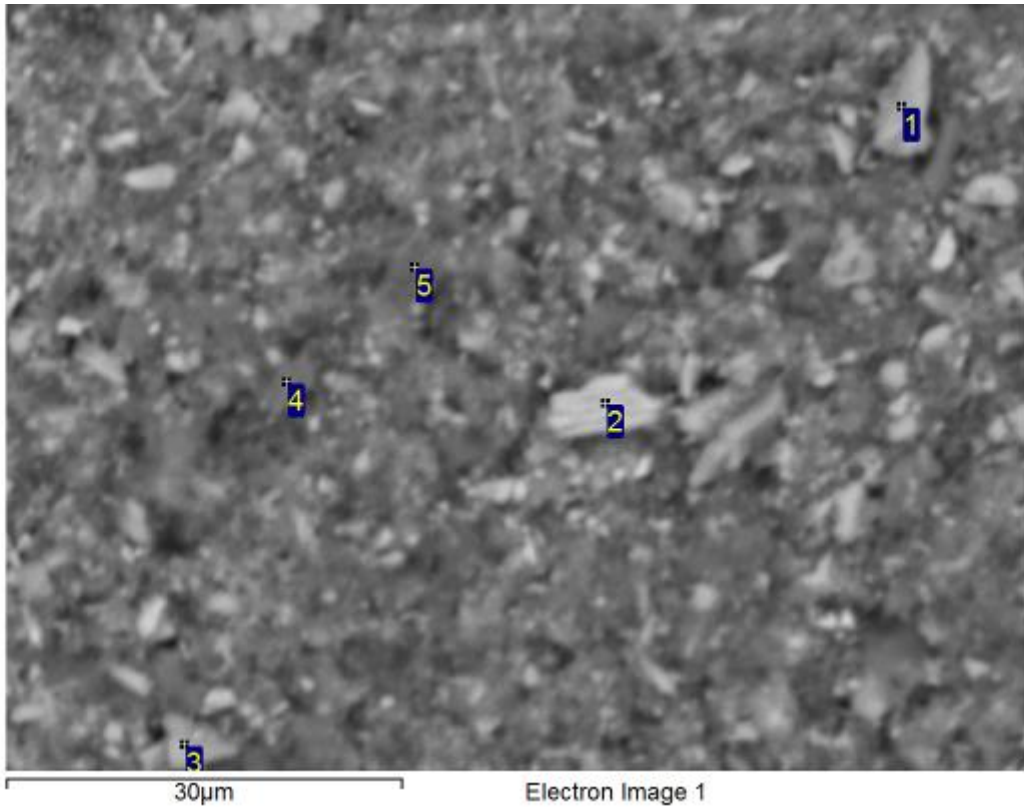
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	35.7		0.8	0.8					62.7	100.0	Fe Oxide
2	49.4		3.0	3.0	0.4	0.3			44.0	100.0	Fe Oxide
3	46.1		6.0	6.3	0.3	0.5		0.4	40.5	100.0	Fe Oxide
4	55.1	0.6	12.5	14.6		2.8	0.2		14.3	100.0	Mica /Kaolinite
5	58.1		4.3	21.4		0.3			16.0	100.0	Quartz

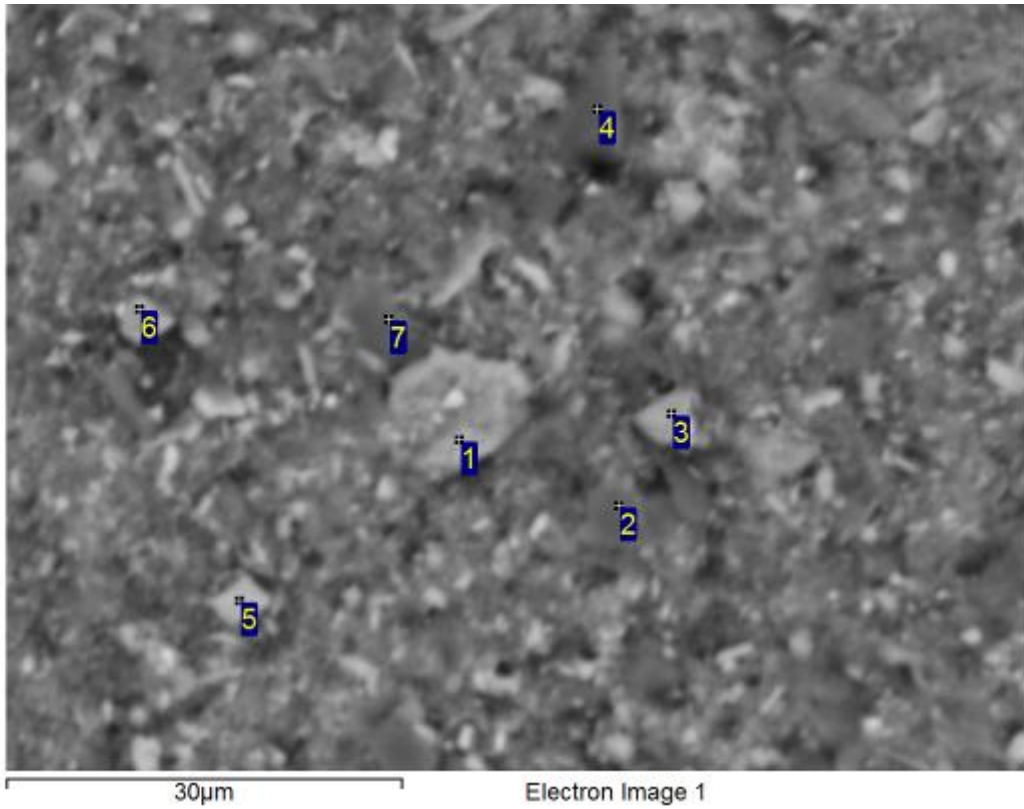
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ca	Mn	Fe	Total	Mineral ID
1	53.5		2.0	1.8					42.7	100.0	Fe Oxide
2	37.8		0.6	0.7					61.0	100.0	Fe Oxide
3	48.6	0.4	4.7	3.4	0.3	0.2		0.8	41.6	100.0	Fe Oxide
4	73.7	0.3	1.9	1.9		0.1	19.0		3.1	100.0	Calcite
5	51.9		6.4	21.2		0.4	0.5	0.4	19.3	100.0	Kaolinite/Fe Oxide

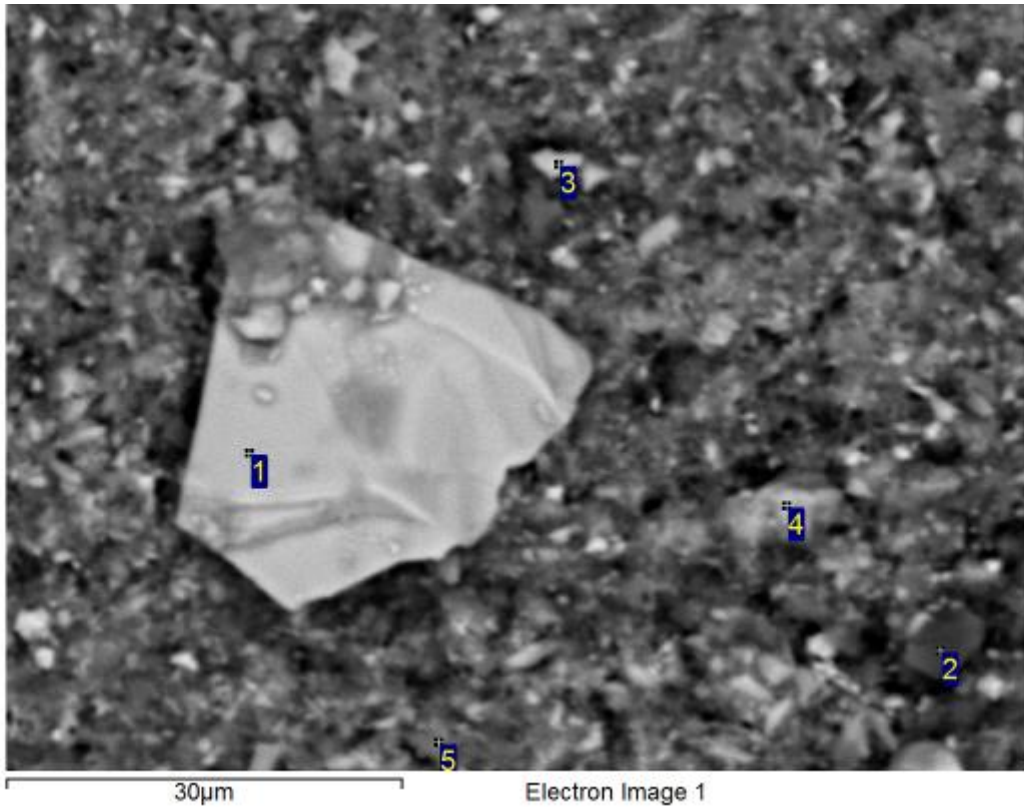
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	45.8	1.8	3.0				49.4	100.0	Fe Oxide
2	60.4	7.2	22.3	1.1			9.0	100.0	Quartz/Mica
3	51.7	6.2	2.0	0.2	0.2		39.7	100.0	Fe Oxide
4	61.5	2.2	30.6	0.2			5.5	100.0	Quartz
5	46.8	5.0	5.4	0.8			41.9	100.0	Fe Oxide
6	50.6	2.3	2.2				44.8	100.0	Fe Oxide
7	54.9	12.4	13.6	0.3		0.5	18.3	100.0	Kaolinite/Fe Oxide

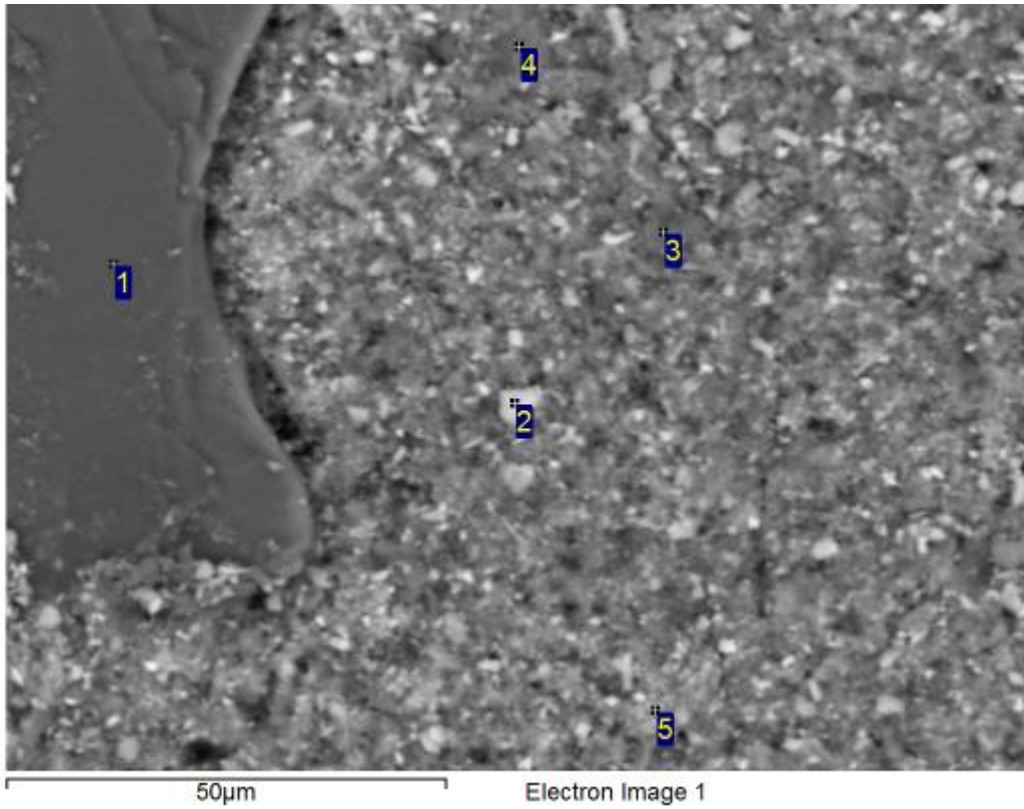
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	38.3							61.7	100.0	Fe Oxide
2	61.8	0.5	36.2				0.2	1.1	100.0	Quartz
3	50.1	4.2	5.7					40.0	100.0	Fe Oxide
4	44.3	2.3	1.0			0.5		51.9	100.0	Fe Oxide
5	48.1	8.8	7.3	0.3	0.4		0.6	34.5	100.0	Fe Oxide/Kaolinite

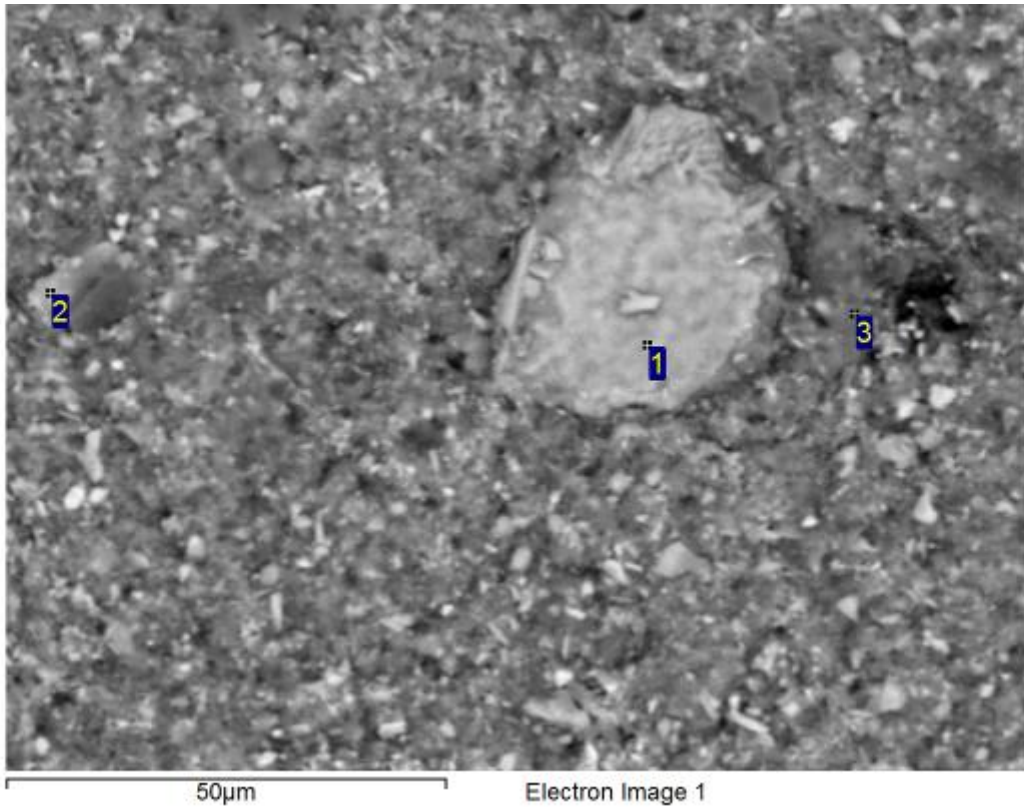
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	50.9	0.7	0.5	16.8	21.4	7.8			2.0	100.0	Mica
2	48.0			3.7	3.7	0.2		0.3	44.0	100.0	Fe Oxide
3	56.8			1.3	35.4				6.4	100.0	Quartz
4	49.7		0.4	12.7	14.3	2.1	0.5	0.5	19.8	100.0	Fe Oxide/Kaolinite/Mica
5	46.0			6.8	5.5	0.3	0.3	1.0	40.1	100.0	Fe Oxide

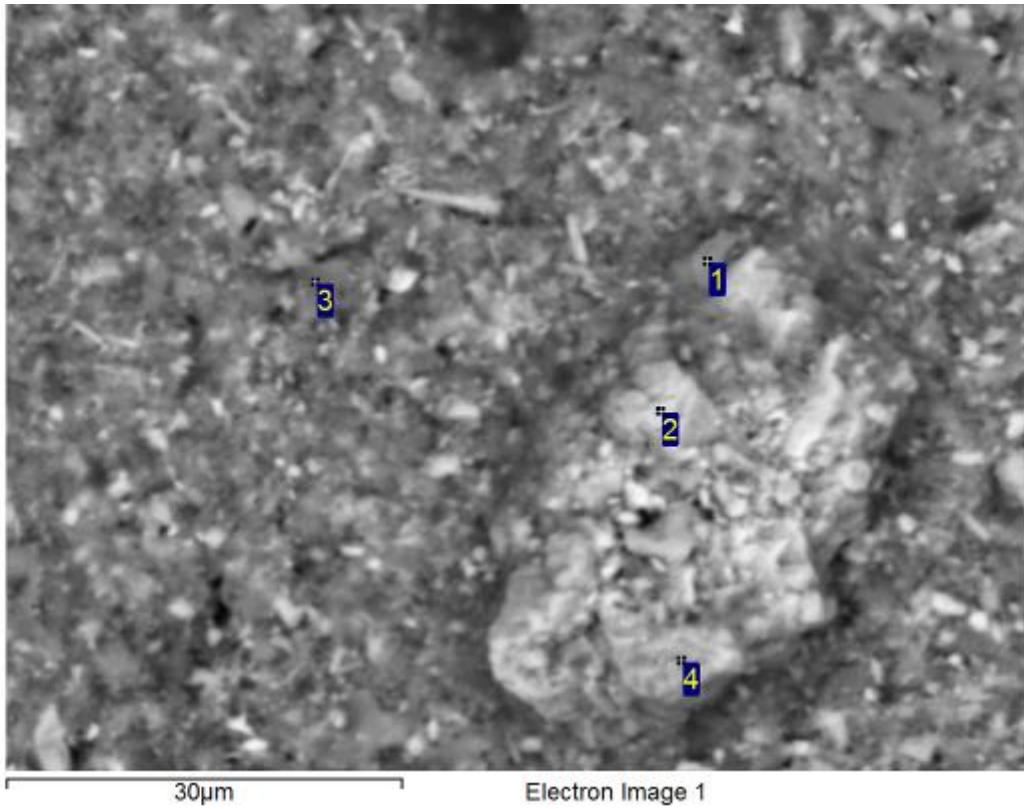
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	37.5	2.0	1.2					59.4	100.0	Fe Oxide
2	46.6	5.0	5.8	0.3	0.3		0.4	41.6	100.0	Fe Oxide
3	54.8	12.5	12.8		0.4	0.2	0.4	19.0	100.0	Kaolinite/Fe Oxide

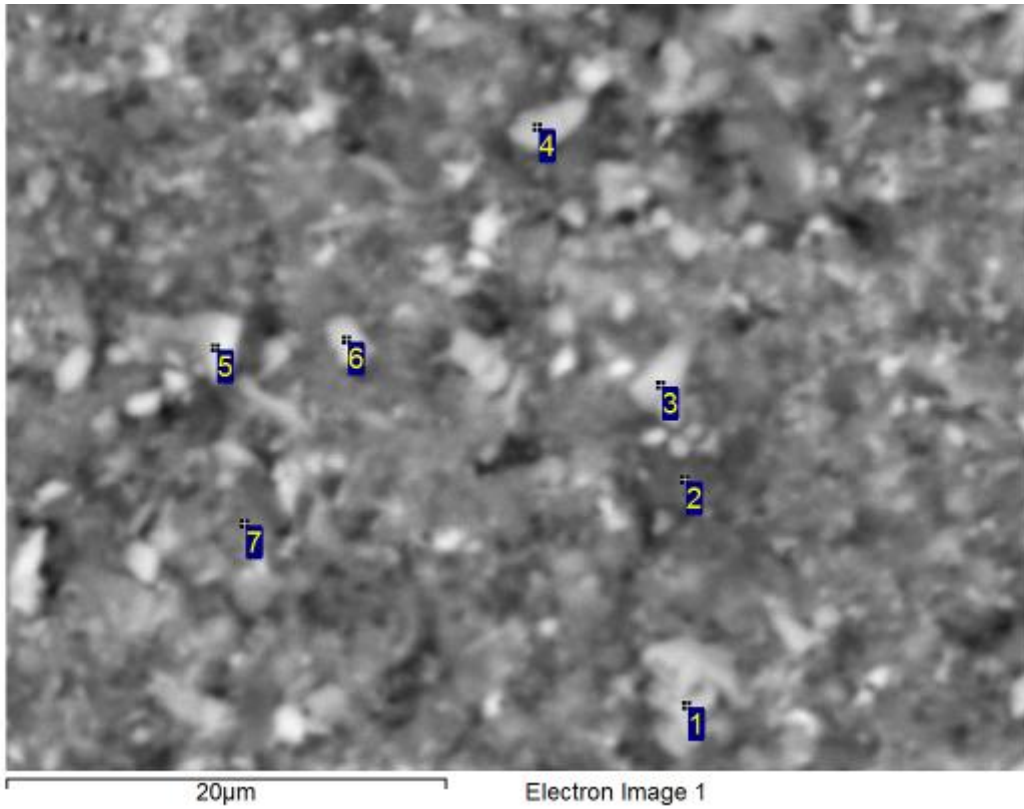
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	64.1	10.6	9.8		0.2	1.0	14.2	100.0	Fe Oxide/Kaolinite
2	41.0	0.6	0.8				57.6	100.0	Fe Oxide
3	57.8	3.3	25.0		0.2		13.7	100.0	Fe Oxide/Kaolinite
4	49.5	2.4	0.6	0.7			46.7	100.0	Fe Oxide

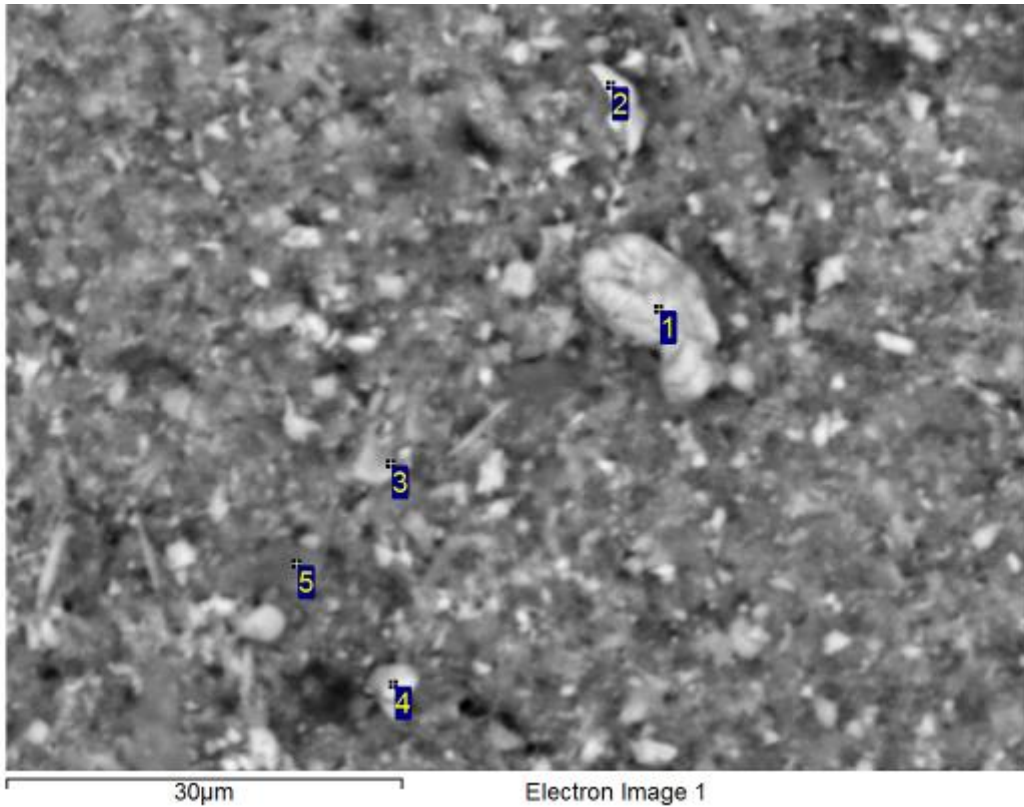
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Ca	Mn	Fe	Total	Mineral ID
1	50.6	5.9	4.8	0.2			38.5	100.0	Fe Oxide/Kaolinite
2	40.6	13.5	14.7	0.7	0.3	0.5	29.6	100.0	Fe Oxide/Kaolinite
3	46.7	3.9	3.8	0.2			45.4	100.0	Fe Oxide
4	52.9	4.0	3.2				40.0	100.0	Fe Oxide
5	46.4	2.3	1.7				49.6	100.0	Fe Oxide
6	48.8	3.5	3.3				44.4	100.0	Fe Oxide
7	50.0	12.0	7.7	0.5		0.5	29.3	100.0	Fe Oxide/Kaolinite

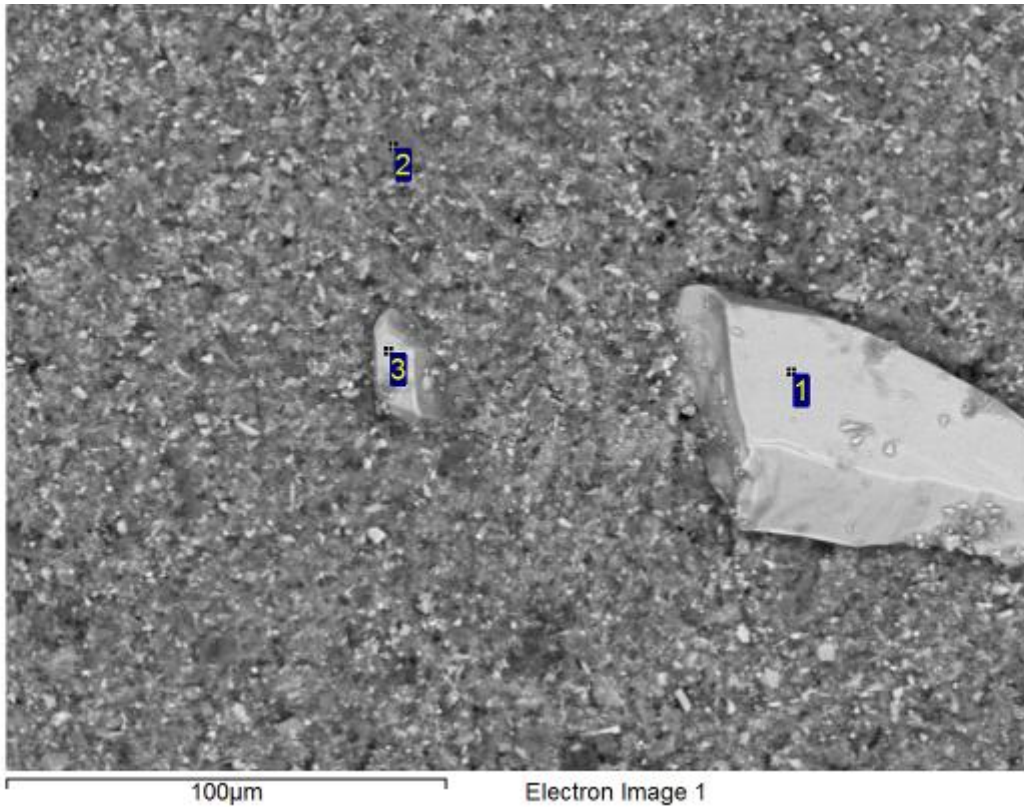
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	31.4	0.6	0.7	67.3	100.0	Fe Oxide
2	42.7	3.2	2.8	51.3	100.0	Fe Oxide
3	49.1	10.4	2.3	38.2	100.0	Fe Oxide/Kaolinite
4	44.8	3.0	2.4	49.8	100.0	Fe Oxide
5	57.6	0.7	39.0	2.7	100.0	Quartz

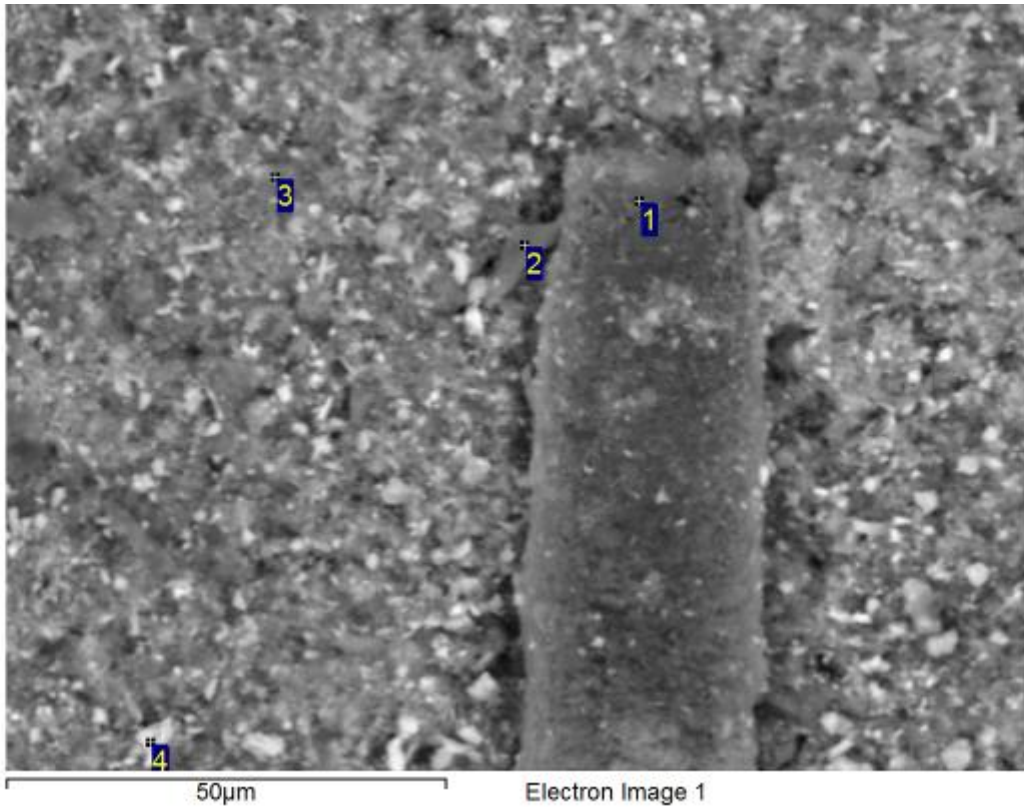
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	37.4						62.6	100.0	Fe Oxide
2	47.3	10.1	10.7	1.0	0.3	0.6	30.0	100.0	Fe Oxide/Kaolinite/Mica
3	39.4						60.6	100.0	Fe Oxide

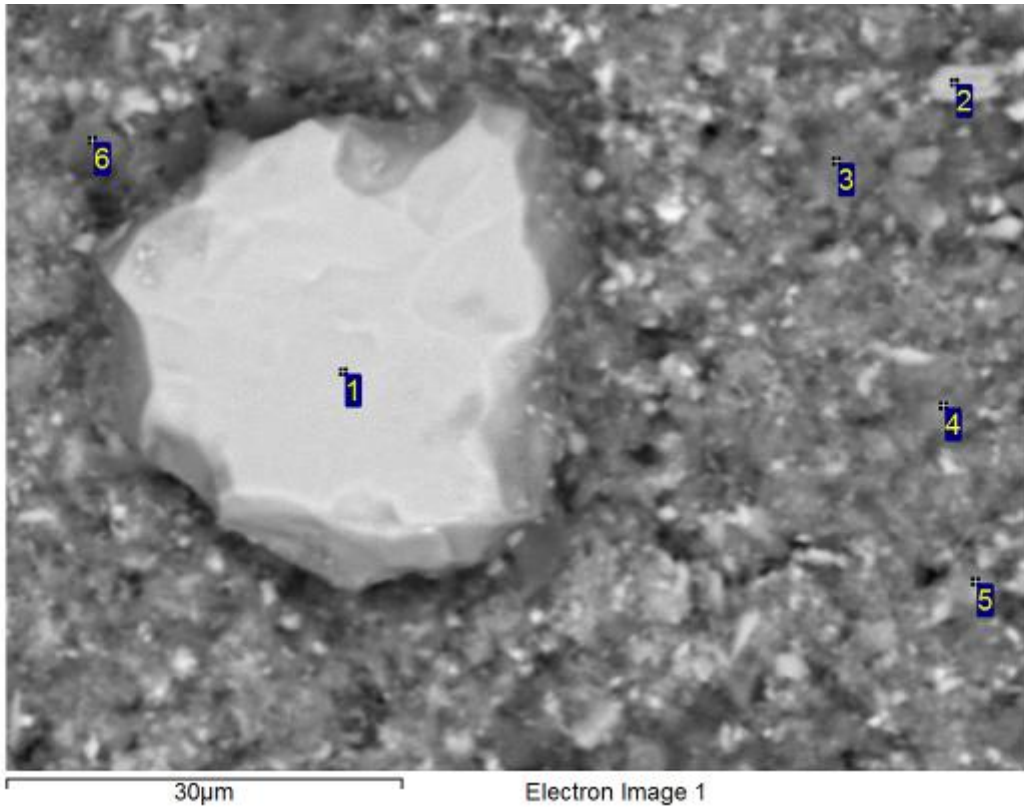
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	49.4		8.0	7.6	0.7	0.3	2.3	31.8	100.0	Fe Oxide/Kaolinite
2	60.5	0.8	13.8	15.4	3.9		0.2	5.4	100.0	Kaolinite/Fe Oxide/Mica
3	52.9		9.6	9.3	0.4		0.5	27.2	100.0	Fe Oxide/Kaolinite
4	44.4		3.9	2.4				49.3	100.0	Fe Oxide

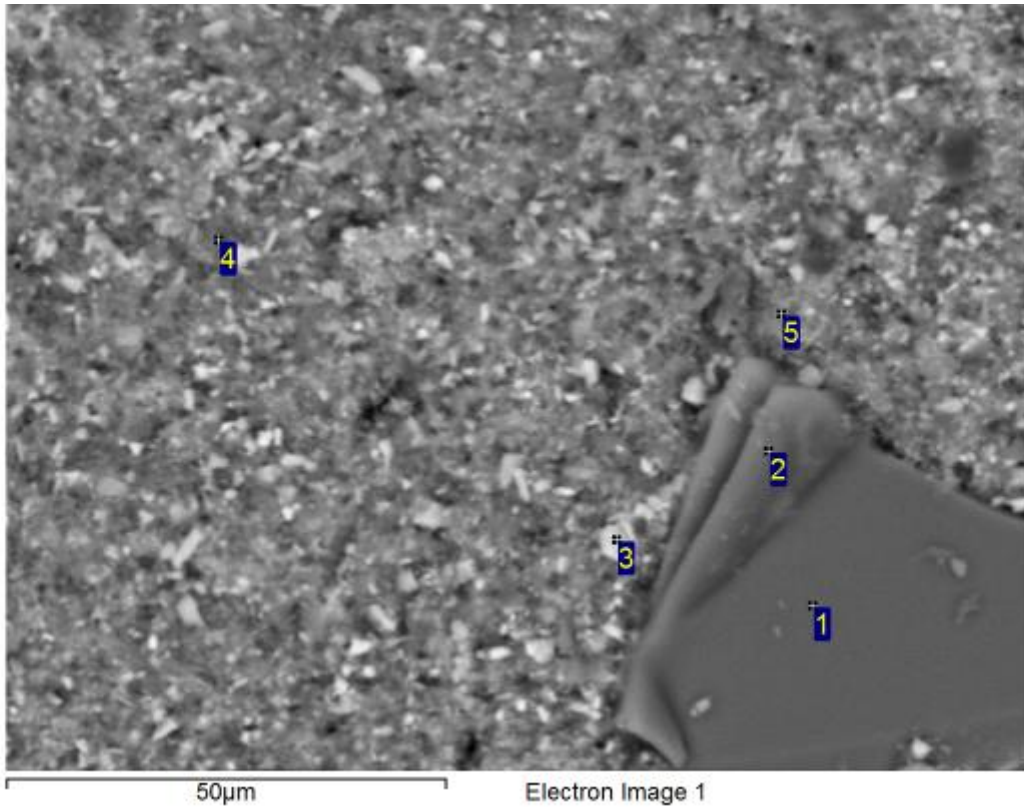
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	39.7							60.3	100.0	Fe Oxide
2	48.2		1.8	2.4				47.6	100.0	Fe Oxide
3	49.9	0.4	10.7	11.5	0.3	1.2	1.4	24.6	100.0	Fe Oxide/Kaolinite
4	47.0		11.0	10.7		0.5	0.5	30.3	100.0	Fe Oxide/Kaolinite
5	44.4		6.3	8.4		0.3		40.5	100.0	Fe Oxide
6	59.2		1.0	36.1				3.6	100.0	Quartz

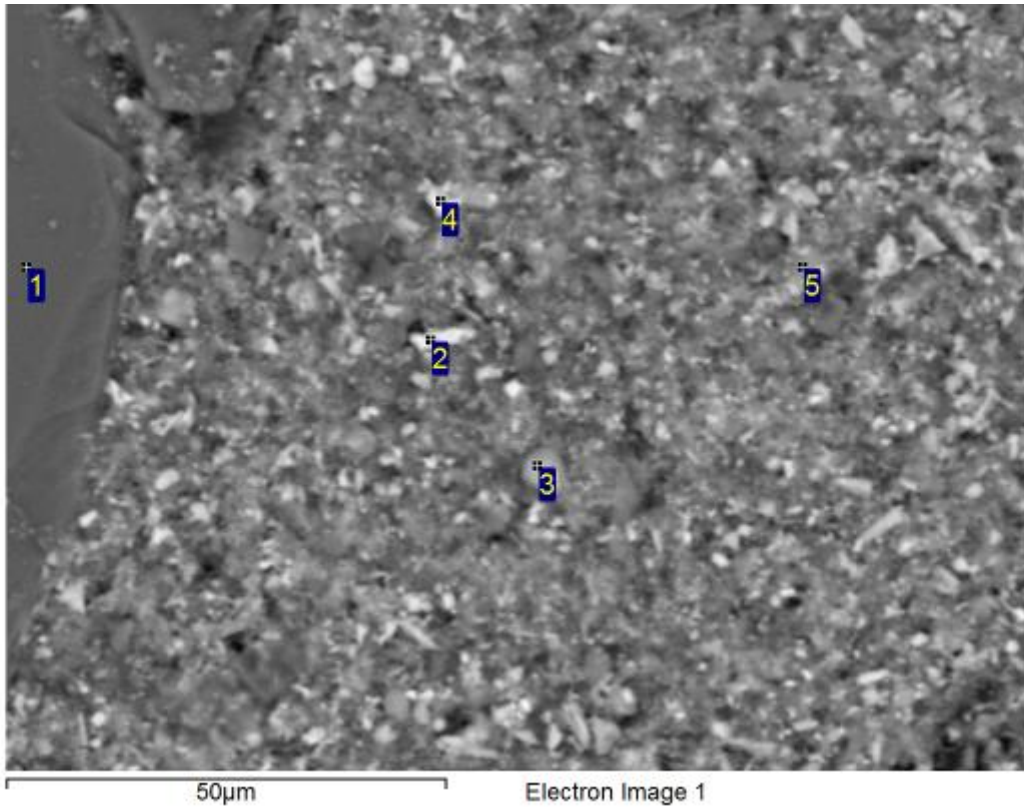
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	51.6	0.3	1.0	14.8	20.7		8.0	0.3		3.3	100.0	Mica
2	54.3		0.9	12.8	17.3		7.0	0.3		7.2	100.0	Mica
3	42.1			2.0	2.2					53.7	100.0	Fe Oxide
4	40.2			8.3	8.5		0.6	0.5	2.0	39.8	100.0	Fe Oxide
5	46.7			9.3	9.6	0.4	0.4		0.7	33.1	100.0	Fe Oxide/Kaolinite

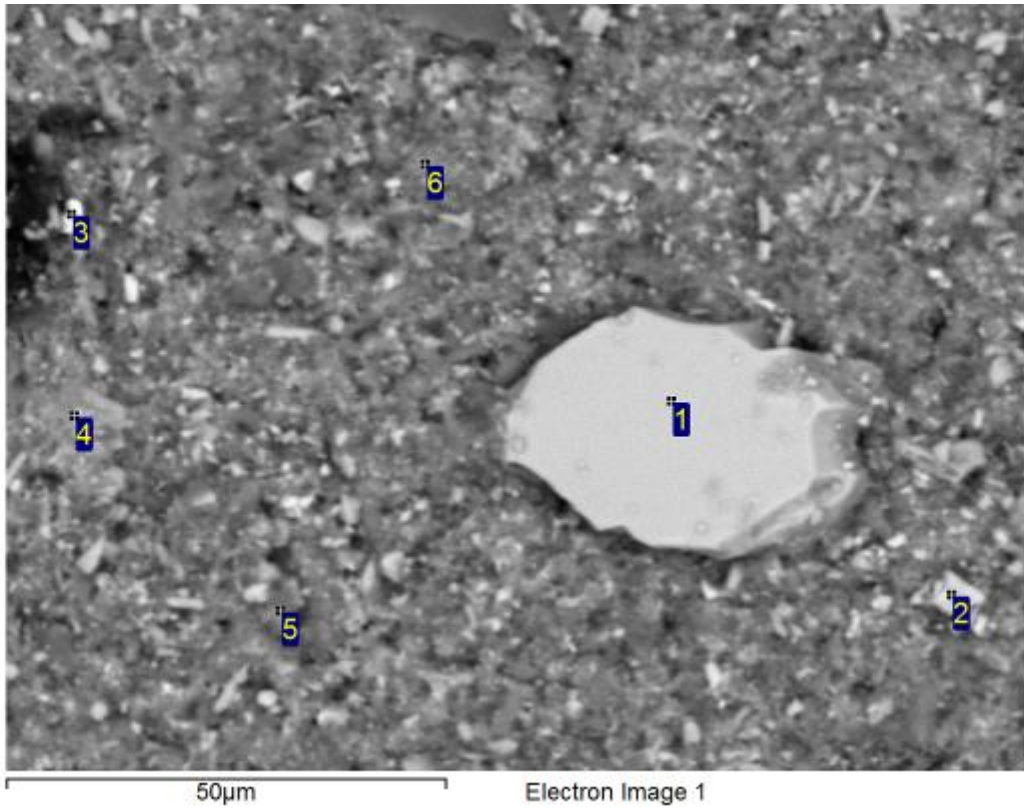
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	52.5	0.3	1.1	14.3	20.7		7.8	0.2		3.0	100.0	Mica
2	42.1			2.5	1.7					53.8	100.0	Fe Oxide
3	55.1			2.4	2.0	0.4				40.2	100.0	Fe Oxide
4	44.3			2.9	3.2					49.6	100.0	Fe Oxide
5	50.0			10.3	6.8		0.3		0.4	32.2	100.0	Fe Oxide/Kaolinite

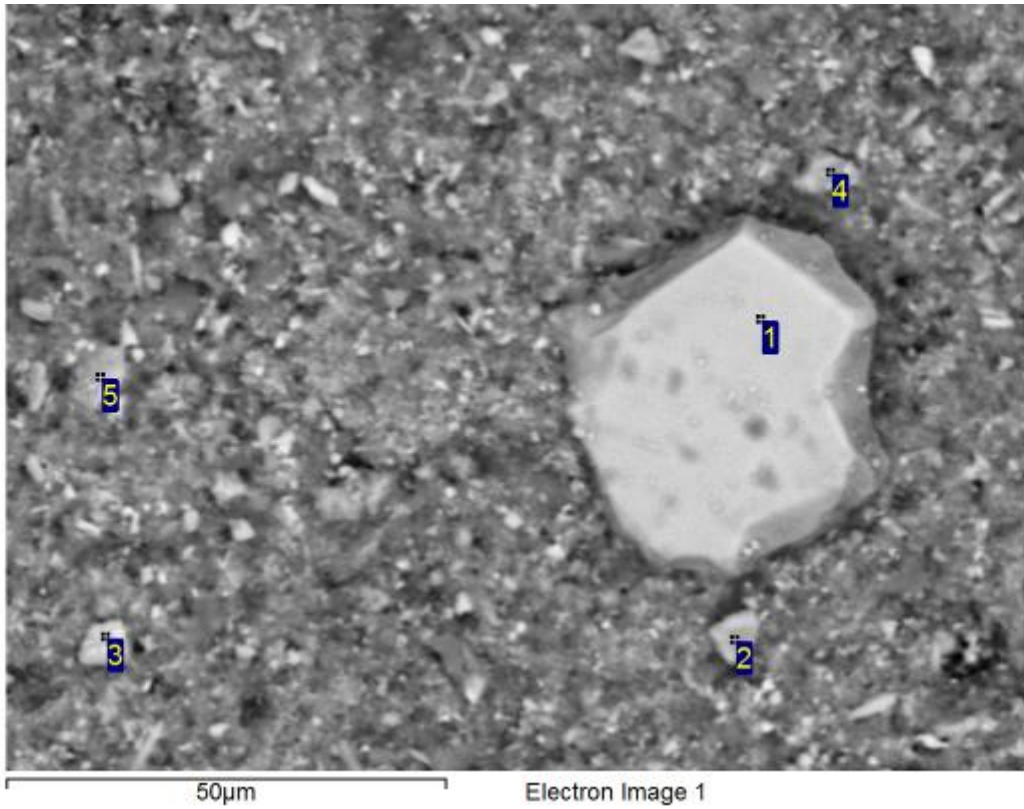
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Mn	Fe	Total	Mineral ID
1	36.2		0.3			63.5	100.0	Fe Oxide
2	37.6	0.7	1.6			60.1	100.0	Fe Oxide
3	9.7	0.9	2.4		0.4	86.6	100.0	Fe Oxide
4	38.1	4.9	4.9	0.3	0.5	51.4	100.0	Fe Oxide
5	45.0	12.4	12.0	2.7	0.8	27.1	100.0	Fe Oxide/Kaolinite/Mica
6	56.1	8.8	7.9	0.2	0.6	26.4	100.0	Fe Oxide/Kaolinite

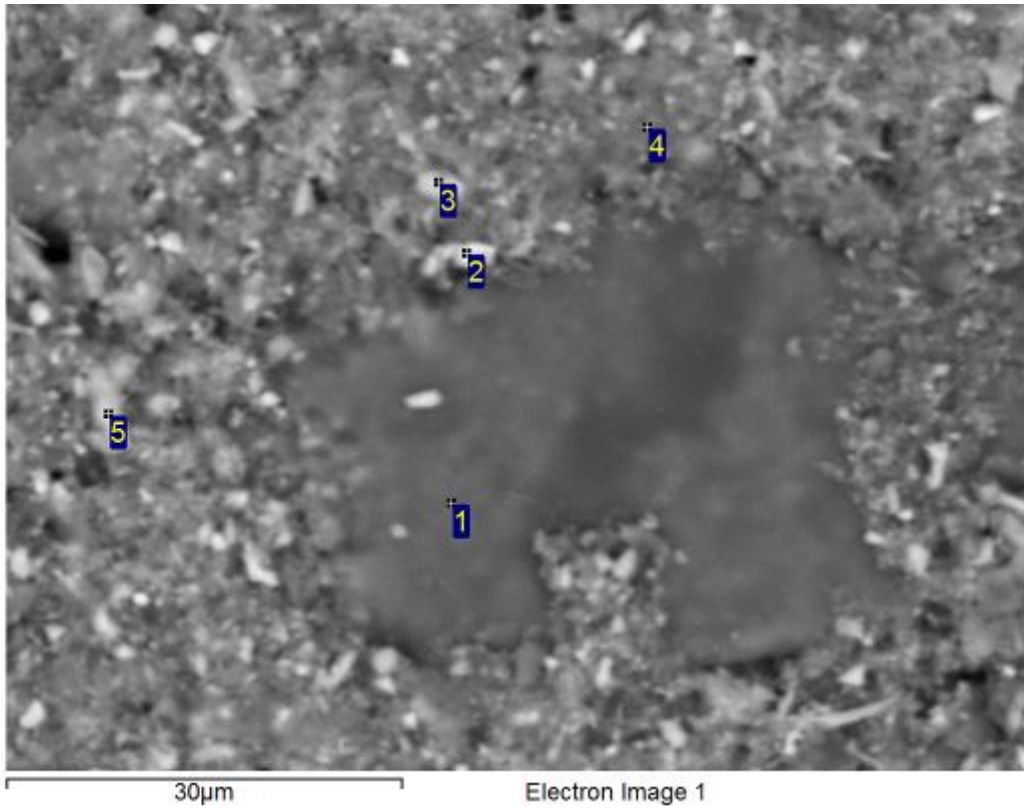
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	33.3	0.4					66.3	100.0	Fe Oxide
2	39.0	1.3	1.1	0.5			58.1	100.0	Fe Oxide
3	42.9	1.2	2.0				53.9	100.0	Fe Oxide
4	44.1	3.1	1.8				51.0	100.0	Fe Oxide
5	47.5	3.6	2.8		0.3	0.3	45.5	100.0	Fe Oxide

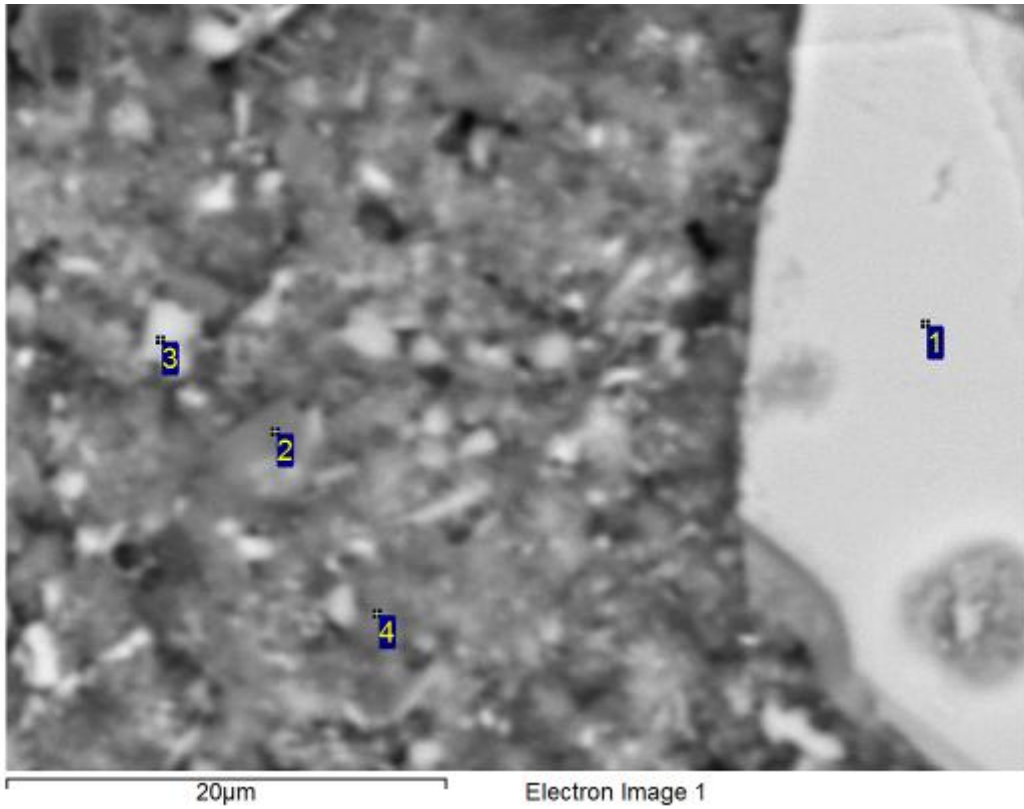
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	46.5	1.0	12.6	15.9		4.5		0.4		19.1	100.0	Mica/Fe Oxide/Kaolinite
2	45.5		2.9	2.3		0.3				49.0	100.0	Fe Oxide
3	43.4		4.3	4.8		0.2				47.3	100.0	Fe Oxide
4	44.3		11.1	9.6	0.3	0.9	0.2		0.4	33.2	100.0	Fe Oxide/Kaolinite
5	31.5		5.4	5.9	0.4			0.7	0.6	55.5	100.0	Fe Oxide

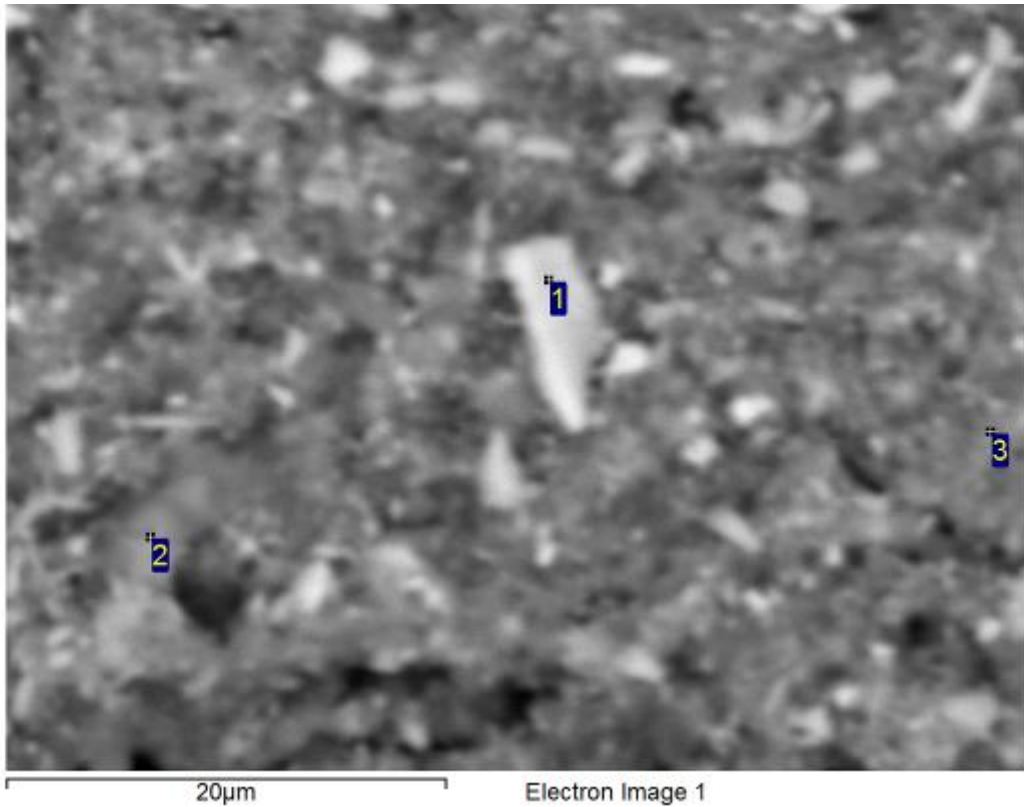
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	30.8							69.2	100.0	Fe Oxide
2	58.0	11.0	11.2		0.4	0.3	0.5	18.7	100.0	Kaolinite/Fe Oxide
3	48.6	4.7	6.7		0.3		0.3	39.5	100.0	Fe Oxide/Kaolinite
4	46.3	9.9	10.4	0.4	0.7		0.6	31.8	100.0	Fe Oxide/Kaolinite

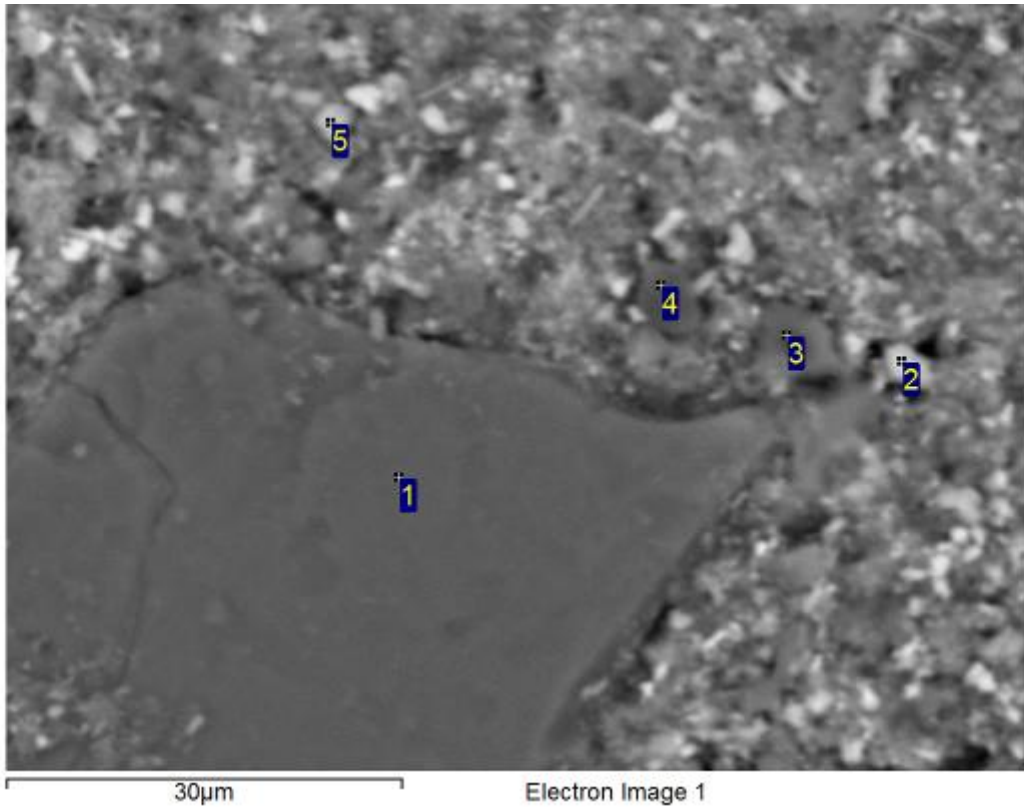
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	33.1	1.8	1.3				63.8	100.0	Fe Oxide
2	57.6	9.6	9.2	0.2	0.2	0.3	22.9	100.0	Kaolinite/Fe Oxide
3	50.6	9.7	8.8	0.7	0.2	0.4	29.5	100.0	Kaolinite/Fe Oxide

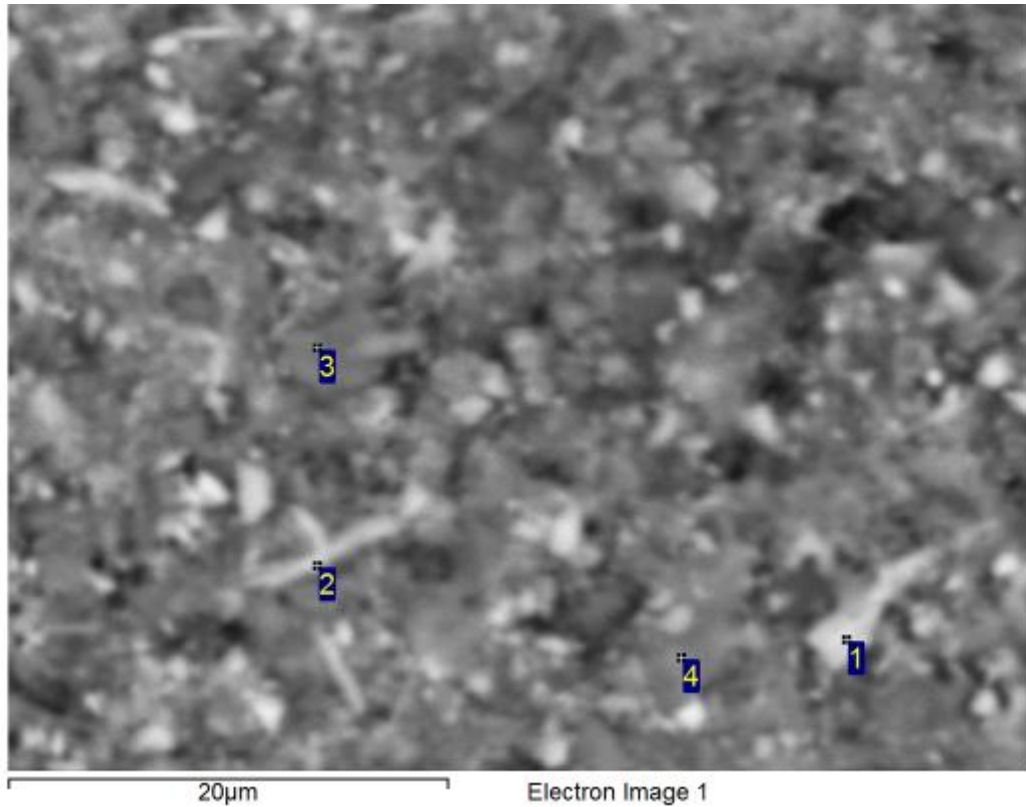
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	52.7	0.3	1.1	14.2	20.8		8.0		0.3		2.6	100.0	Mica
2	54.8			2.3	2.5	0.3					40.1	100.0	Fe Oxide
3	64.1			2.1	28.4		0.2				5.3	100.0	Quartz
4	69.7			23.5	2.4					0.2	4.1	100.0	Quartz/
5	48.9	1.8		8.4	6.7		0.3	0.2		0.3	33.4	100.0	Fe Oxide/Kaolinite

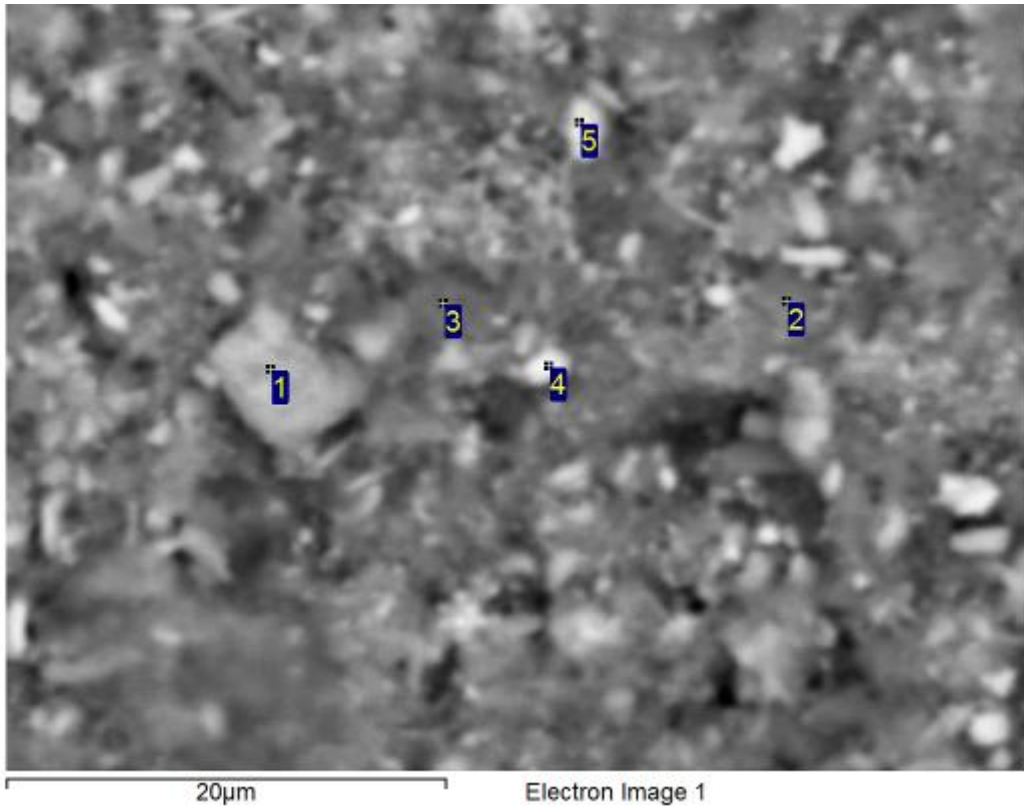
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	49.7		3.2	4.1	0.2				42.8	100.0	Fe Oxide
2	51.1	0.5	3.9	4.2	0.2			1.0	39.1	100.0	Fe Oxide/Kaolinite
3	52.8		11.7	11.7	0.7	0.2		0.4	22.5	100.0	Kaolinite/Fe Oxide
4	56.7	0.4	8.4	11.4	1.5		0.2	1.0	20.4	100.0	Kaolinite/Fe Oxide/Mica

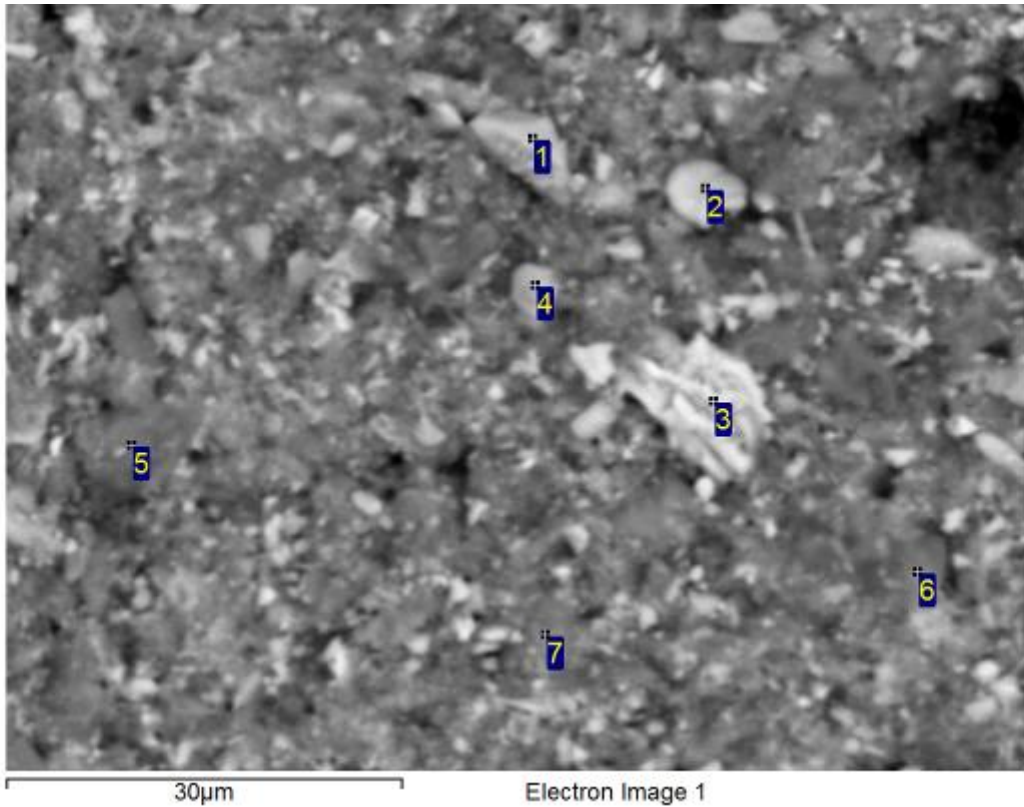
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	46.9		4.1	4.3			0.4	44.2	100.0	Fe Oxide
2	51.3	0.5	10.5	11.3	2.2	0.2	0.3	23.8	100.0	Kaolinite/Fe Oxide/Mica
3	48.3		9.1	11.7	1.3		2.5	27.1	100.0	Fe Oxide/Kaolinite/Mica
4	42.6		3.5	3.5				50.4	100.0	Fe Oxide
5	46.3		5.0	4.2	0.4			44.2	100.0	Fe Oxide

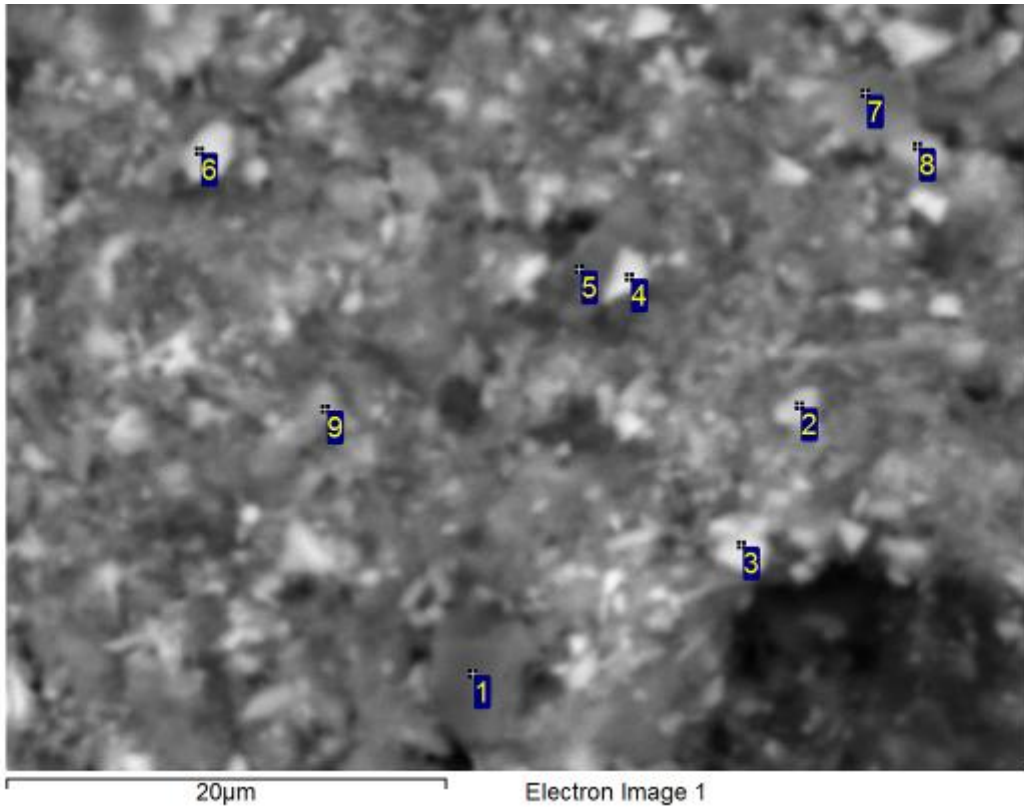
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	43.8		0.6	1.3				54.4	100.0	Fe Oxide
2	41.9		4.6	4.8	0.2			48.5	100.0	Fe Oxide
3	33.9		0.4	0.3				65.4	100.0	Fe Oxide
4	53.7		3.2	3.5			0.3	39.3	100.0	Fe Oxide
5	46.3		12.1	12.3	0.2			29.1	100.0	Fe Oxide/Kaolinite
6	54.4	0.3	11.5	11.9	2.7			19.3	100.0	Fe Oxide/Kaolinite/Mica
7	52.0	0.3	9.9	9.6	1.5	0.2	0.4	26.1	100.0	Fe Oxide/Kaolinite/Mica

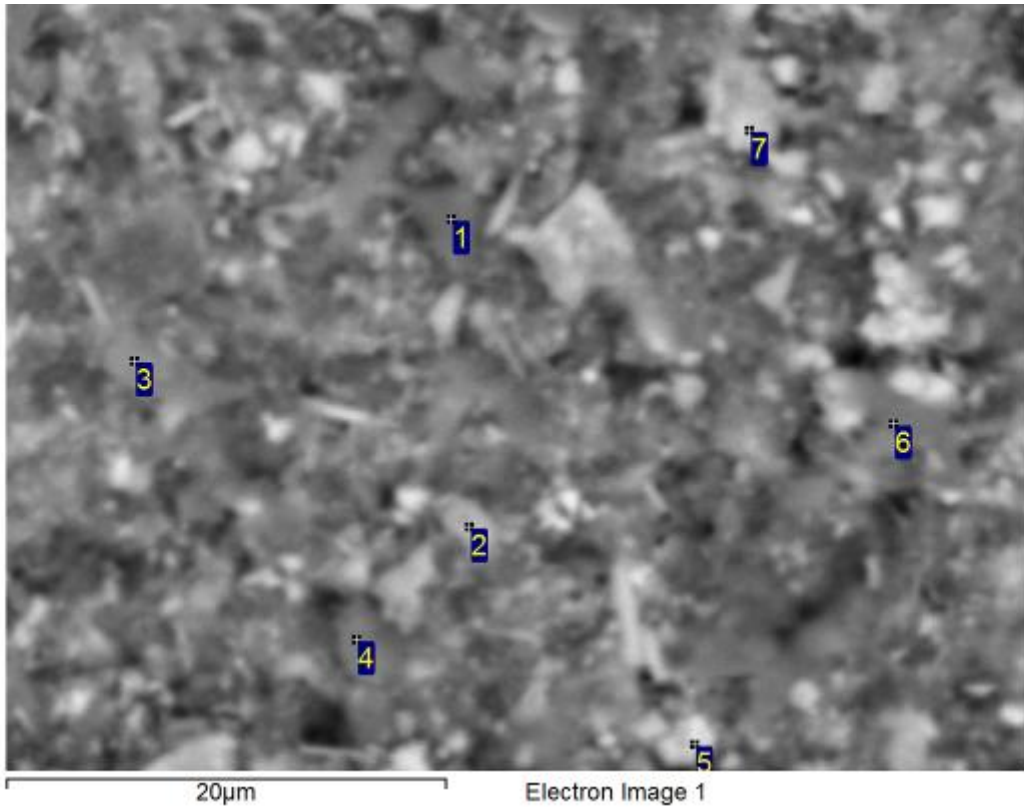
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	62.8	0.8	34.7				1.7	100.0	Quartz
2	55.7	4.1	3.3	0.4		0.3	36.3	100.0	Fe Oxide/Kaolinite
3	45.1	1.8	1.3				51.8	100.0	Fe Oxide
4	53.1	4.3	3.9		0.2		38.6	100.0	Fe Oxide/Kaolinite
5	55.6	9.8	8.9		0.6	1.2	23.8	100.0	Fe Oxide/Kaolinite
6	52.6	5.5	5.8	0.3	0.7		35.2	100.0	Fe Oxide/Kaolinite
7	60.1	10.3	10.2		0.2	0.3	18.9	100.0	Kaolinite/Fe Oxide
8	38.6	6.6	5.5		0.3		49.0	100.0	Fe Oxide
9	51.6	7.4	6.3		0.5	0.4	33.8	100.0	Fe Oxide/Kaolinite

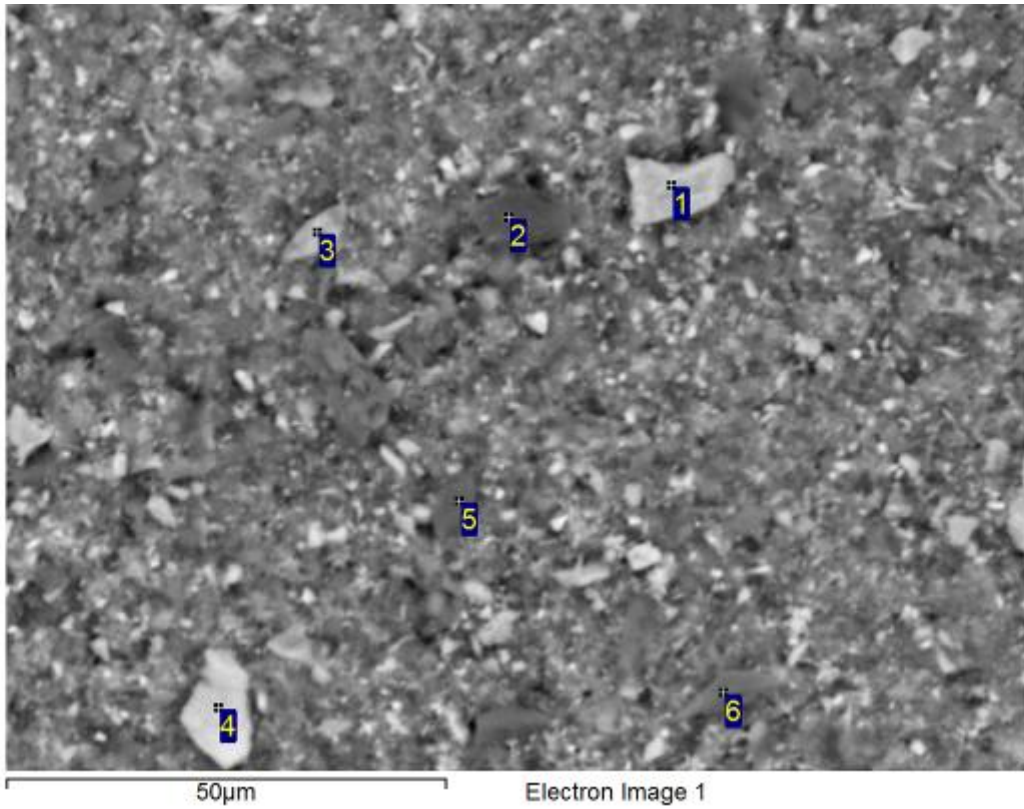
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	64.6		1.2	31.4				2.7	100.0	Quartz
2	51.0		7.7	4.6	0.3	0.2	0.6	35.6	100.0	Fe Oxide/Kaolinite
3	50.0	0.8	9.9	12.8	3.0		0.5	23.1	100.0	Fe Oxide/Kaolinite/Mica
4	59.2		3.0	26.9	0.3		0.3	10.2	100.0	Quartz/Fe Oxide
5	37.0		2.4	2.7				57.9	100.0	Fe Oxide
6	46.3		11.7	3.1	0.3		0.3	38.2	100.0	Fe Oxide/Kaolinite
7	47.0		3.4	3.6				46.0	100.0	Fe Oxide

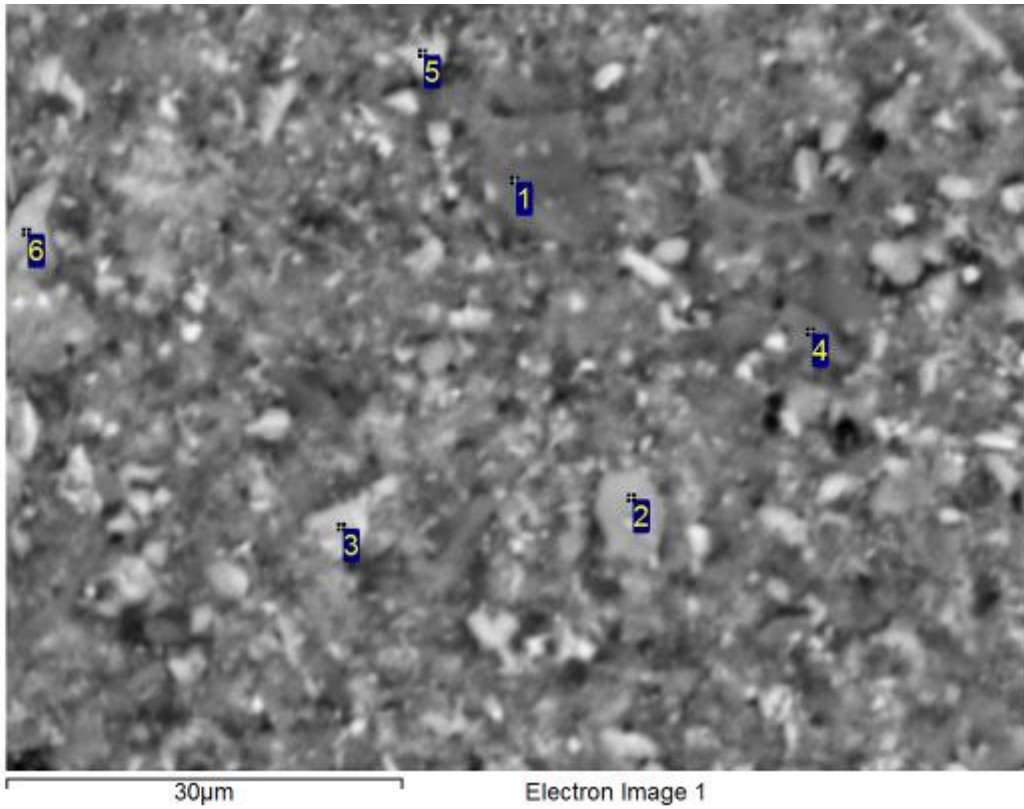
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ca	Ti	Fe	Total	Mineral ID
1	47.8	0.5	1.7	2.2					47.8	100.0	Fe Oxide
2	63.1		15.3	18.2			0.1		3.3	100.0	Kaolinite
3	49.2		0.4	1.7					48.6	100.0	Fe Oxide
4	49.1		3.4	3.5	0.3				43.6	100.0	Fe Oxide
5	57.9		0.6	39.8					1.7	100.0	Quartz
6	59.7	1.3	12.2	17.9		5.9		0.2	2.7	100.0	Mica

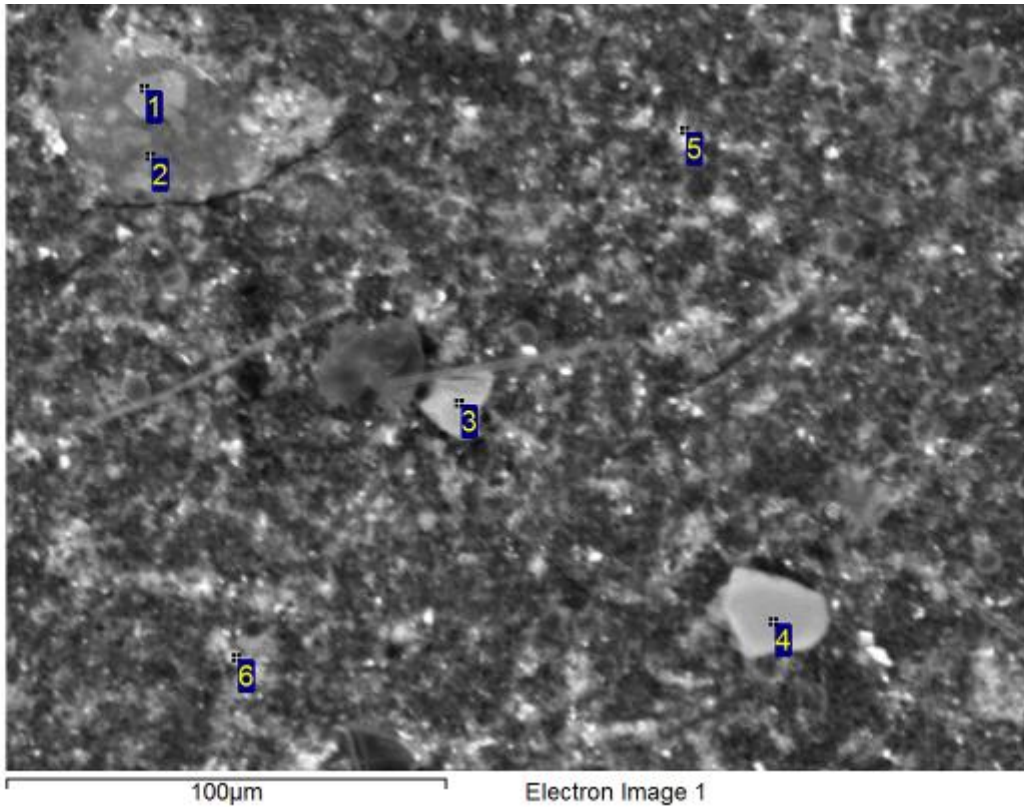
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	58.0		14.0	10.7		1.0	0.2	0.4	15.6	100.0	Fe Oxide/Kaolinite
2	49.3		6.1	3.3		0.3	0.2	0.6	40.3	100.0	Fe Oxide
3	46.7		3.2	2.7			0.3		47.2	100.0	Fe Oxide
4	52.9	1.3	13.7	19.4		5.6		0.4	6.7	100.0	Kaolinite/Mica
5	48.7	0.5	5.3	4.1		0.2		1.2	39.9	100.0	Fe Oxide/Kaolinite
6	50.4		5.8	5.7	0.4	0.4		0.7	36.6	100.0	Fe Oxide/Kaolinite

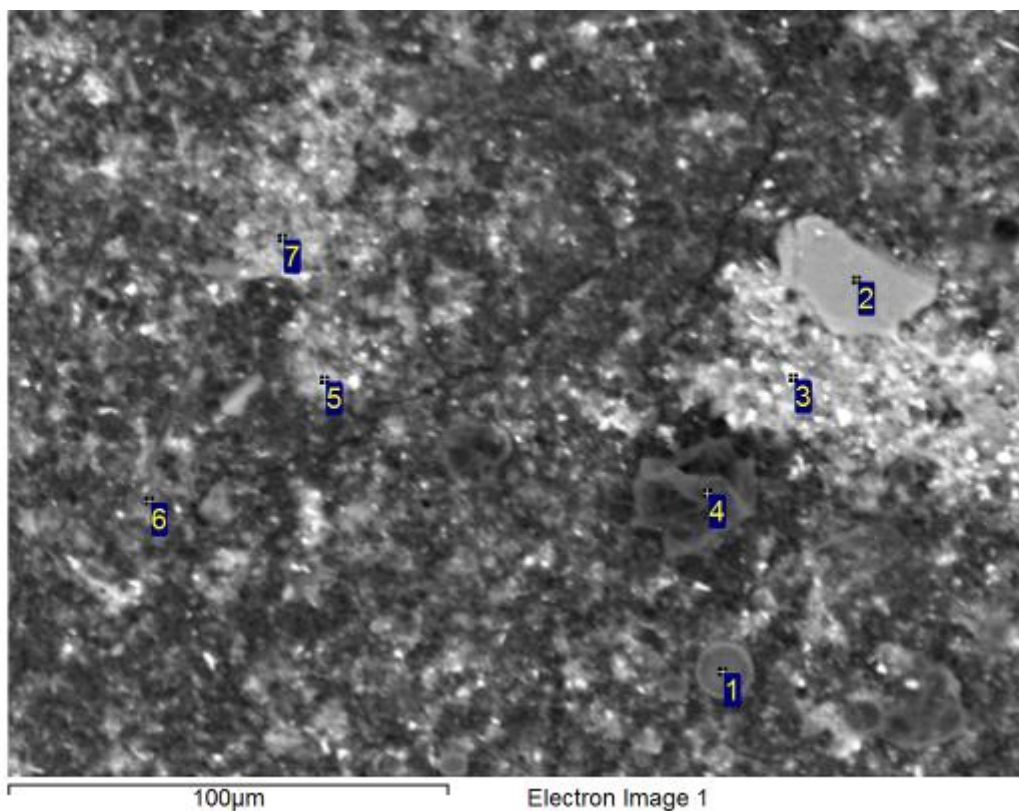
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	60.1		12.4	2.1	21.2				4.3	100.0	Talc/Fe-Oxide
2	61.1		11.7	1.9	17.7				7.6	100.0	Talc/Fe-Oxide
3	53.7	0.3	0.6	14.2	19.4	7.7	0.3		4.0	100.0	Mica
4	48.5		0.6	14.1	23.6	7.1	0.4		5.6	100.0	Mica
5	54.9			5.9	5.1	0.5		1.1	32.6	100.0	Kaolinite/Fe Oxide
6	48.2			5.3	4.3	0.3		0.4	41.6	100.0	Kaolinite/Fe Oxide

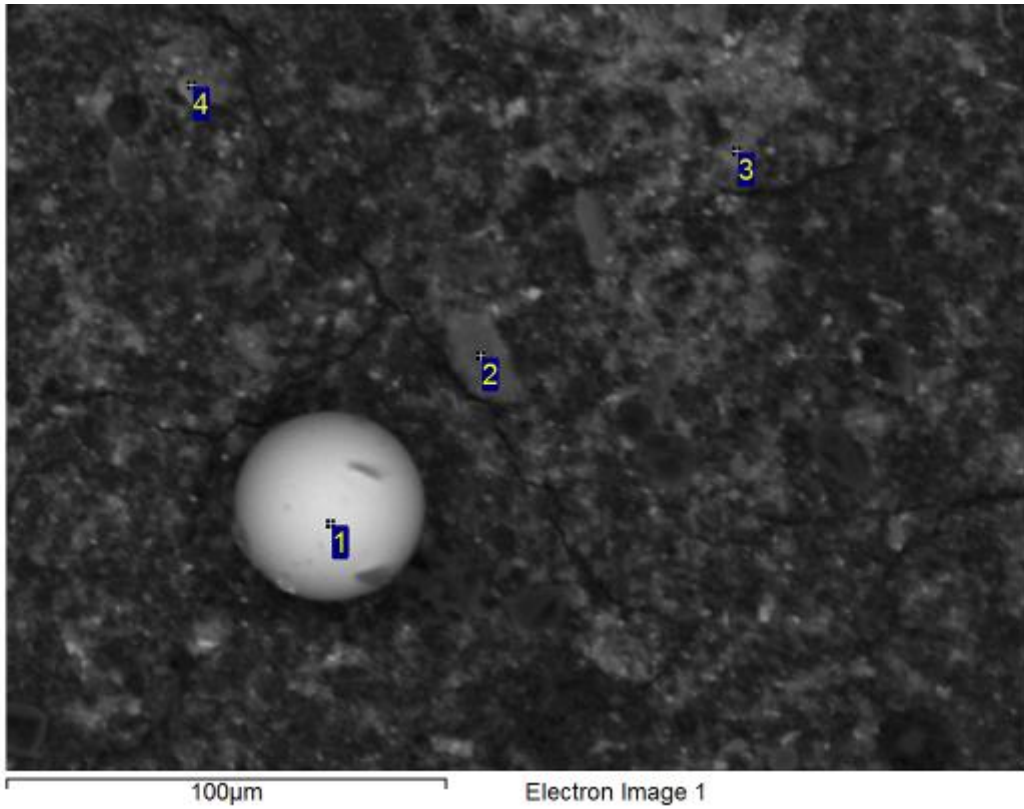
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	S	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	63.6			1.9	23.6			0.4	0.3			10.1	100.0	Fe-Si- Oxide
2	53.2	1.1		15.8	18.3			5.4				6.2	100.0	Mica
3	57.1			9.7	4.1	1.0		0.2		0.6		27.3	100.0	Kaolinite/Fe Oxide
4	78.4	1.3	1.4	2.7	3.1	1.2	2.1	2.8	2.3			4.5	100.0	Clay
5	55.9			9.8	10.1			1.5	0.4		0.7	21.7	100.0	Kaolinite/Fe Oxide
6	65.0			11.5	12.4							11.1	100.0	Kaolinite/Fe Oxide
7	58.1			9.6	8.7			0.6	0.5		1.0	21.5	100.0	Kaolinite/Fe Oxide

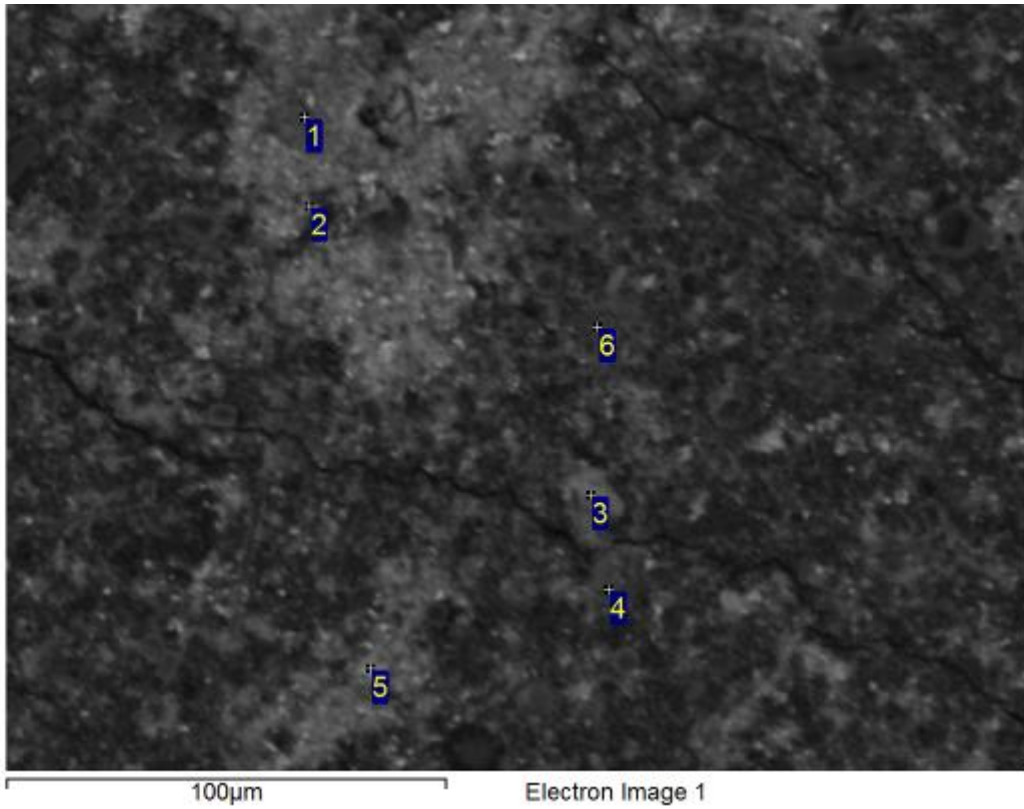
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	K	Ca	Ti	Mn	Fe	Zn	Ba	Total	Mineral ID
1	29.8	0.5	0.6	5.7		3.0	19.9			0.7	39.8	100.0	Ba-Ti-Oxide
2	61.6	1.0	13.7	16.2	4.8				2.7			100.0	Mica
3	57.7		8.4	7.7	0.5	0.3		0.5	24.8			100.0	Kaolinite/Fe Oxide
4	47.2		15.2	11.0	0.4				26.1			100.0	Kaolinite/Fe Oxide

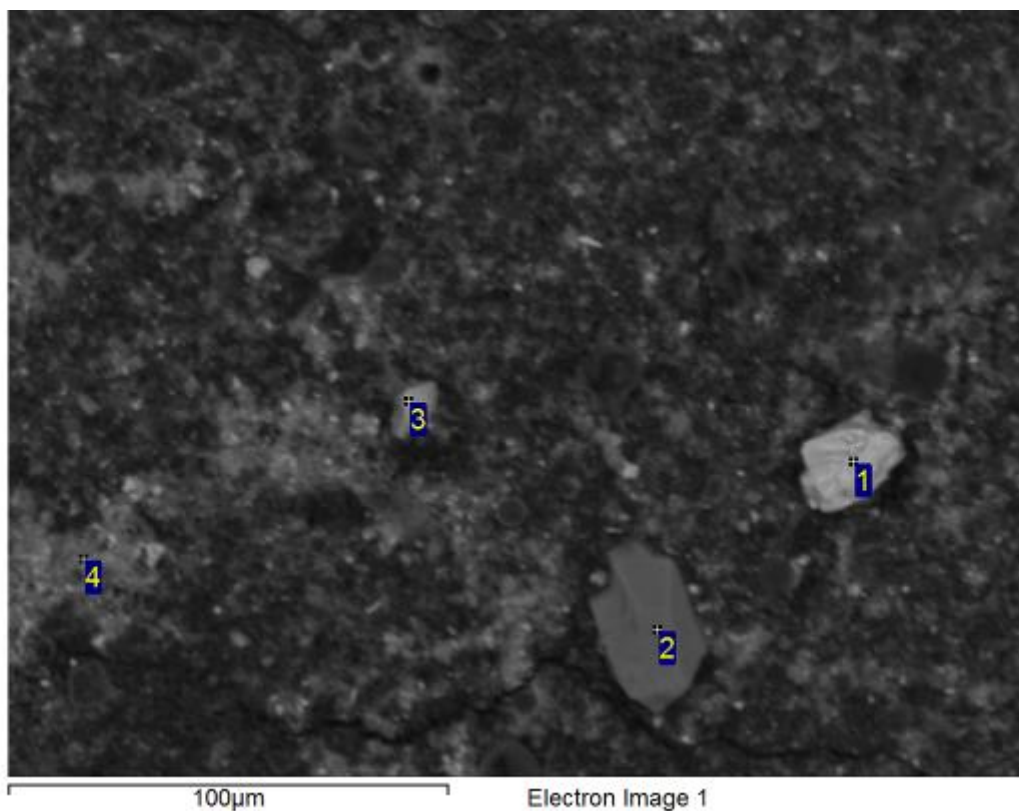
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	S	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	56.4		13.4	15.4			2.0			0.3	12.5	100.0	Mica
2	48.9		5.5	4.3	0.4	0.3	0.4	0.6		1.3	38.3	100.0	Kaolinite/Fe Oxide
3	59.1		10.6	7.9	0.7				0.4	0.5	20.8	100.0	Kaolinite/Fe Oxide
4	60.5		4.1	18.7	0.8	0.5	0.5	0.5		0.5	14.0	100.0	Fe-Si- Oxide
5	45.1	0.6	5.4	9.5			0.3	0.2		0.4	38.5	100.0	Kaolinite/Fe Oxide
6	63.1		4.9	16.3	1.1		0.4	0.7			13.6	100.0	Kaolinite/Fe Oxide

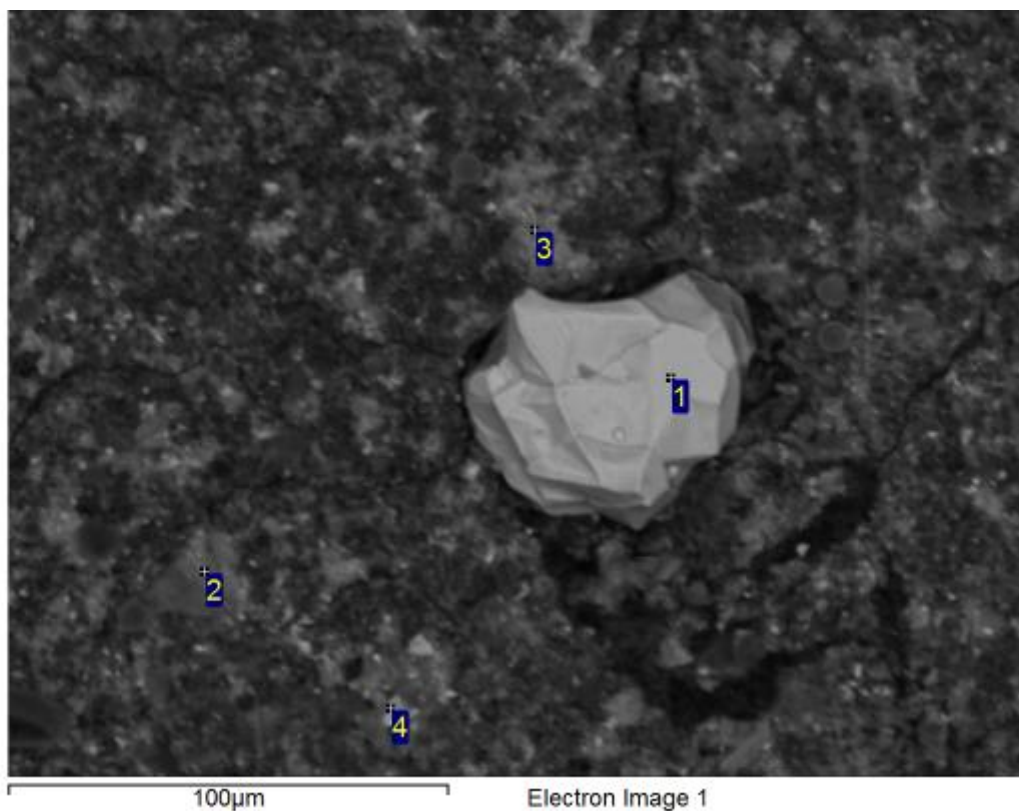
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	12.8									87.2	100.0	Fe Oxide
2	56.5	0.8	13.4	18.9		7.1		0.5		2.9	100.0	Mica
3	50.4		1.3	1.7	0.7					45.9	100.0	Fe Oxide
4	53.6		8.3	7.8		0.5	0.3		0.6	28.8	100.0	Kaolinite/Fe Oxide

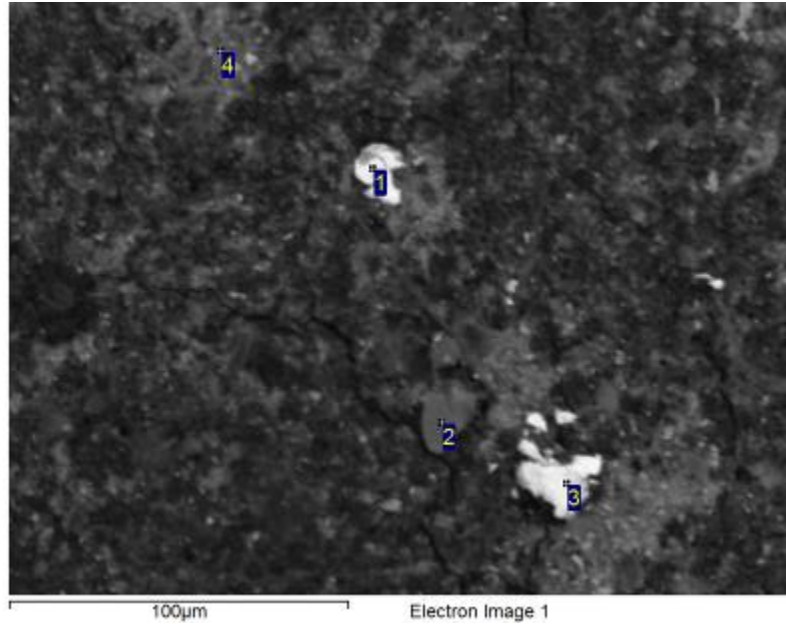
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	36.7									63.3	100.0	Fe Oxide
2	56.9	4.0	9.4	14.0		3.0		0.7	0.5	11.6	100.0	Mica
3	56.9		7.3	7.7	0.3	0.6	0.4		0.9	25.9	100.0	Kaolinite/Fe Oxide
4	45.2		1.1	4.1						49.6	100.0	Fe Oxide

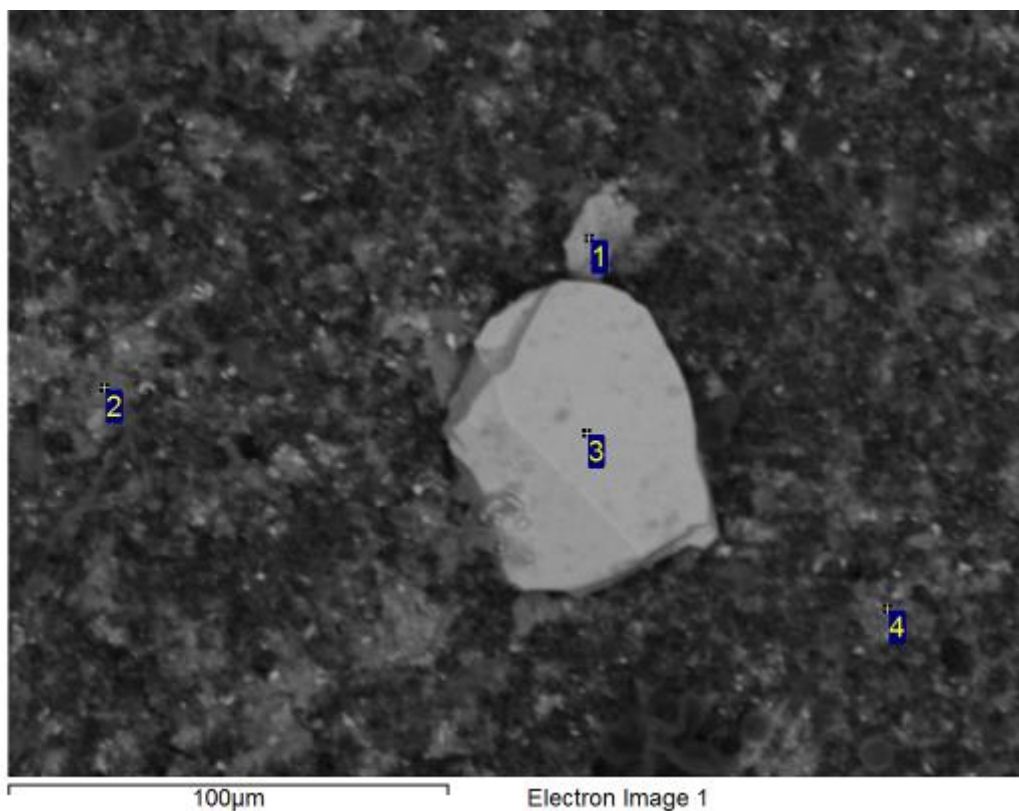
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	S	K	Ca	Ti	Mn	Fe	Cu	Zn	Total	Mineral ID
1	4.5					0.4					0.6	61.6	32.9	100.0	Cu-Zn alloy
2	54.1	0.4	0.7	14.2	19.3		7.0		0.3		4.1			100.0	Mica
3	2.4				0.4						0.9	62.1	34.3	100.0	Cu-Zn alloy
4	51.4			8.8	7.6		0.4	0.3		1.5	30.0			100.0	Kaolinite/Fe Oxide

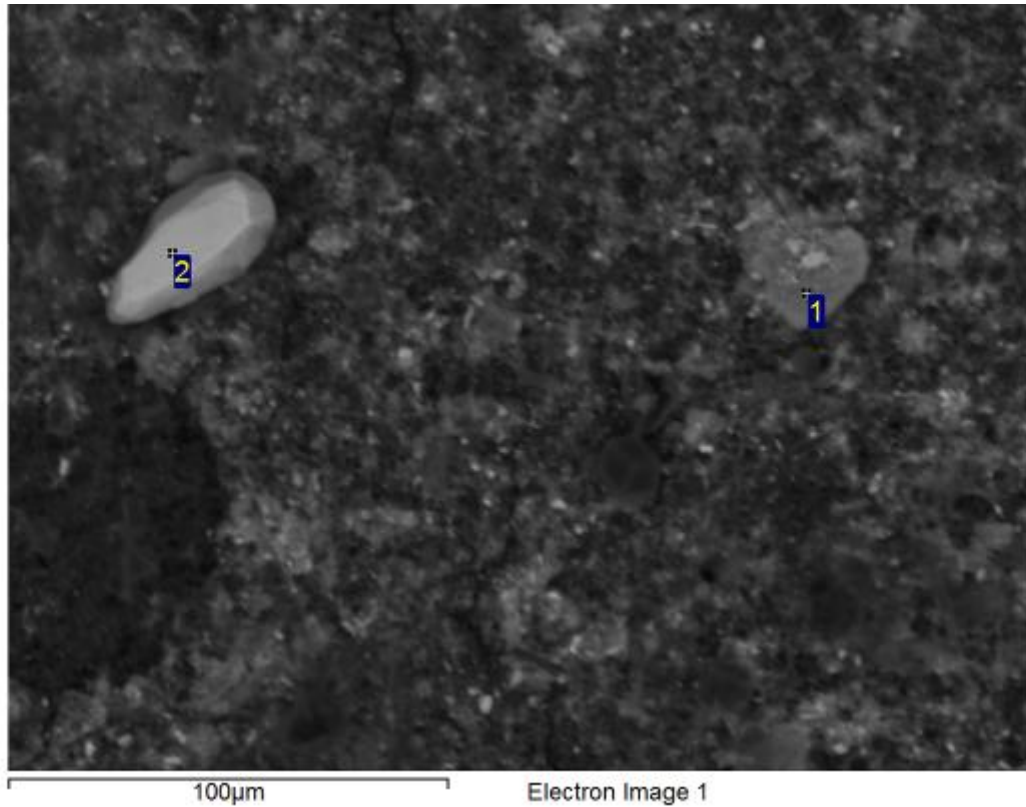
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	K	Ca	Mn	Fe	Total	Mineral ID
1	40.9		0.5	2.1				56.5	100.0	Fe Oxide
2	57.8	6.2	8.6	19.9	0.2	0.2	0.3	6.7	100.0	Plagioclase/Fe Oxide
3	34.9							65.1	100.0	Fe Oxide
4	58.6		9.0	8.8	0.6	0.2	0.6	22.3	100.0	Kaolinite/Fe Oxide

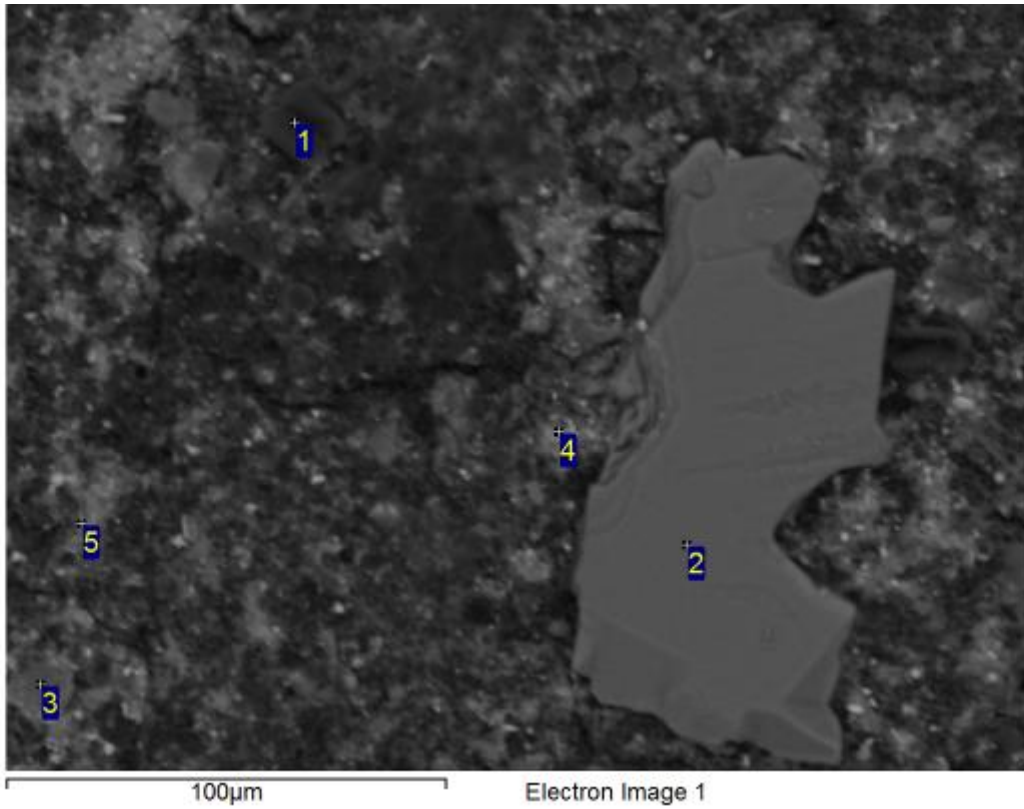
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ti	Mn	Fe	Zr	Total	Mineral ID
1	50.5	0.3	12.4	16.6	5.4	0.4	0.4	13.0	1.1	100.0	Mica/Fe Oxide
2	41.8							58.2		100.0	Fe Oxide

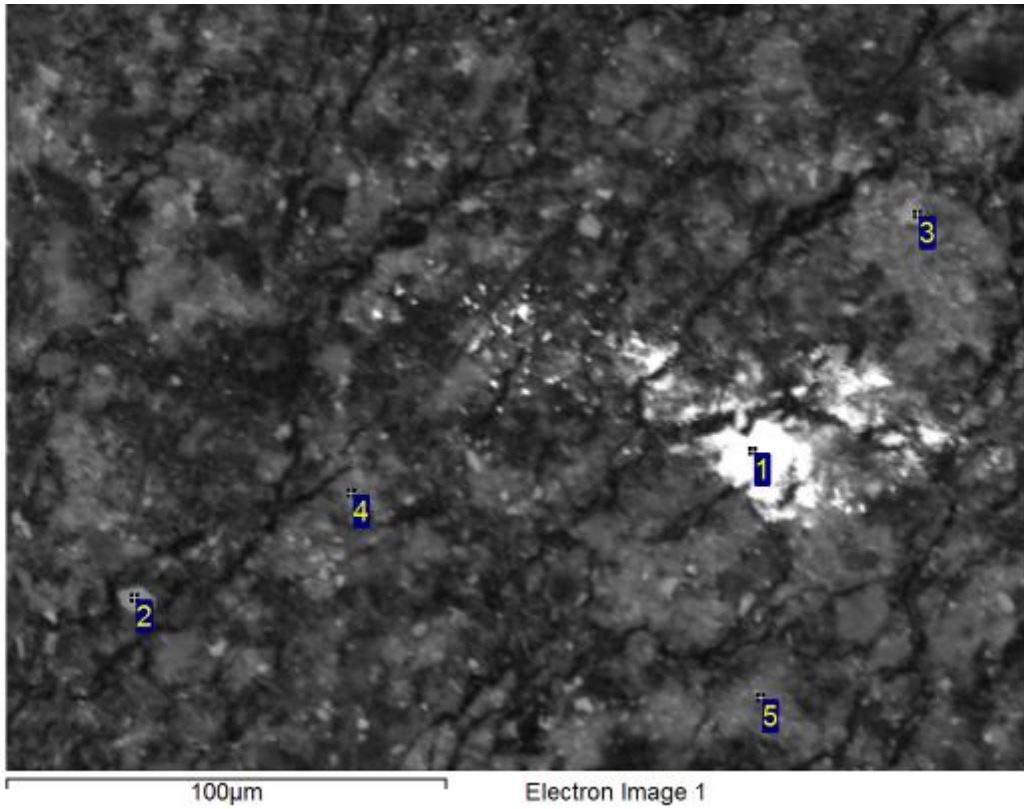
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	S	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	69.1		1.2	5.8	9.6	0.9	0.8	1.1	1.6		0.7	9.3	100.0	Kaolinite/Fe Oxide
2	53.4	0.3	0.6	15.2	19.8			7.9		0.3		2.5	100.0	Mica
3	61.0			16.7	18.3			0.4				3.6	100.0	Kaolinite/Fe Oxide
4	55.2			9.5	8.5			0.7	0.3			25.8	100.0	Kaolinite/Fe Oxide
5	56.0			7.3	6.2	0.4		0.3		0.2	0.5	29.0	100.0	Kaolinite/Fe Oxide

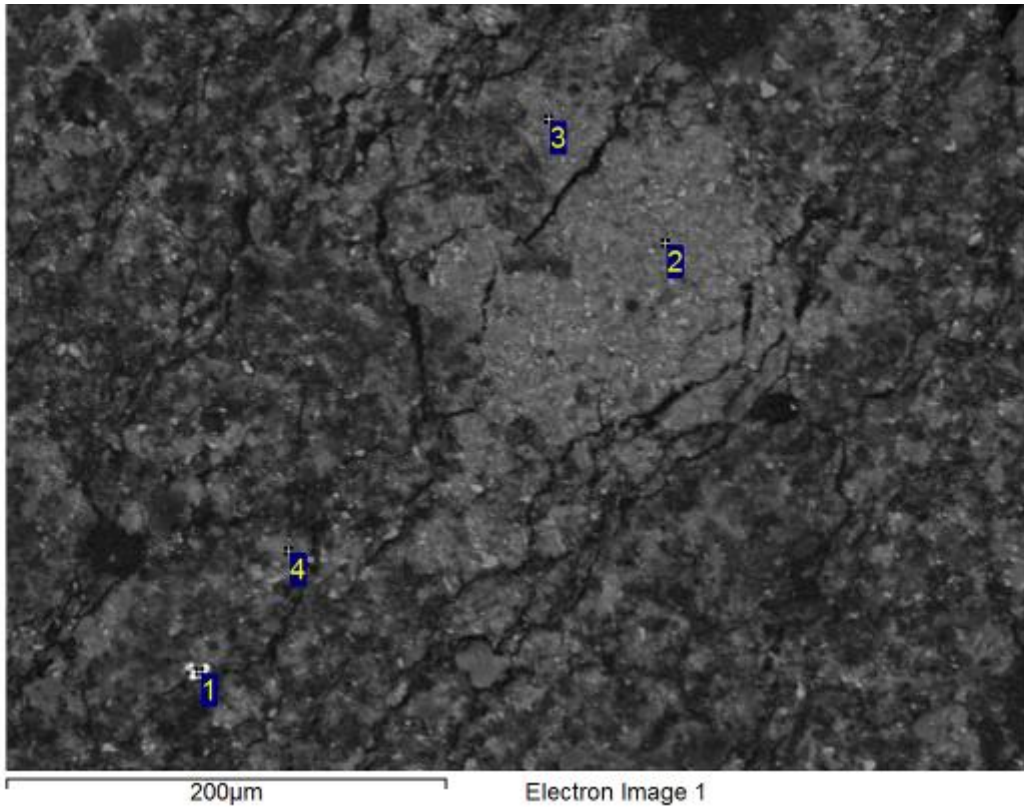
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	K	Ca	Ti	Mn	Fe	Pb	Total	Mineral ID
1	24.1							0.9	75.0	100.0	Pb Oxide
2	42.1	2.5	1.4					54.0		100.0	Fe Oxide
3	38.5	2.1	1.7					57.8		100.0	Fe Oxide
4	55.7	9.2	8.4	0.4	0.2		1.3	22.9	1.8	100.0	Kaolinite/Fe Oxide
5	56.8	8.0	8.2	0.5	0.2	0.2	0.5	25.5		100.0	Kaolinite/Fe Oxide

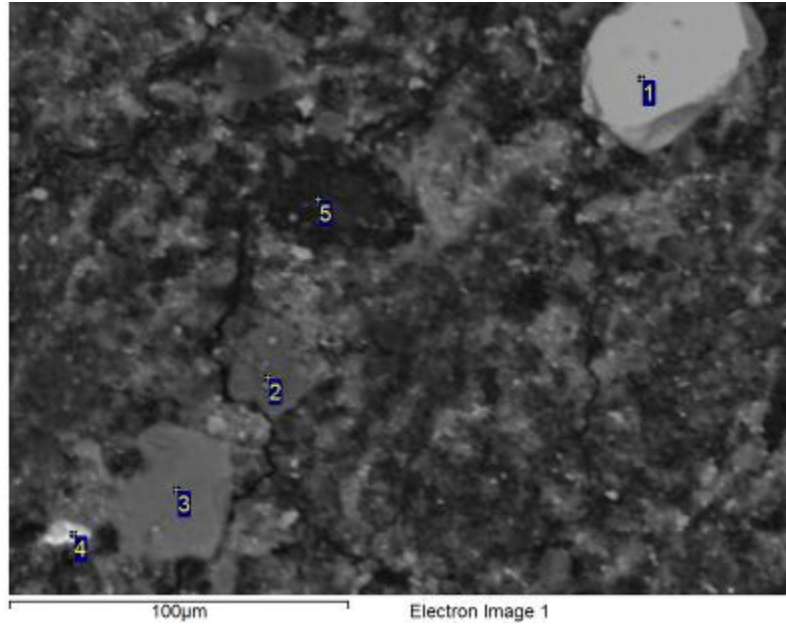
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Cu	Pb	Total	Mineral ID
1	28.2		0.4			1.2			0.8	0.8	68.6	100.0	Pb Oxide
2	48.2	0.6	9.3	9.0	0.7	0.2	0.3	0.7	30.9			100.0	Kaolinite/Fe Oxide
3	52.1		11.1	11.4	0.6			1.5	21.0		2.3	100.0	Kaolinite/Fe Oxide
4	51.5	0.3	9.1	12.5	0.6		0.3	0.4	25.2			100.0	Kaolinite/Fe Oxide

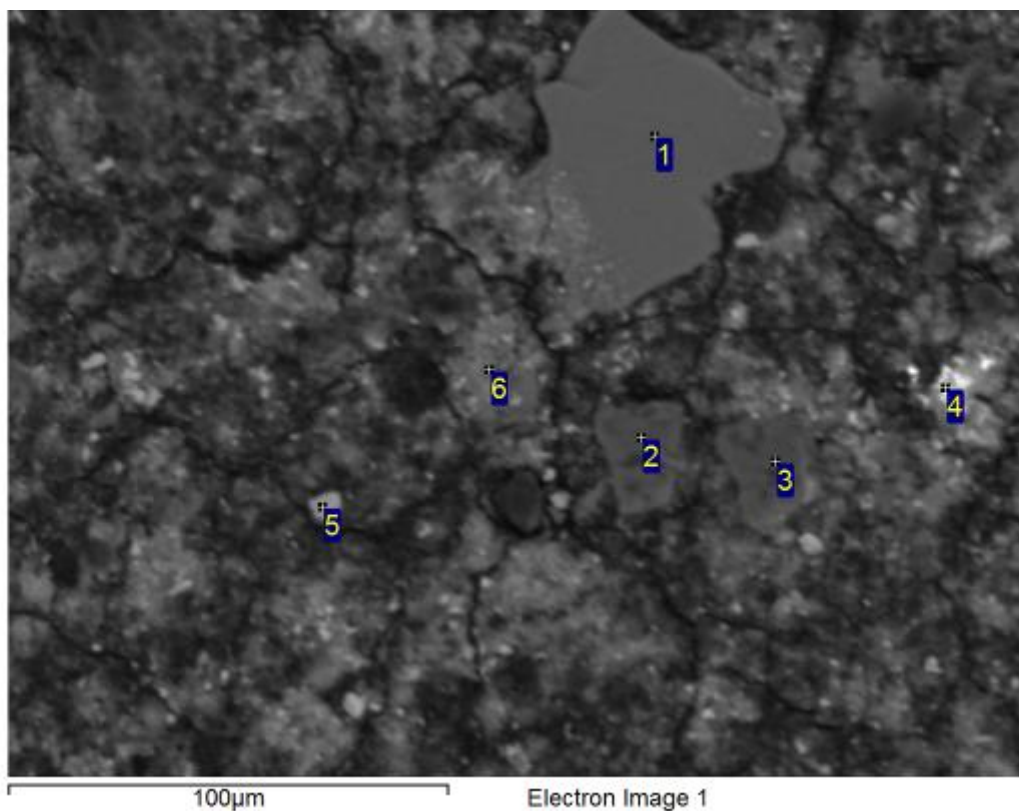
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ca	Ti	Fe	Sn	Sb	Pb	Total	Mineral ID
1	37.5								62.5				100.0	Fe Oxide
2	44.2	0.4		18.8	24.3	10.4			1.9				100.0	Mica
3	54.6		3.6	8.4	16.0	2.3	3.7	0.5	10.8				100.0	Clay
4	35.6			3.7	5.1				22.1	2.3	4.6	26.5	100.0	Pb-Fe-Sb-Sn Oxide/Kaolinite
5	76.7			5.8	4.0				13.5				100.0	Fe-Al-Si-O

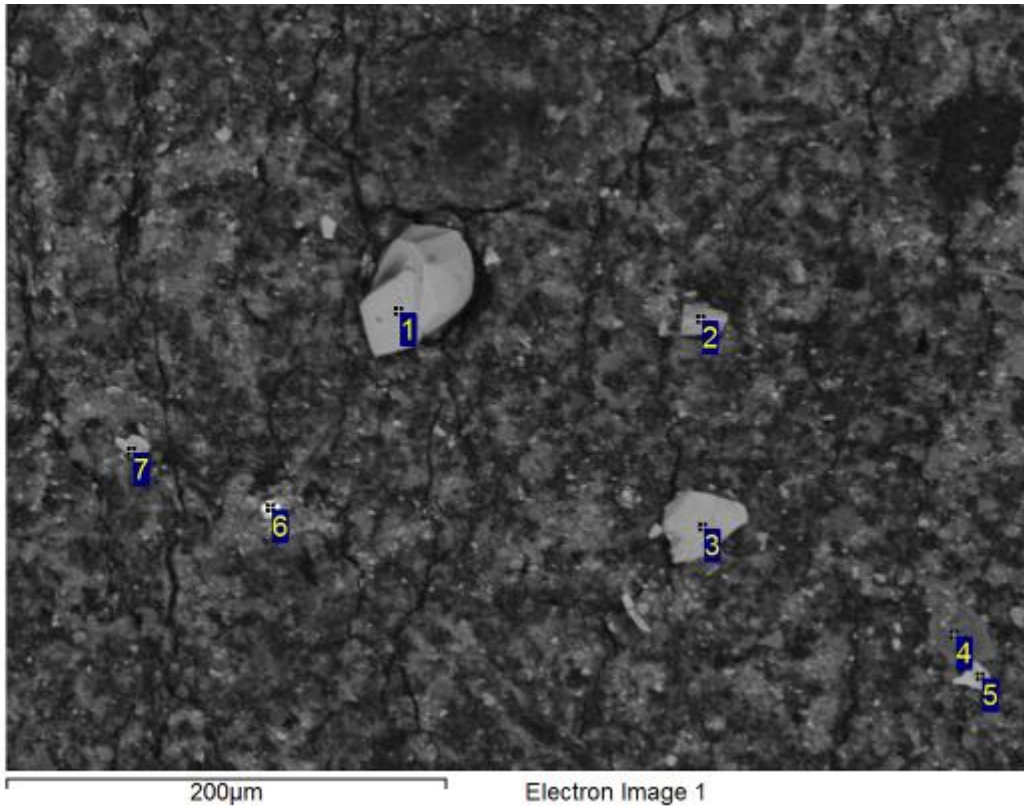
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ti	Mn	Fe	Pb	Total	Mineral ID
1	52.2	0.3	14.8	19.8	8.3	0.5		4.1		100.0	Mica
2	59.5		19.4	20.1				1.0		100.0	Kaolinite
3	62.6		18.1	18.6				0.7		100.0	Kaolinite
4	49.5		2.9	2.0				7.2	38.4	100.0	Pb Oxide
5	38.7		1.0	0.9				59.4		100.0	Fe Oxide
6	50.3		10.0	10.4	0.9		2.1	23.3	3.0	100.0	Kaolinite/Fe Oxide

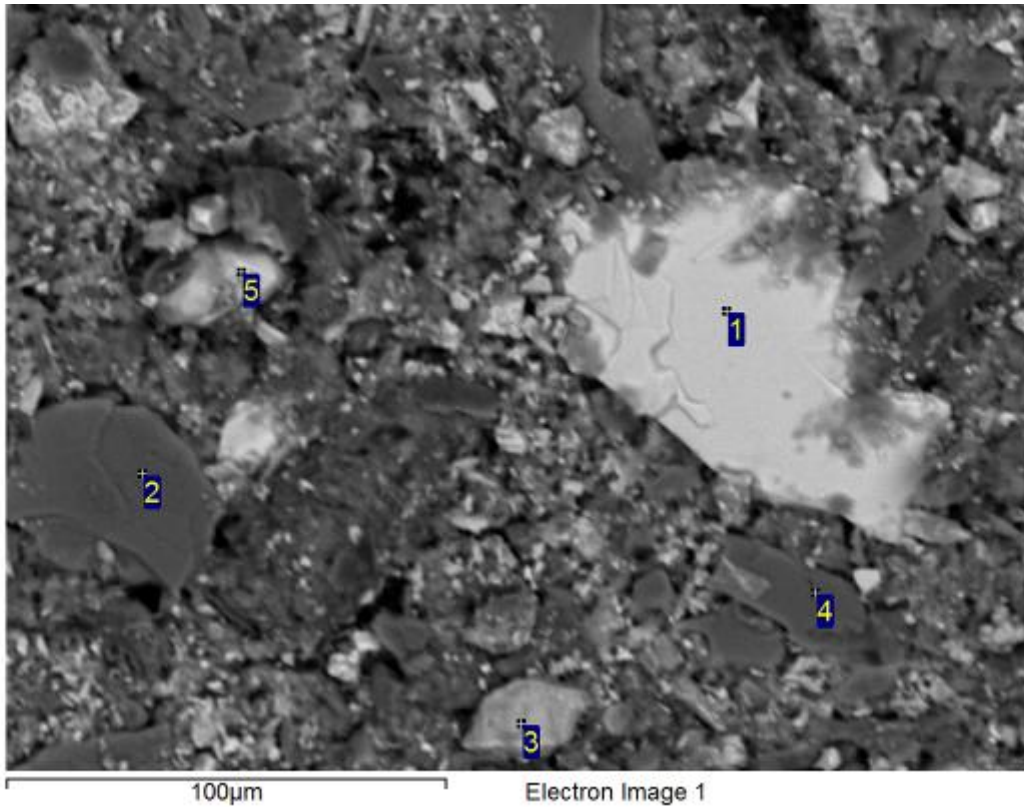
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Al	Si	K	Ti	Mn	Fe	Cu	Pb	Total	Mineral ID
1	36.9					2.9		60.2			100.0	Fe Oxide
2	45.5		1.2	0.9				52.5			100.0	Fe Oxide
3	36.9		0.7					62.4			100.0	Fe Oxide
4	51.0	0.5	15.3	19.0	5.8			8.0	0.5		100.0	Mica
5	32.9		0.5				0.5	66.1			100.0	Fe Oxide
6	40.2		1.1	1.0				3.1		54.6	100.0	Pb Oxide
7	29.4							70.6			100.0	Fe Oxide

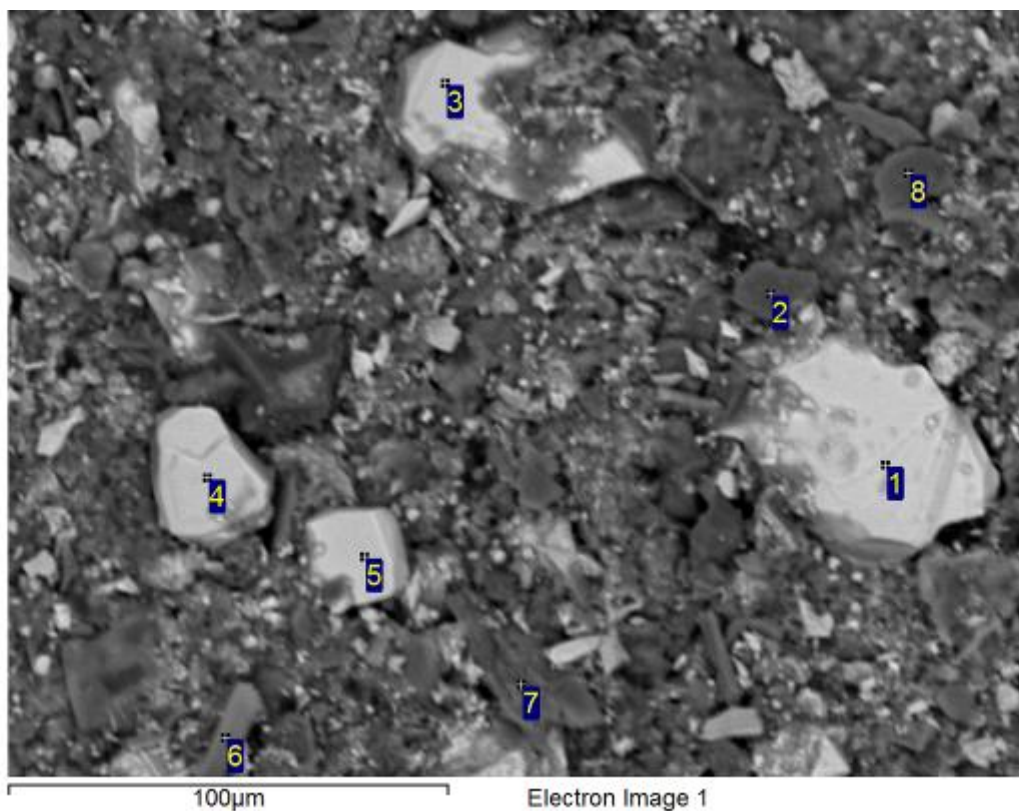
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%

Spectrum	O	Na	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	34.1							65.9	100.0	Fe Oxide
2	59.2			15.5	18.0	5.6		1.7	100.0	Mica
3	54.1			0.6	2.2			43.2	100.0	Fe Oxide
4	54.2	0.8	0.4	16.3	20.1	6.6	0.2	1.3	100.0	Mica
5	35.9			1.8	1.1		0.3	60.9	100.0	Fe Oxide

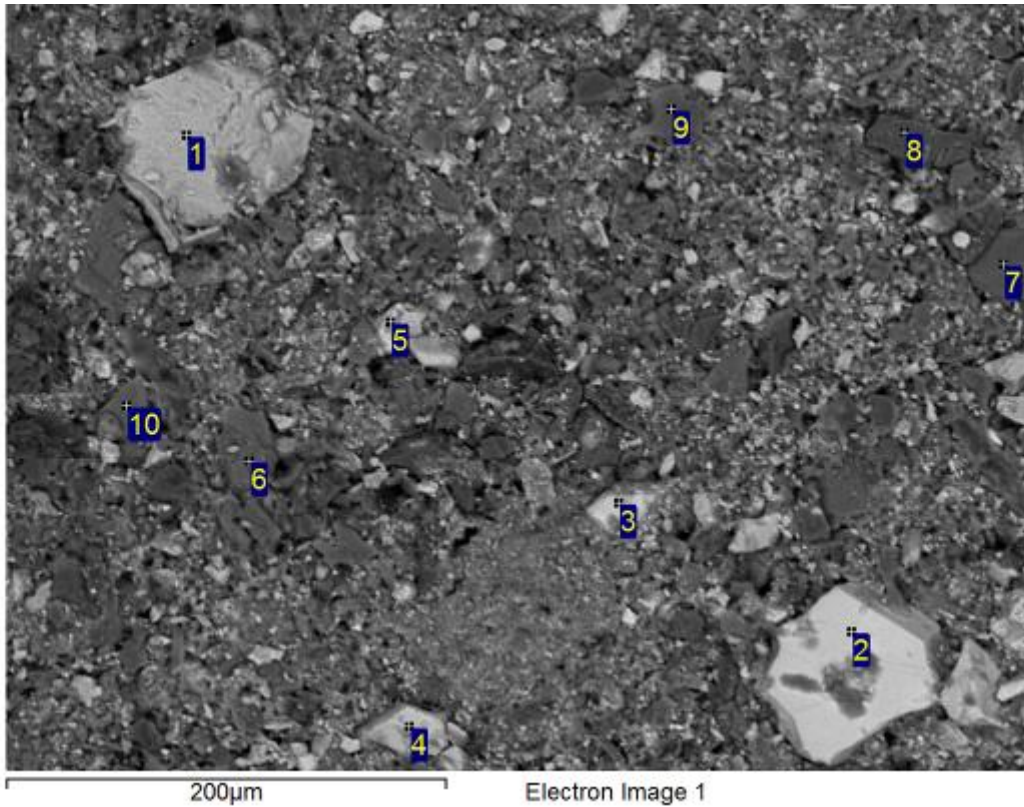
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	41.4							58.6	100.0	Fe Oxide
2	61.6			15.8	18.7	1.4		2.6	100.0	Mica
3	40.0							60.0	100.0	Fe Oxide
4	35.9							64.1	100.0	Fe Oxide
5	40.0							60.0	100.0	Fe Oxide
6	62.7	0.3	0.5	12.9	14.9	2.8	0.2	5.7	100.0	Mica
7	54.9	0.8		16.7	18.0	4.2		5.4	100.0	Mica
8	56.2	0.7	0.5	16.1	19.3	6.3		0.9	100.0	Mica

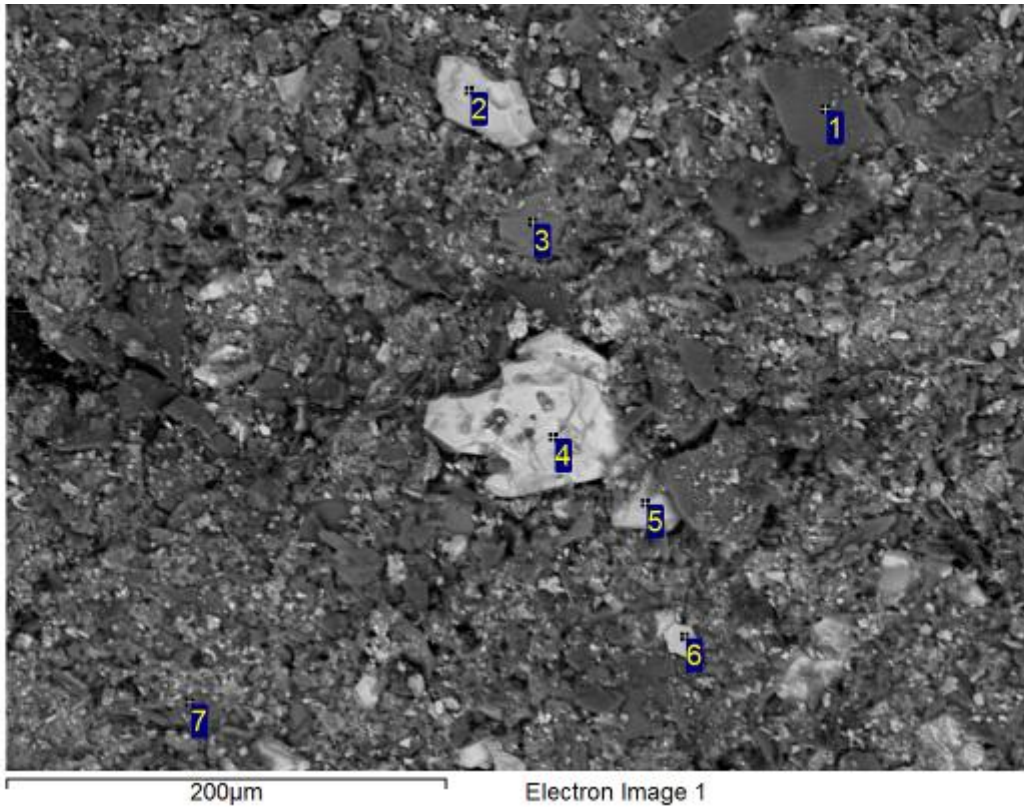
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	38.5		0.5	0.8	2.0				0.4	57.7	100.0	Fe Oxide
2	39.4									60.6	100.0	Fe Oxide
3	35.6									64.4	100.0	Fe Oxide
4	35.0			1.3	0.8					62.9	100.0	Fe Oxide
5	45.9			2.1	1.5					50.5	100.0	Fe Oxide
6	56.7		0.4	13.9	18.6	6.7		0.5		3.3	100.0	Mica
7	56.9	0.2	0.3	16.1	19.0	5.9				1.6	100.0	Mica
8	63.9		13.9	0.4	0.5		19.0		0.3	2.1	100.0	Dolomite
9	54.8	1.1	0.4	15.8	18.0	4.7		0.2	0.2	4.7	100.0	Mica
10	56.9		0.9	14.9	16.8	0.9	0.2	0.5		8.8	100.0	Mica

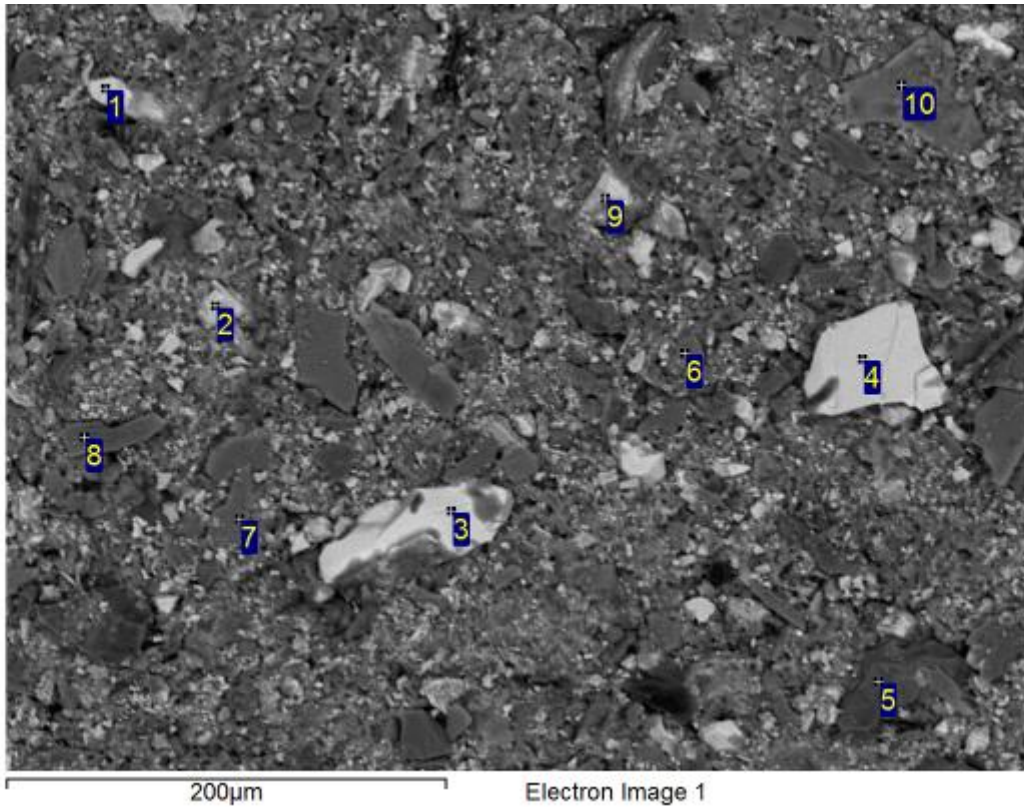
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	F	Na	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	51.2	1.3		0.6	17.0	20.9	6.6			2.5	100.0	Mica
2	37.4				0.4	0.3				61.9	100.0	Fe Oxide
3	50.8			6.2	8.6	15.8	3.3	1.1		14.2	100.0	Mica
4	33.2									66.8	100.0	Fe Oxide
5	37.0				0.7	0.6				61.8	100.0	Fe Oxide
6	33.4				0.7	0.5				65.4	100.0	Fe Oxide
7	48.1		0.4		9.4	10.2	1.8		0.3	29.8	100.0	Mica/Fe Oxide

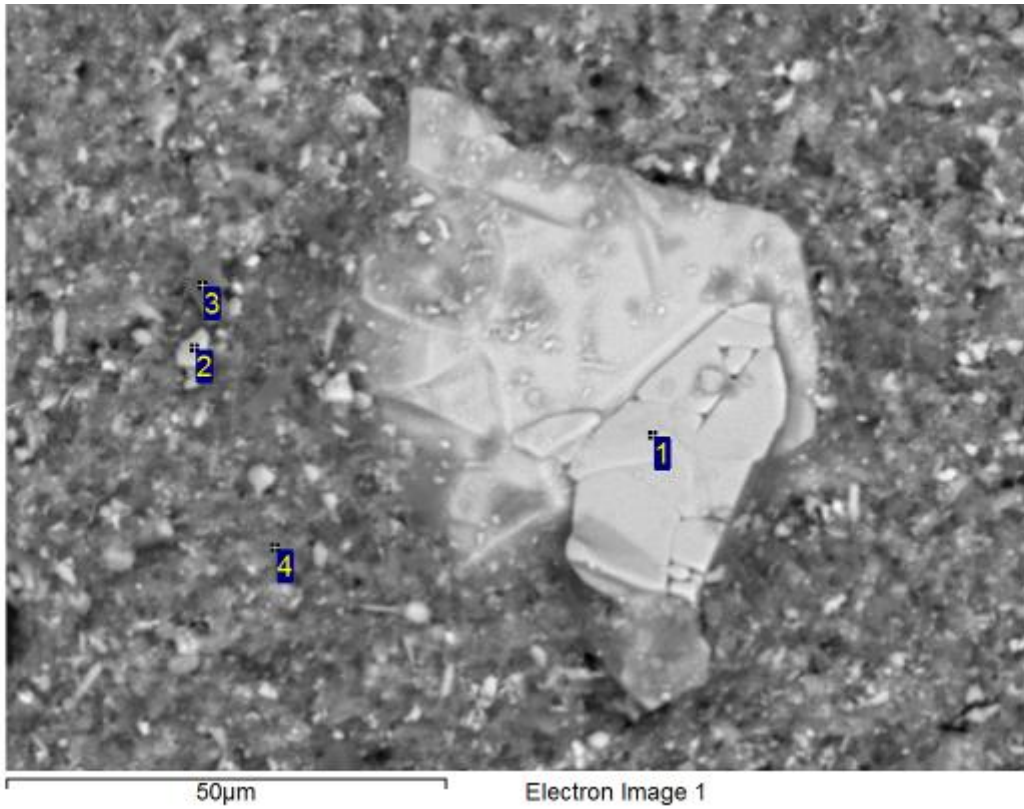
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	38.0			0.4	0.4				61.2	100.0	Fe Oxide
2	28.0			0.8	0.8				70.3	100.0	Fe Oxide
3	22.0			0.3					77.7	100.0	Fe Oxide
4	39.7								60.3	100.0	Fe Oxide
5	58.5				41.1				0.4	100.0	Quartz
6	56.5		0.6	12.0	21.1	4.2	0.3		5.3	100.0	Mica
7	53.5	0.4	1.0	15.0	20.9	7.1	0.3		2.0	100.0	Mica
8	60.8		0.6	14.1	18.1	3.7	0.2		2.5	100.0	Mica
9	39.8			3.8	3.7	0.2			52.5	100.0	Fe Oxide
10	46.1		3.0	12.2	18.9	6.0	0.4	0.5	12.6	100.0	Mica

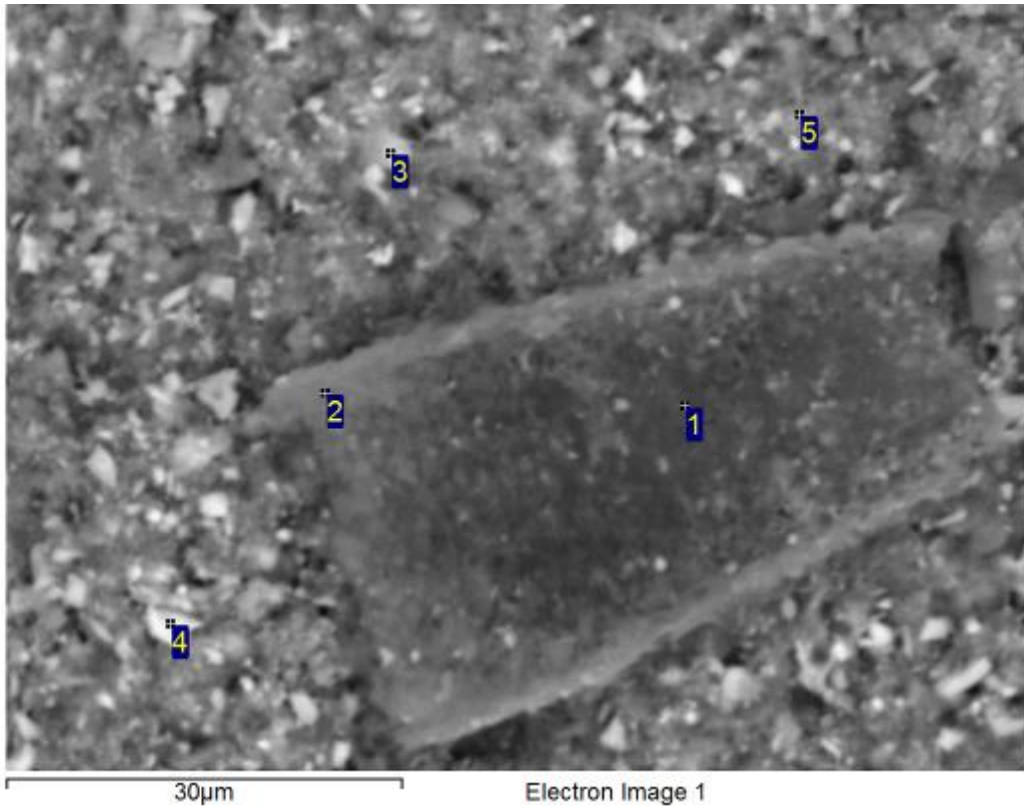
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Mn	Fe	Total	Mineral ID
1	44.0						56.0	100.0	Fe Oxide
2	52.1		0.9	1.8			45.2	100.0	Fe Oxide
3	58.0		1.2	36.2			4.6	100.0	Quartz
4	49.6	0.3	12.1	11.1	2.0	0.4	24.5	100.0	Fe Oxide/Kaolinite/Mica

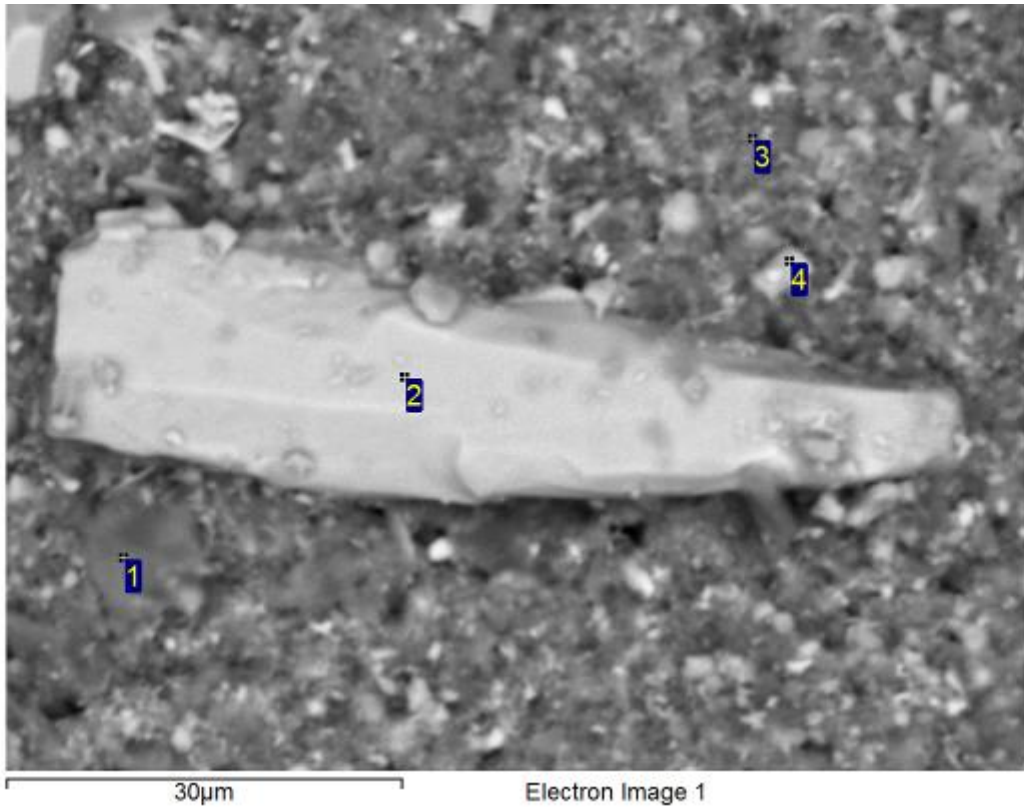
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	50.8		9.7	10.1		1.3	3.6	24.6	100.0	Fe Oxide/Kaolinite/Mica
2	60.3	0.3	10.3	10.5		1.2	1.8	15.7	100.0	Fe Oxide/Kaolinite/Mica
3	40.5		6.1	5.7	0.3	0.7	0.8	45.9	100.0	Fe Oxide
4	35.9		2.3	1.8				60.0	100.0	Fe Oxide
5	52.4		10.0	9.5		0.7	0.4	27.0	100.0	Fe Oxide/Kaolinite

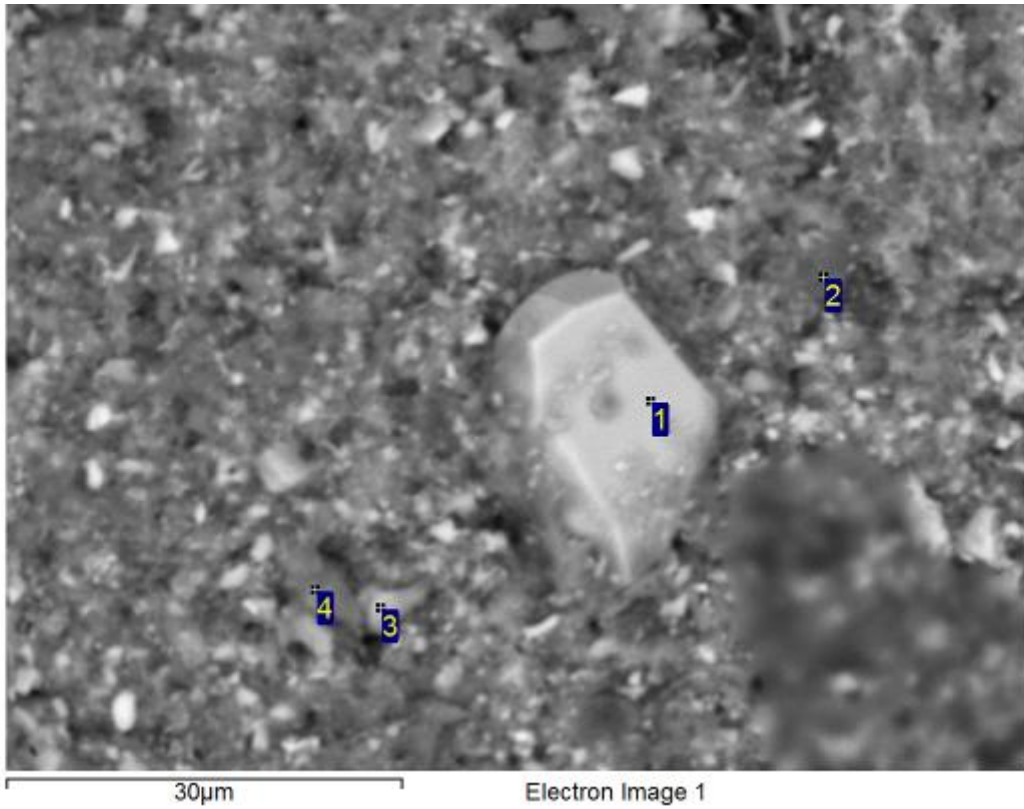
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	45.6	0.5	12.9	15.0	4.3	0.3		21.5	100.0	Mica/Fe Oxide
2	36.3		0.4	0.4		0.4		62.4	100.0	Fe Oxide
3	48.4		9.0	8.9	0.8		0.7	32.2	100.0	Fe Oxide/Kaolinite
4	52.3		3.3	3.2	0.2		0.4	40.5	100.0	Fe Oxide

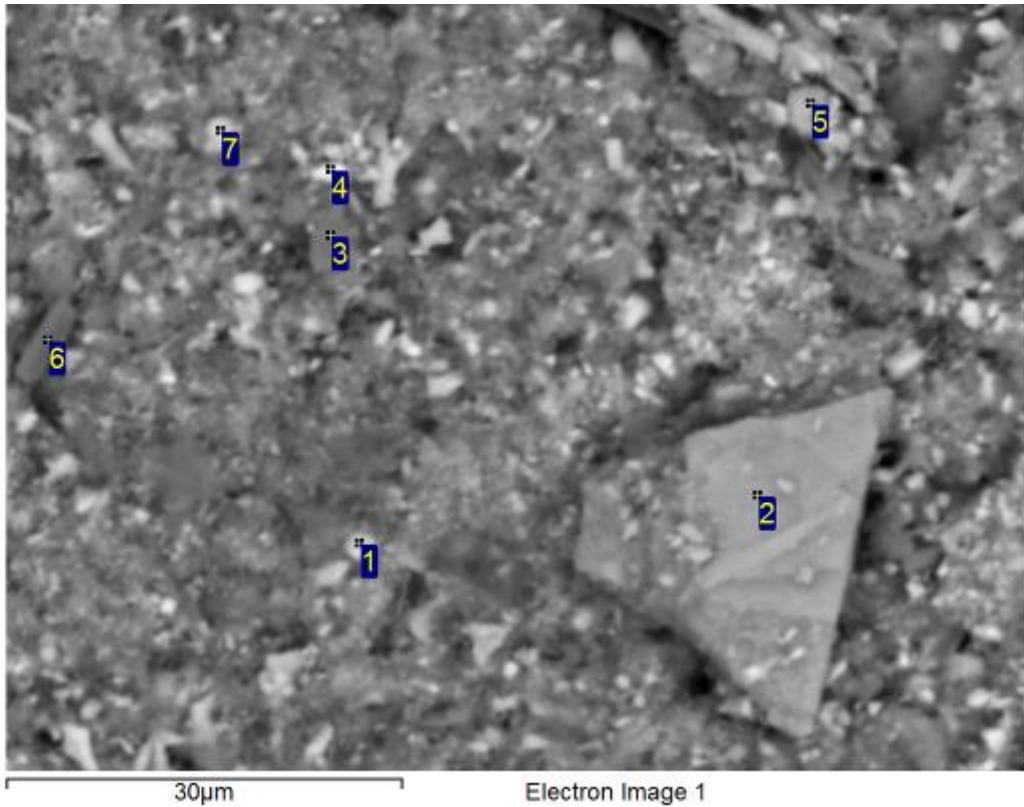
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	23.6								76.4	100.0	Fe Oxide
2	33.1		13.2	14.1	1.5			0.7	37.4	100.0	Fe Oxide/Kaolinite
3	52.7		7.8	6.2	0.5		0.3	9.9	22.7	100.0	Fe Oxide/Kaolinite
4	56.0	0.3	12.0	11.9	1.3	0.2	0.2	0.3	17.7	100.0	Fe Oxide/Kaolinite

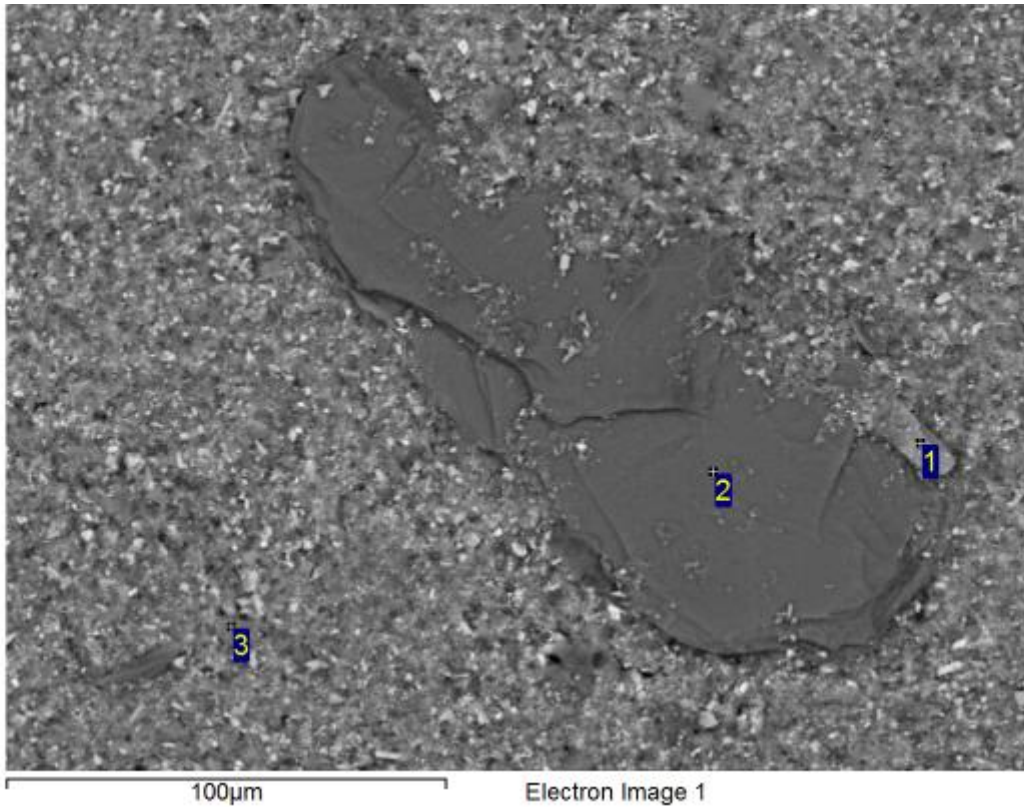
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	44.0			7.3	7.3		0.4	1.0		40.1	100.0	Fe Oxide
2	50.4			1.0	0.3	0.3		33.7		14.4	100.0	Rutile
3	55.2			13.3	14.2		0.4		1.3	15.7	100.0	Mica
4	48.4			2.7	2.6					46.2	100.0	Fe Oxide
5	48.2			8.0	2.2	0.4		0.4		40.7	100.0	Fe Oxide
6	47.6	0.9	2.5	16.9	17.3					14.8	100.0	Mica
7	49.4			2.5	2.5					45.7	100.0	Fe Oxide

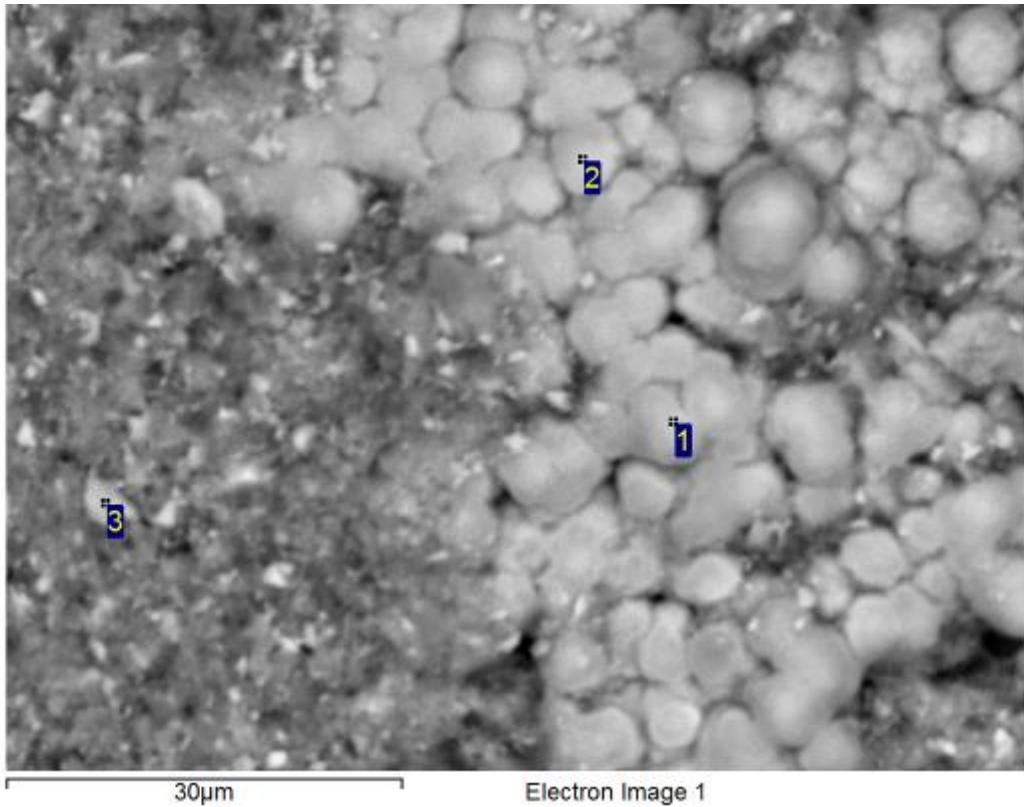
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	57.4			1.3	1.0		34.1		6.1	100.0	Rutile
2	53.3	0.2	0.8	14.8	20.2	7.9	0.3		2.5	100.0	Mica
3	54.1		0.8	12.5	14.1	3.2		0.4	14.8	100.0	Mica

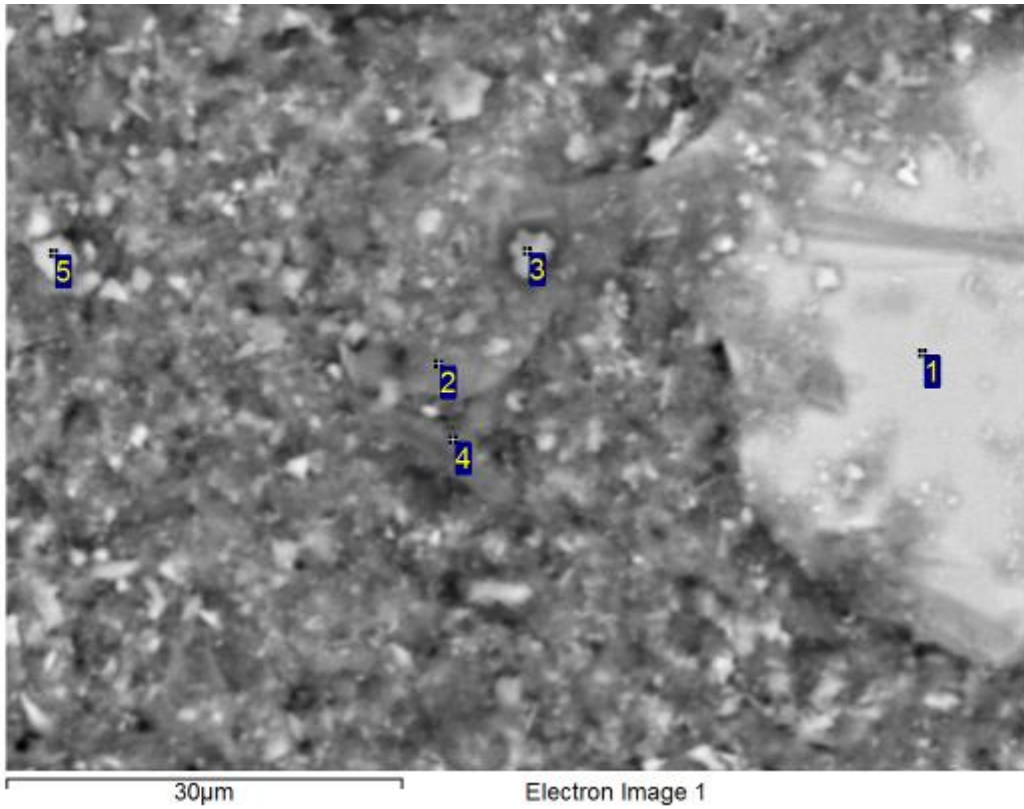
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	S	Cl	K	Mn	Fe	Ni	Total	Mineral ID
1	48.6			0.8	4.1			35.3	11.1	100.0	Fe-Ni Oxide
2	52.7			0.8	3.8		0.3	34.0	8.4	100.0	Fe-Ni Oxide
3	41.5	4.7	4.8			0.3	0.6	48.1		100.0	Fe Oxide

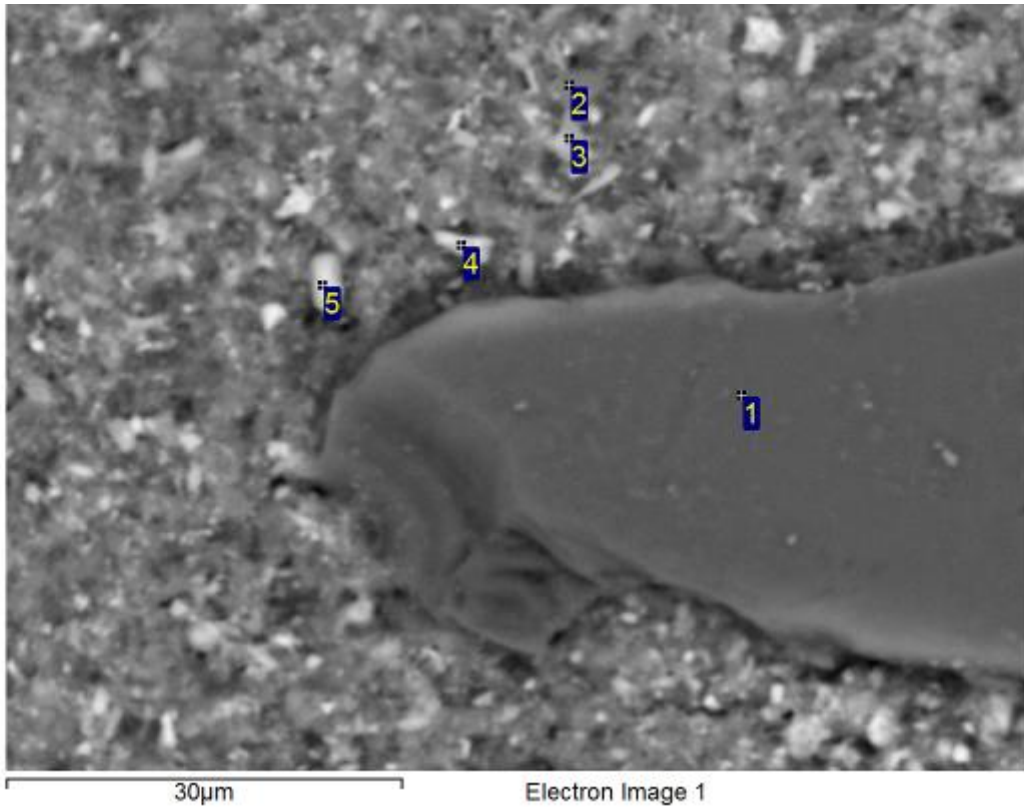
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	35.6						64.4	100.0	Fe Oxide
2	48.5	10.6	10.9	0.3	2.2		27.5	100.0	Kaolinite/Fe Oxide
3	57.2	8.3	3.0	0.4	0.4		30.8	100.0	Fe Oxide/Kaolinite
4	39.2	11.2	12.4		0.9	0.6	35.7	100.0	Fe Oxide/Kaolinite
5	45.3	3.3	3.3			0.4	47.7	100.0	Fe Oxide

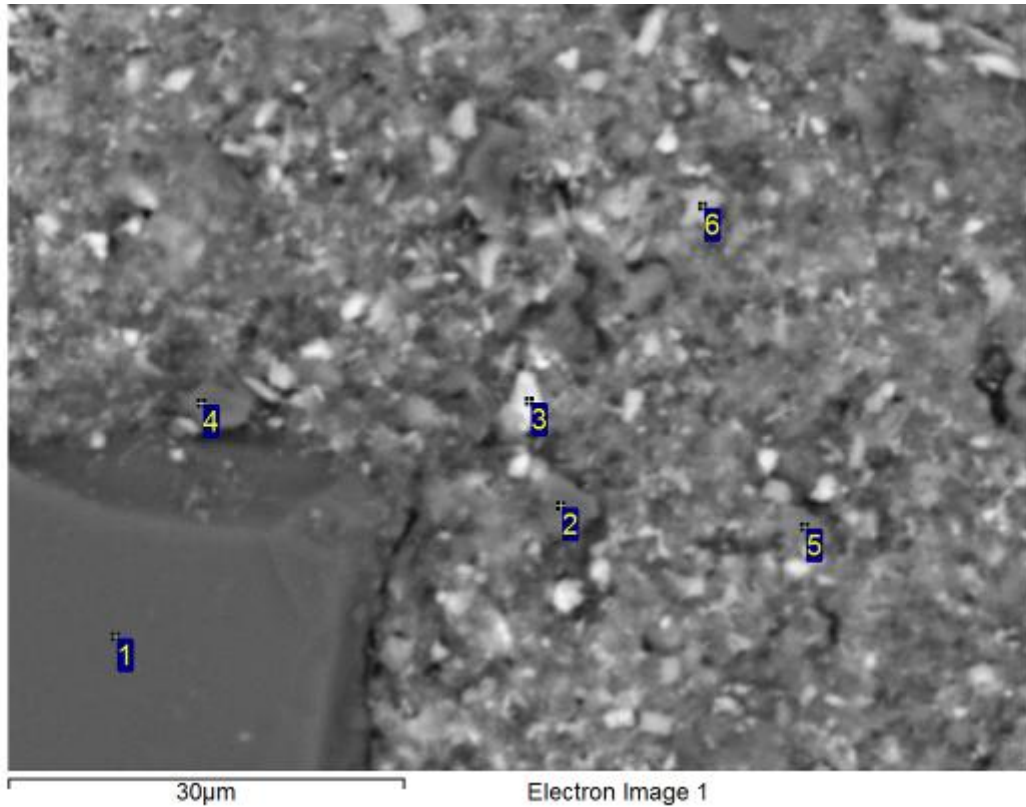
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	52.6	0.3	0.9	14.7	20.9	8.0	0.4		2.2	100.0	Mica
2	59.0			4.0	19.2	0.3		0.3	17.3	100.0	Fe Oxide/Quartz/Kaolinite
3	49.8			6.3	5.2	0.3	0.2		38.1	100.0	Fe Oxide/Kaolinite
4	47.5			4.4	4.2	0.4		0.5	43.0	100.0	Fe Oxide
5	43.5			1.0	0.9				54.5	100.0	Fe Oxide

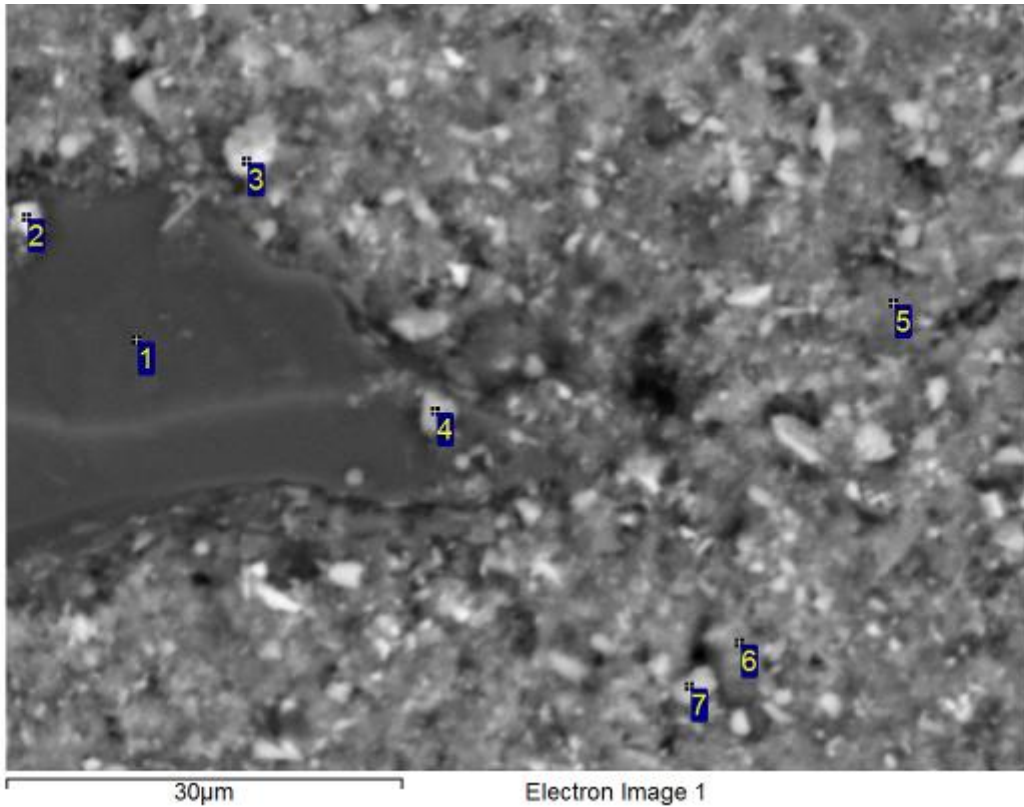
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	50.6	0.4	1.2	14.5	21.1	8.5	0.4		3.3	100.0	Mica
2	54.1			2.2	32.7	0.1			11.0	100.0	Quartz/Fe Oxide
3	43.2			1.5	1.6				53.7	100.0	Fe Oxide
4	64.7		1.4	10.2	14.4	4.1	0.2		5.1	100.0	Kaolinite/Mica
5	56.3			3.7	25.6	0.2		1.0	13.1	100.0	Kaolinite/Fe Oxide
6	53.7		0.5	3.7	3.2			0.5	38.3	100.0	Fe Oxide/Kaolinite

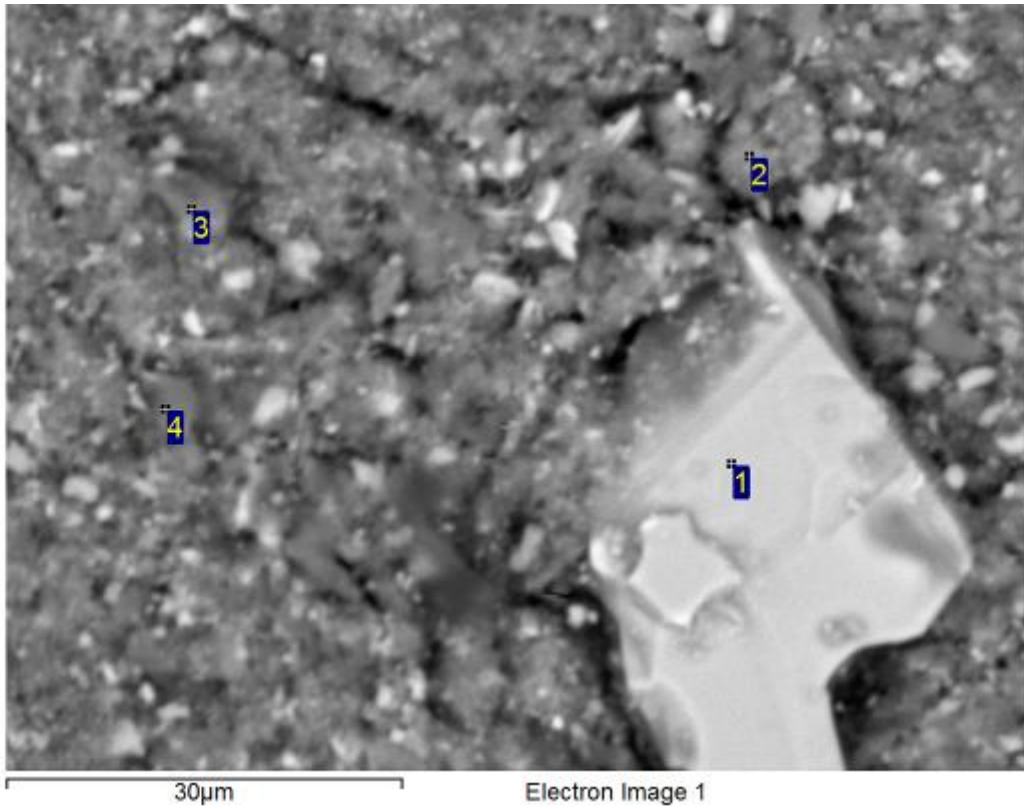
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	60.8			38.8						0.3	100.0	Quartz
2	41.4		1.2	10.5						46.9	100.0	Fe Oxide
3	52.0		4.9	4.4	0.5	0.3	0.2		0.5	37.2	100.0	Fe Oxide/Kaolinite
4	46.7		2.2	11.9	0.4					38.8	100.0	Fe Oxide/Kaolinite
5	51.2	0.4	10.1	10.9		1.0			0.3	26.1	100.0	Fe Oxide/Kaolinite
6	48.5	0.3	8.5	9.3		1.3			0.3	31.6	100.0	Fe Oxide/Kaolinite
7	51.9		4.7	2.0	0.4			0.2		40.7	100.0	Fe Oxide

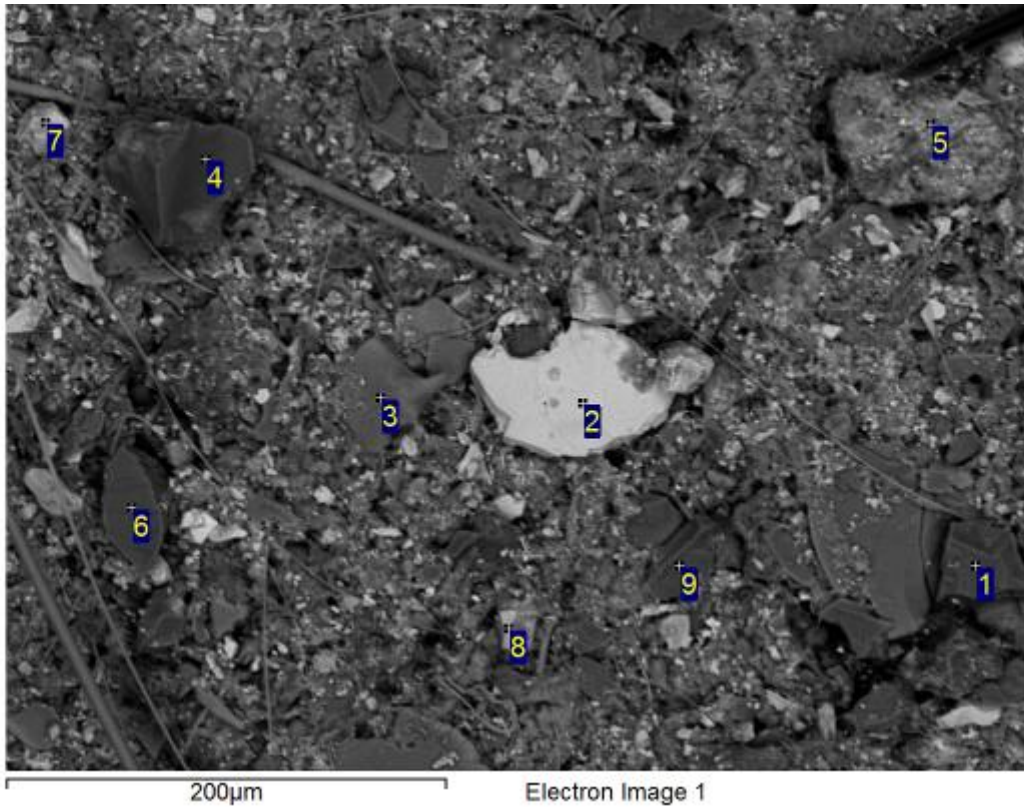
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	36.7							63.3	100.0	Fe Oxide
2	51.9		9.3	8.4	0.8	0.2	0.4	29.0	100.0	Fe Oxide/Kaolinite
3	54.0	0.4	12.2	13.7	2.7		0.3	16.7	100.0	Kaolinite/Mica
4	59.6		3.6	24.5	0.3	0.2	0.9	11.1	100.0	Quartz/Fe Oxide

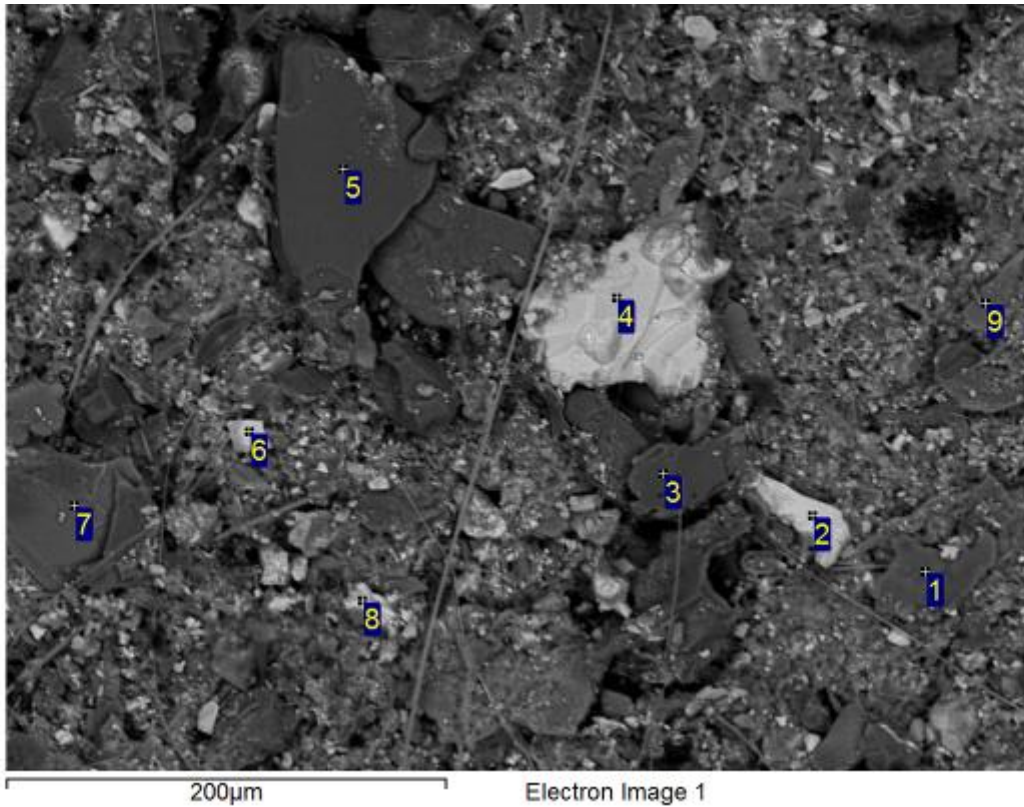
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Mg	Al	Si	P	K	Ca	Ti	Fe	Total	Mineral ID
1	57.4			42.6						100.0	Quartz
2	35.5			0.3					64.1	100.0	Fe Oxide
3	55.9	0.5	14.3	18.1		5.8		0.2	5.2	100.0	Mica
4	55.1		4.6	27.2					13.0	100.0	Kaolinite/Fe Oxide
5	32.2		8.2	1.3	0.4		0.5	5.2	52.2	100.0	Fe Oxide
6	54.3			45.2					0.5	100.0	Quartz
7	30.6		1.8	1.7					65.9	100.0	Fe Oxide
8	39.8		1.5	2.0					56.7	100.0	Fe Oxide
9	26.1			72.7					1.2	100.0	Quartz

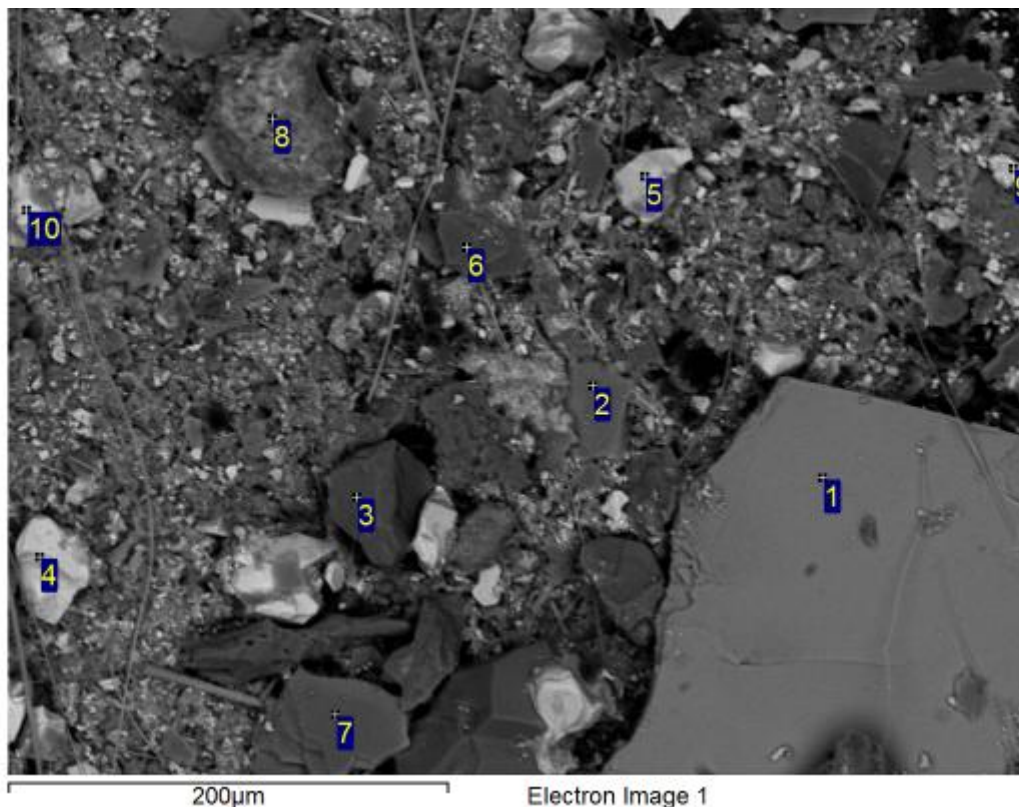
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	39.3	0.5	0.7	15.3	18.2	5.9	0.3	0.4	19.3	100.0	Mica
2	35.3				0.3				64.4	100.0	Fe Oxide
3	44.4	0.3	1.2	15.2	22.6	13.2	0.5		2.7	100.0	Mica
4	45.3				0.3				54.4	100.0	Fe Oxide
5	47.7				51.9				0.4	100.0	Quartz
6	27.2			0.9	0.9				71.0	100.0	Fe Oxide
7	52.0	0.4	0.9	15.6	21.2	7.9	0.2		1.8	100.0	Mica
8	40.3			1.4	1.2				57.1	100.0	Fe Oxide
9	57.6		0.5	9.0	24.8	4.1			4.1	100.0	Mica

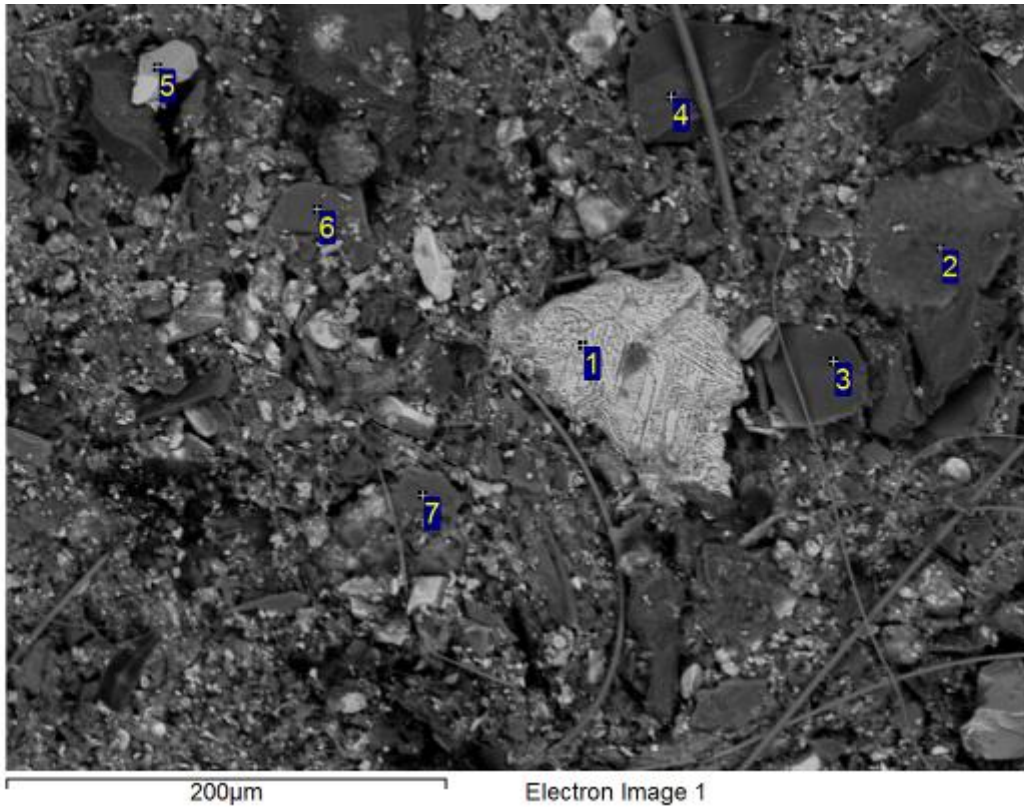
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	F	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Cu	Total	Mineral ID
1	48.4			5.6	7.0	16.0	7.3		1.4		14.3		100.0	Mica
2	55.1			0.3	15.0	18.2	6.4				4.7	0.3	100.0	Mica
3	60.8					38.9					0.3		100.0	Quartz
4	25.9				0.3	0.9					73.0		100.0	Fe Oxide
5	38.5					0.5					61.1		100.0	Fe Oxide
6	58.8					40.7					0.5		100.0	Quartz
7	57.4	2.8	0.6	1.2	13.7	18.2	5.4		0.2		0.5		100.0	Mica
8	16.5				5.7	10.4	0.6	1.0	0.7	13.6	51.5		100.0	Fe Oxide
9	33.3				2.3	1.9					62.5		100.0	Fe Oxide
10	25.0					0.3					74.6		100.0	Fe Oxide

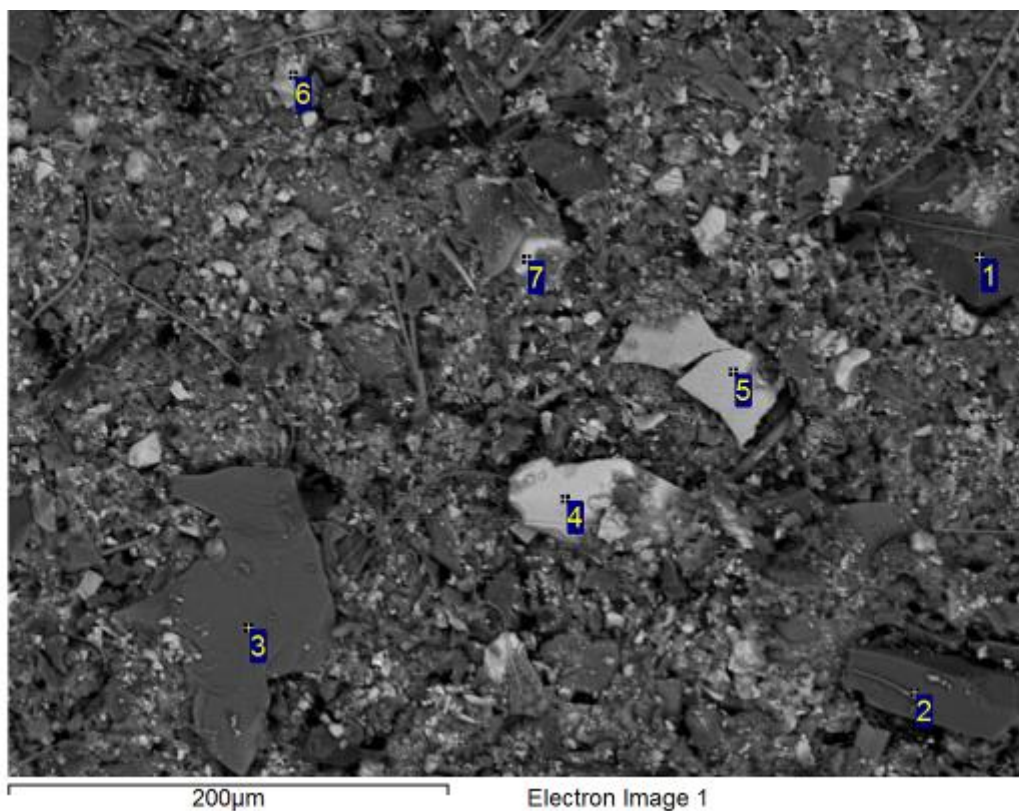
Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Ti	Mn	Fe	Total	Mineral ID
1	16.1			0.2	0.4		0.8		82.6	100.0	Fe Oxide
2	60.3		2.4	9.3	16.7	1.3	0.4	0.2	9.4	100.0	Mica
3	63.7				35.9				0.4	100.0	Quartz
4	59.5				40.2				0.3	100.0	Quartz
5	46.6			0.5	1.0				52.0	100.0	Fe Oxide
6	53.5	1.1	0.7	15.5	20.2	6.5			2.5	100.0	Mica
7	55.9	0.4	0.3	16.6	19.4	5.2			2.1	100.0	Mica

Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



Processing option : All elements analysed (Normalised). All results in weight%.

Spectrum	O	Na	Mg	Al	Si	K	Fe	Total	Mineral ID
1	53.3				46.3		0.4	100.0	Quartz
2	54.9				44.5		0.6	100.0	Quartz
3	55.1	0.3	0.6	15.6	19.3	7.2	1.9	100.0	Mica
4	24.6				0.3		75.1	100.0	Fe Oxide
5	36.9			0.7	2.0		60.3	100.0	Fe Oxide
6	38.7			6.2	5.5		49.5	100.0	Fe Oxide
7	11.5			2.3	2.5	0.4	83.2	100.0	Fe Oxide

Analysis was conducted on as-received sample. Data is to be considered qualitative and mineral identification is tentative.



## Quantitative X-Ray Diffraction by Rietveld Refinement

**Report Prepared for:** *Environmental -Analytical*

**Project Number/ LIMS No.** *Custom Min/MI5013-JAN17*

**Sample Receipt:** *January 10, 2017*

**Sample Analysis:** *January 16, 2017*

**Reporting Date:** *January 23, 2017*

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**Instrument:** BRUKER AXS D8 Advance Diffractometer

**Test Conditions:** Co radiation, 40 kV, 35 mA  
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°

**Interpretations :** PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.

**Detection Limit :** 0.5-2%. Strongly dependent on crystallinity.

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**Contents:**

- 1) Method Summary
- 2) Summary of Mineral Assemblages
- 3) Quantitative XRD Results
- 4) XRD Pattern(s)

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**ACCREDITATION:** SGS Minerals Services Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada - Minerals Services - Lakefield: <http://palcan.scc.ca/SpecsSearch/GLSearchForm.do>.



## Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

### ***Mineral Identification and Interpretation:***

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

### ***Quantitative Rietveld Analysis:***

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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## Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

### Quantitative X-ray Diffraction Results

Mineral/Compound	MP1A 11-45	MP1B 2-45	MP1C 7-45	MP2A 10-45	MP2B 18-45	MP2C 48-45	MP3A 47-45	MP3B 33-45	MP4A 22-45
	JAN5013-1 (wt %)	JAN5013-2 (wt %)	JAN5013-3 (wt %)	JAN5013-4 (wt %)	JAN5013-5 (wt %)	JAN5013-6 (wt %)	JAN5013-7 (wt %)	JAN5013-8 (wt %)	JAN5013-9 (wt %)
Quartz	8.1	9.8	15.7	11.1	6.3	7.3	6.1	7.9	6.1
Kaolinite	22.2	15.7	13.2	18.3	18.4	16.7	17.2	17.5	19.9
Goethite	30.5	28.8	28.8	35.9	34.9	37.5	38.9	34.4	33.1
Muscovite	14.4	19.4	9.2	11.4	11.3	11.0	8.5	13.8	15.2
Hematite	19.0	19.6	22.4	19.0	21.7	22.9	22.6	21.2	19.8
Siderite	0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3
Orthoclase	2.8	3.4	6.8	2.1	4.1	1.9	4.6	2.5	2.1
Albite	0.0	0.0	1.4	0.4	0.0	0.0	0.0	0.0	0.0
Gibbsite	2.1	2.8	2.1	1.2	2.7	2.1	1.5	2.1	3.2
Rutile	0.5	0.1	0.1	0.2	0.2	0.2	0.1	0.3	0.2
TOTAL	100	100	100	100	100	100	100	100	100

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

Mineral/Compound	Formula
Quartz	SiO <sub>2</sub>
Kaolinite	Al <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> (OH) <sub>4</sub>
Goethite	αFeO·OH
Muscovite	KAl <sub>2</sub> (AlSi <sub>3</sub> O <sub>10</sub> )(OH) <sub>2</sub>
Hematite	Fe <sub>2</sub> O <sub>3</sub>
Siderite	FeCO <sub>3</sub>
Orthoclase	KAlSi <sub>3</sub> O <sub>8</sub>
Albite	NaAlSi <sub>3</sub> O <sub>8</sub>
Gibbsite	Al(OH) <sub>3</sub>
Rutile	TiO <sub>2</sub>



## Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

### Quantitative X-ray Diffraction Results

Mineral/Compound	MP4B 28-45 JAN5013-10 (wt %)	MP2002C 38-45 JAN5013-11 (wt %)	MP2003C 32-45 JAN5013-12 (wt %)	C1A 8-22 JAN5013-13 (wt %)	C1B 10-22 JAN5013-14 (wt %)	C1C 4-22 JAN5013-15 (wt %)	C2A 6-22 JAN5013-16 (wt %)	C2B 2-22 JAN5013-17 (wt %)	C2C 7-22 JAN5013-18 (wt %)
Quartz	9.5	8.9	6.5	20.1					
Kaolinite	18.3	19.2	19.5	55.1					
Goethite	35.0	31.9	33.5	4.2					
Muscovite	11.7	12.6	14.9	20.7					
Hematite	19.1	22.0	21.0	-					
Siderite	0.5	0.4	0.3	-	nss	nss	nss	nss	nss
Orthoclase	2.2	2.1	2.2	-					
Albite	0.8	0.0	0.0	-					
Gibbsite	2.6	2.6	1.7	-					
Rutile	0.2	0.3	0.2	-					
TOTAL	100	100	100	100					

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

nss: non-sufficient sample on filter

Mineral/Compound	Formula
Quartz	SiO <sub>2</sub>
Kaolinite	Al <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> (OH) <sub>4</sub>
Goethite	αFeO·OH
Muscovite	KAl <sub>2</sub> (AlSi <sub>3</sub> O <sub>10</sub> )(OH) <sub>2</sub>
Hematite	Fe <sub>2</sub> O <sub>3</sub>
Siderite	FeCO <sub>3</sub>
Orthoclase	KAlSi <sub>3</sub> O <sub>8</sub>
Albite	NaAlSi <sub>3</sub> O <sub>8</sub>
Gibbsite	Al(OH) <sub>3</sub>
Rutile	TiO <sub>2</sub>



## Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

### Quantitative X-ray Diffraction Results

Mineral/Compound	C3A 11-22 JAN5013-19 (wt %)	C3B 21-22 JAN5013-20 (wt %)	C4A 16-22 JAN5013-21 (wt %)	C4B 15-22 JAN5013-22 (wt %)
Quartz			17.3	
Kaolinite			39.0	
Goethite			8.7	
Muscovite			35.0	
Hematite			-	
Siderite	nss	nss	-	nss
Orthoclase			-	
Albite			-	
Gibbsite			-	
Rutile			-	
TOTAL			100	

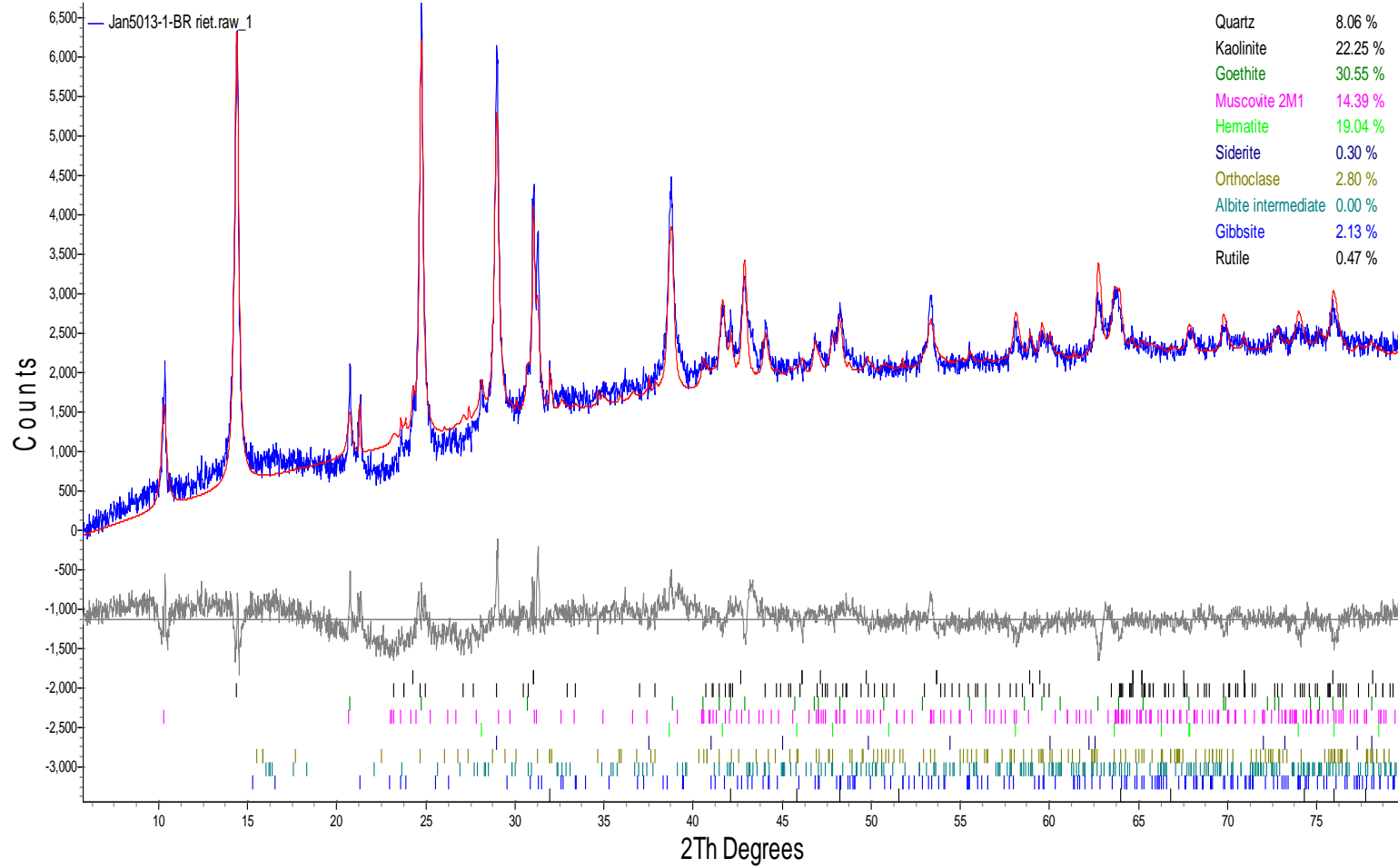
Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

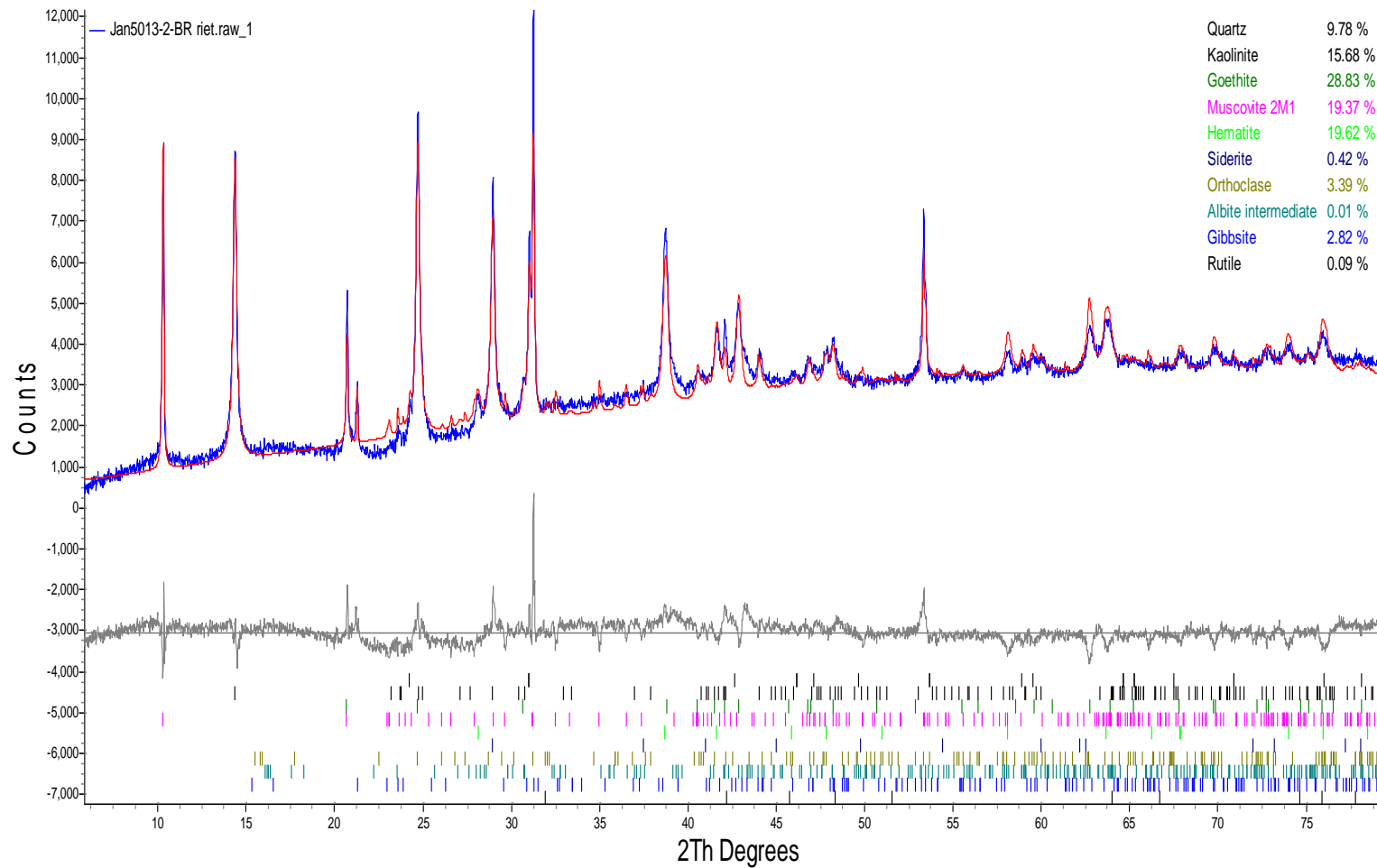
nss: non-sufficient sample on filter

Mineral/Compound	Formula
Quartz	SiO <sub>2</sub>
Kaolinite	Al <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> (OH) <sub>4</sub>
Goethite	αFeO·OH
Muscovite	KAl <sub>2</sub> (AlSi <sub>3</sub> O <sub>10</sub> )(OH) <sub>2</sub>
Hematite	Fe <sub>2</sub> O <sub>3</sub>
Siderite	FeCO <sub>3</sub>
Orthoclase	KAlSi <sub>3</sub> O <sub>8</sub>
Albite	NaAlSi <sub>3</sub> O <sub>8</sub>
Gibbsite	Al(OH) <sub>3</sub>
Rutile	TiO <sub>2</sub>

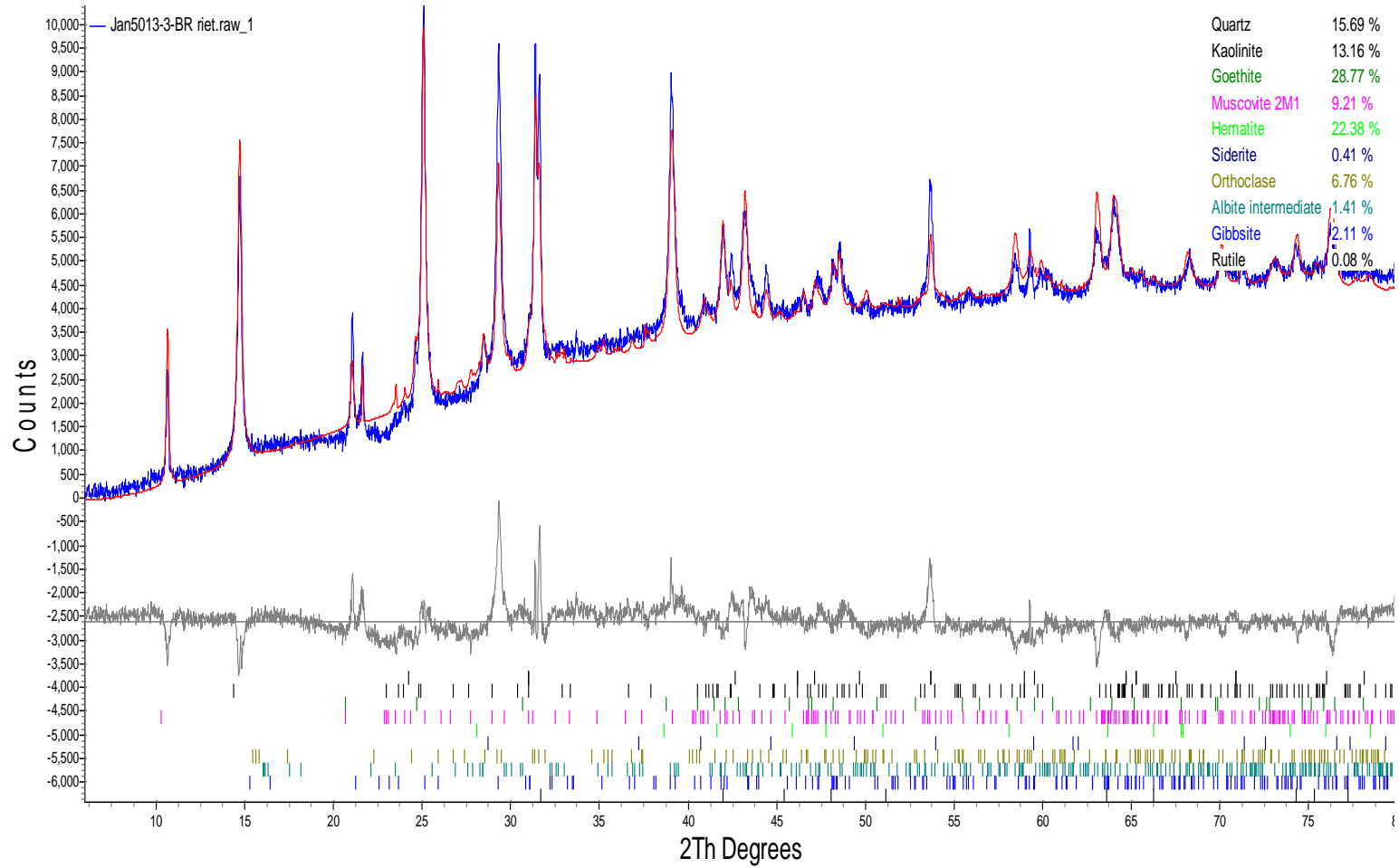
MP1A 11-45



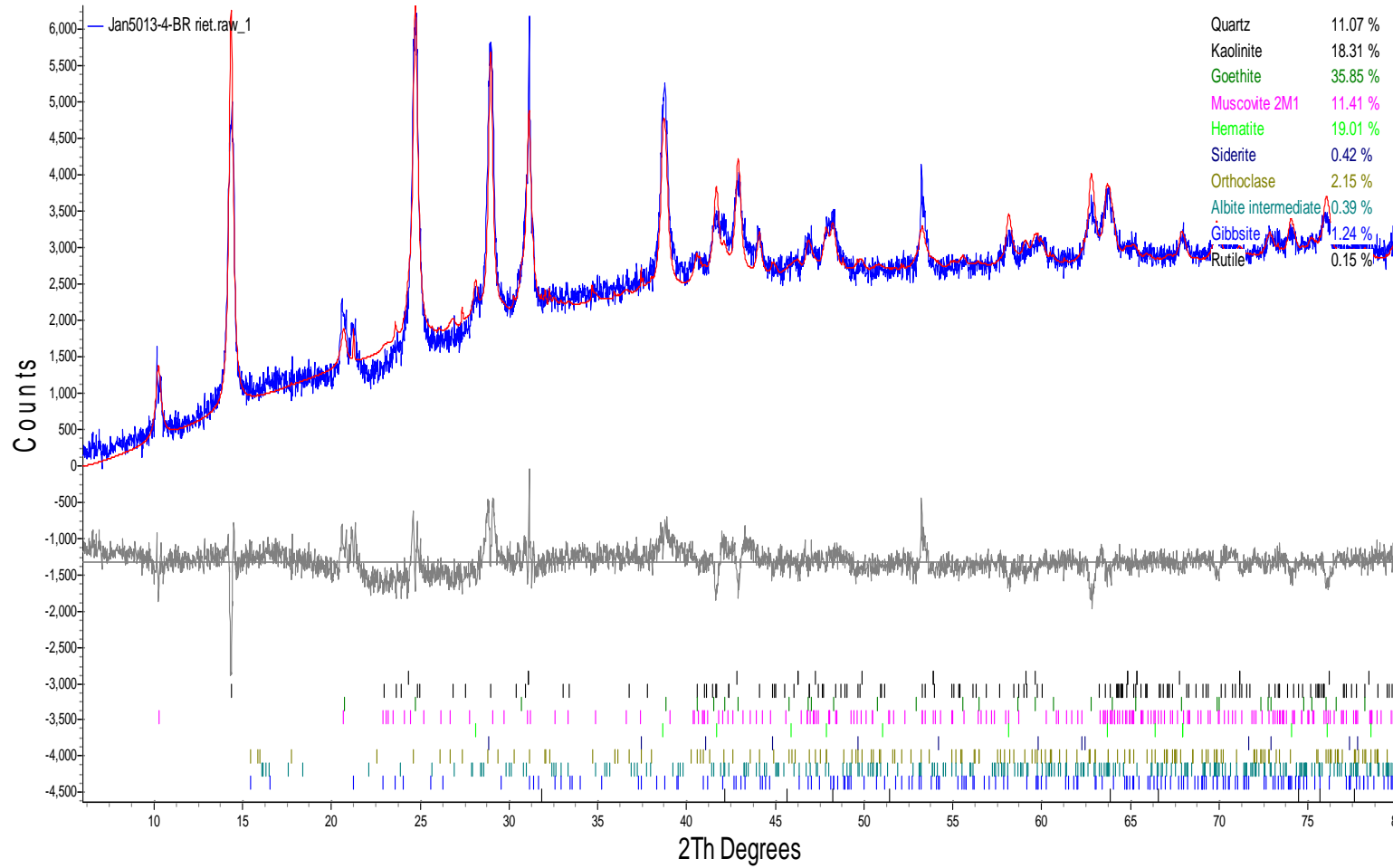
MP1B 2-45



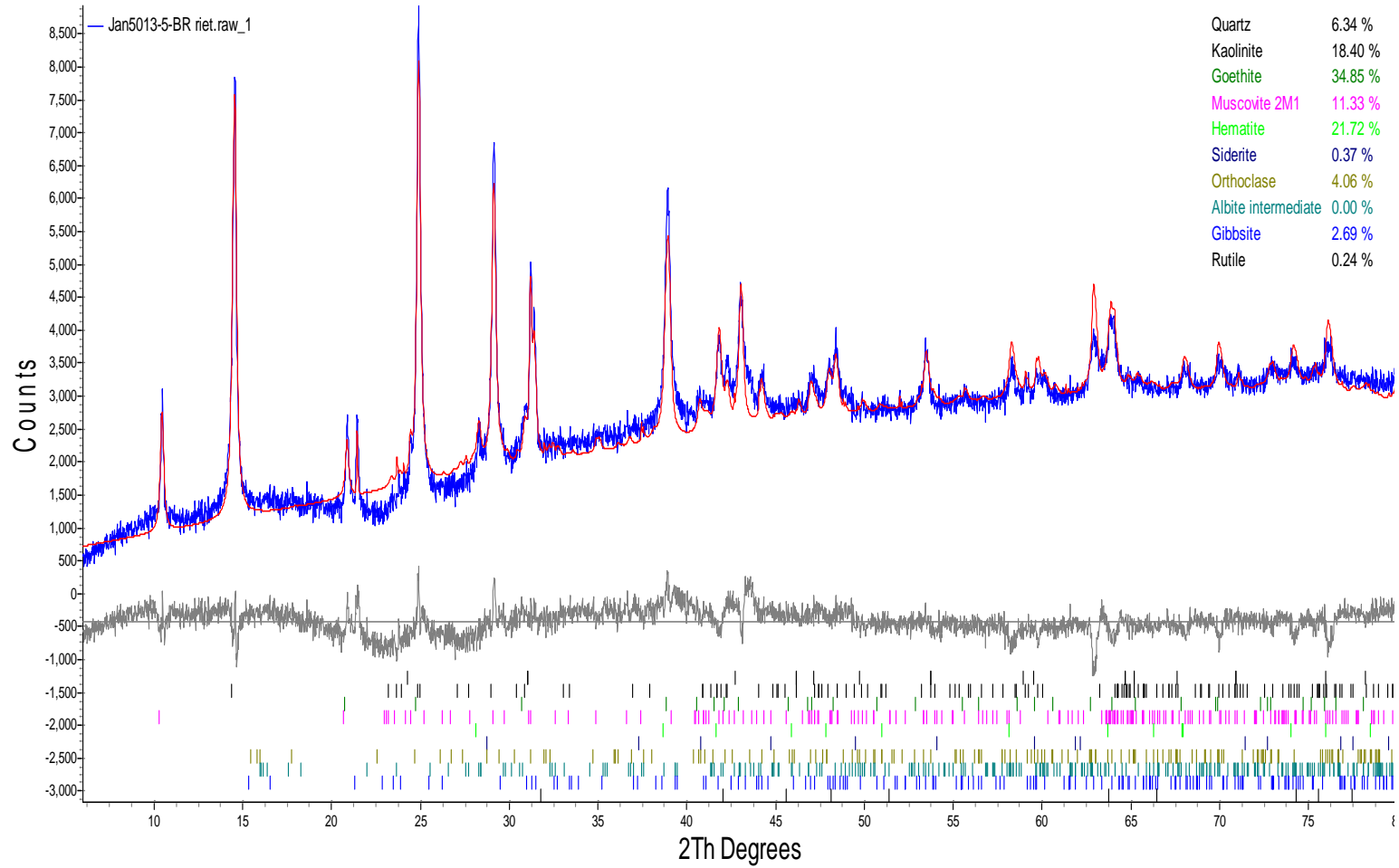
## MP1C 7-45



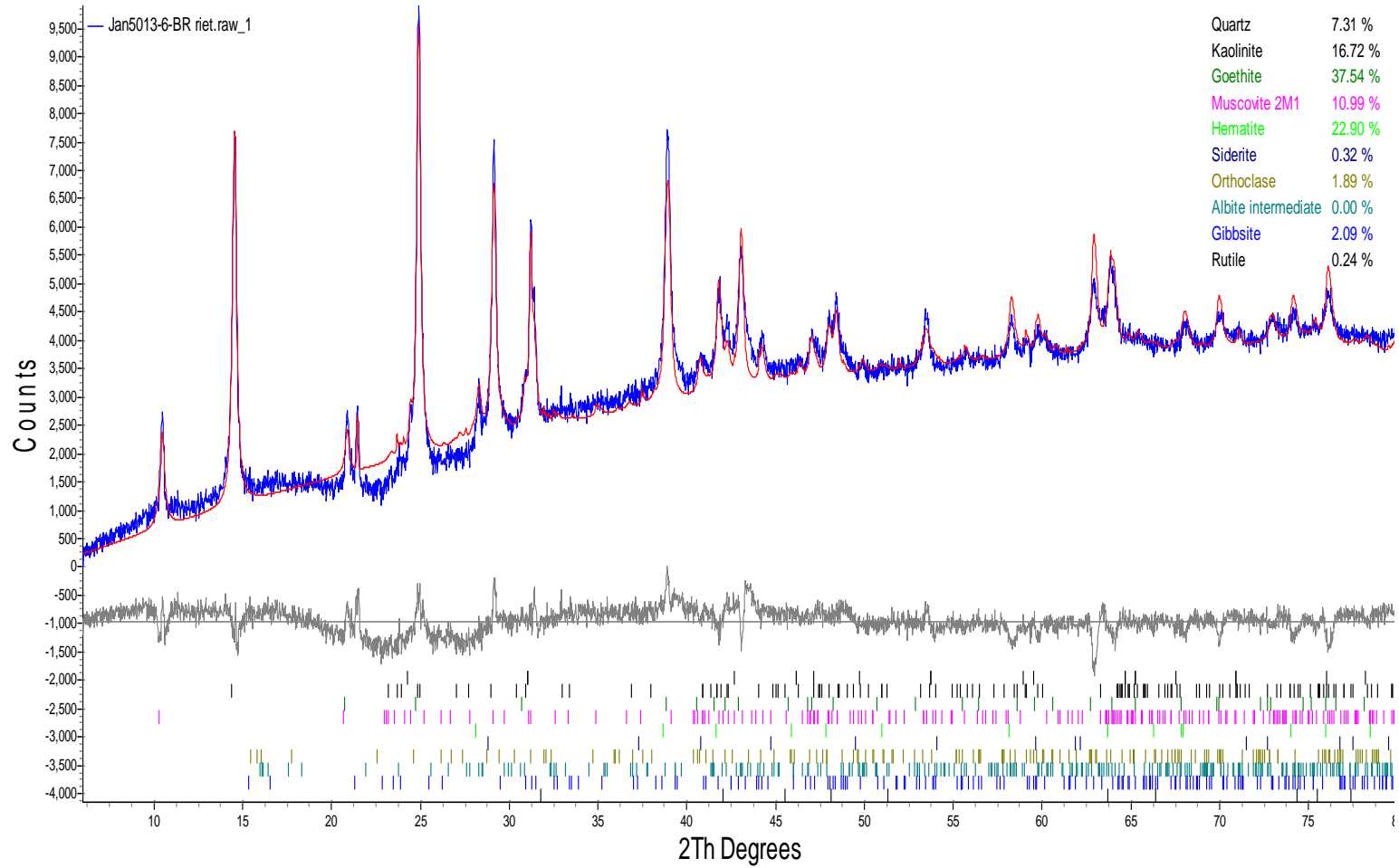
MP2A 10-45



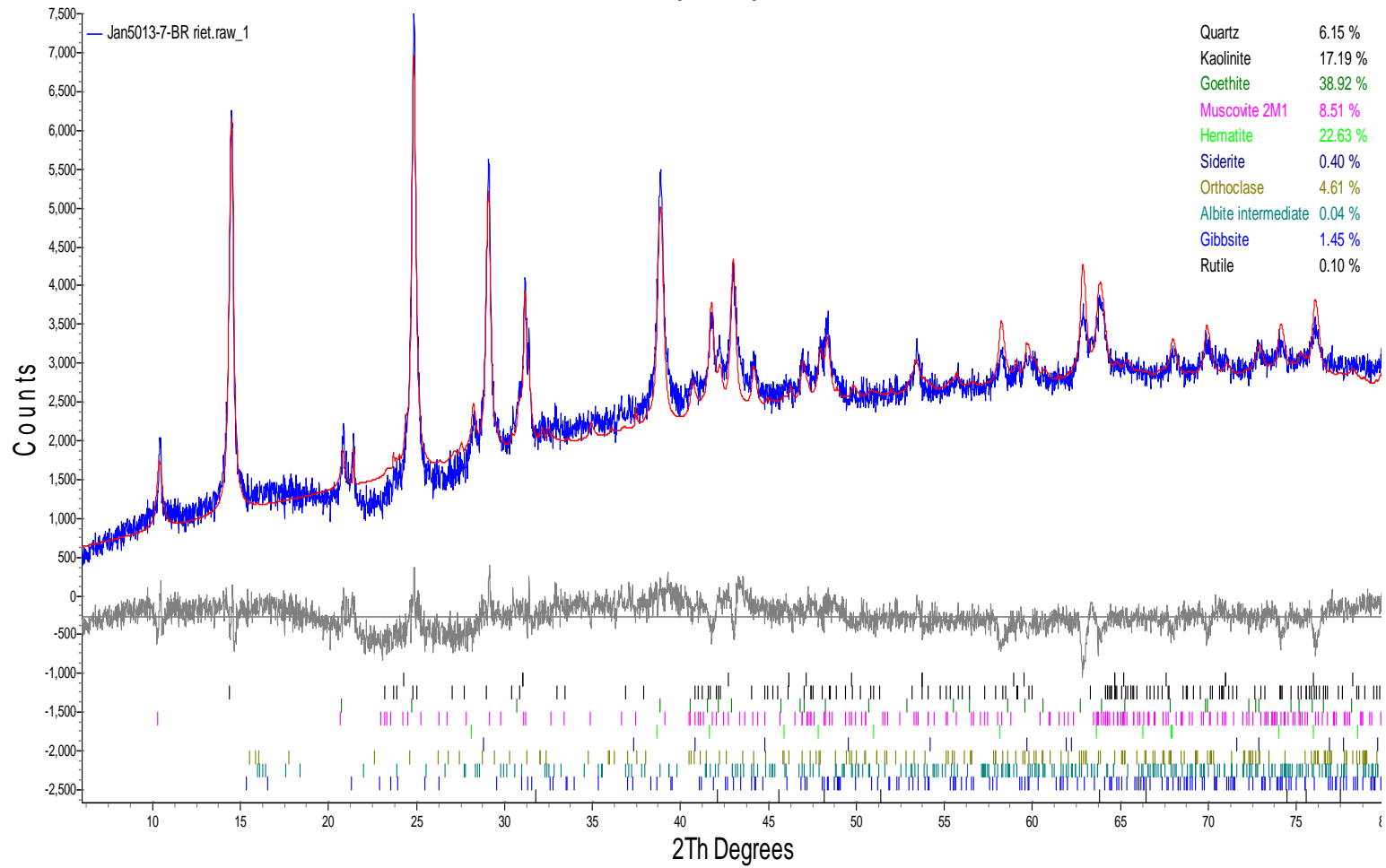
MP2B 18-45



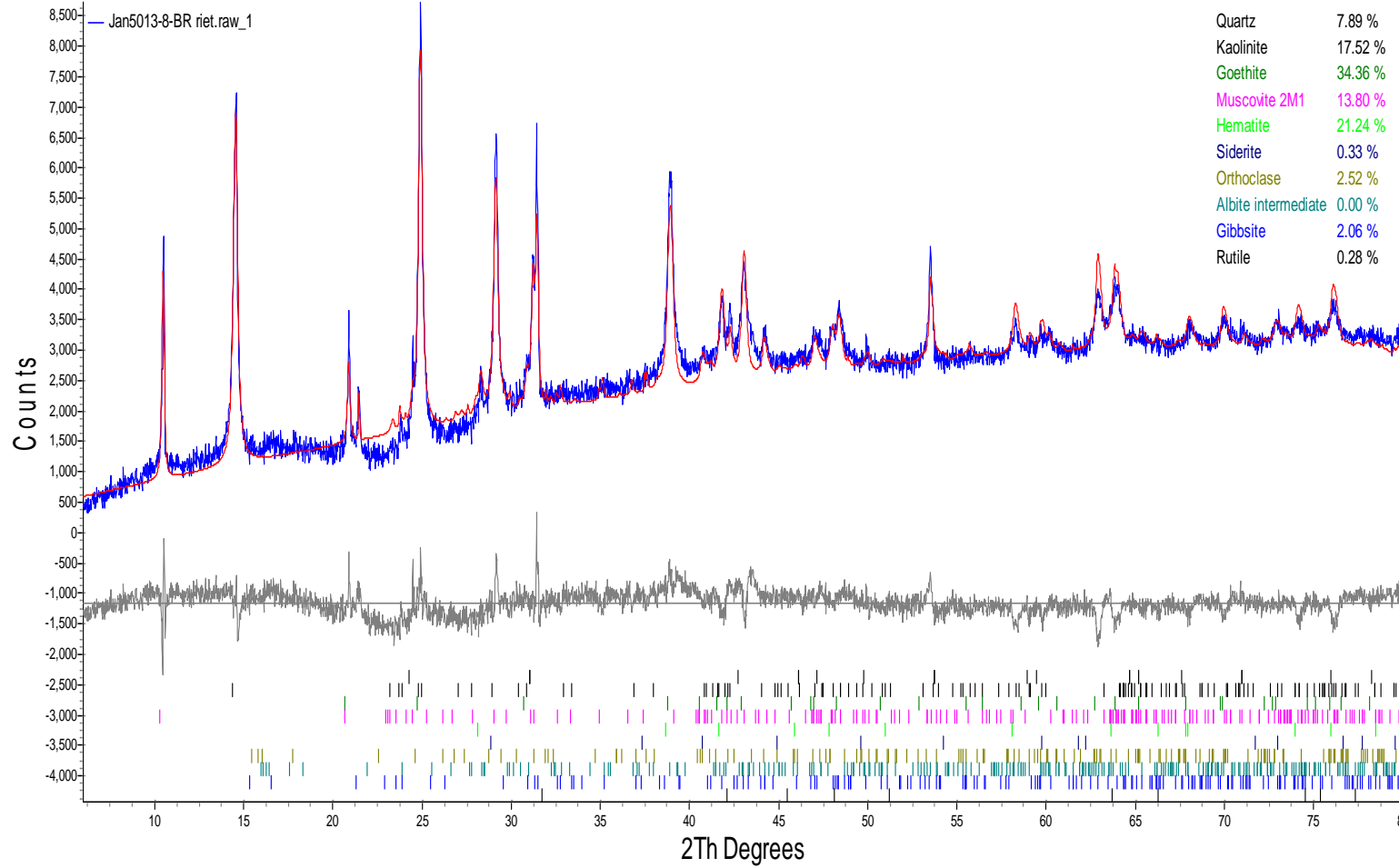
MP2C 48-45



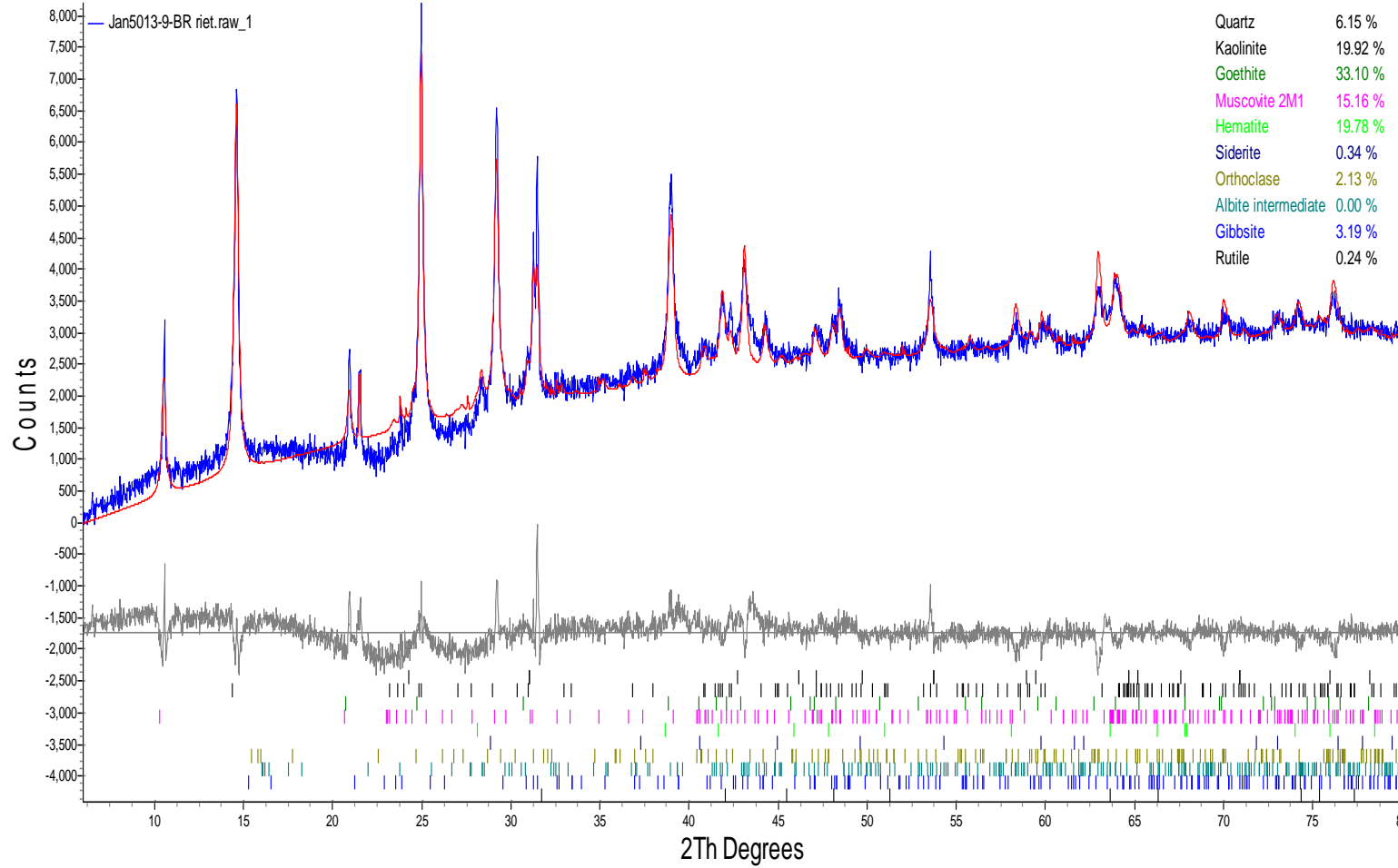
MP3A 47-45



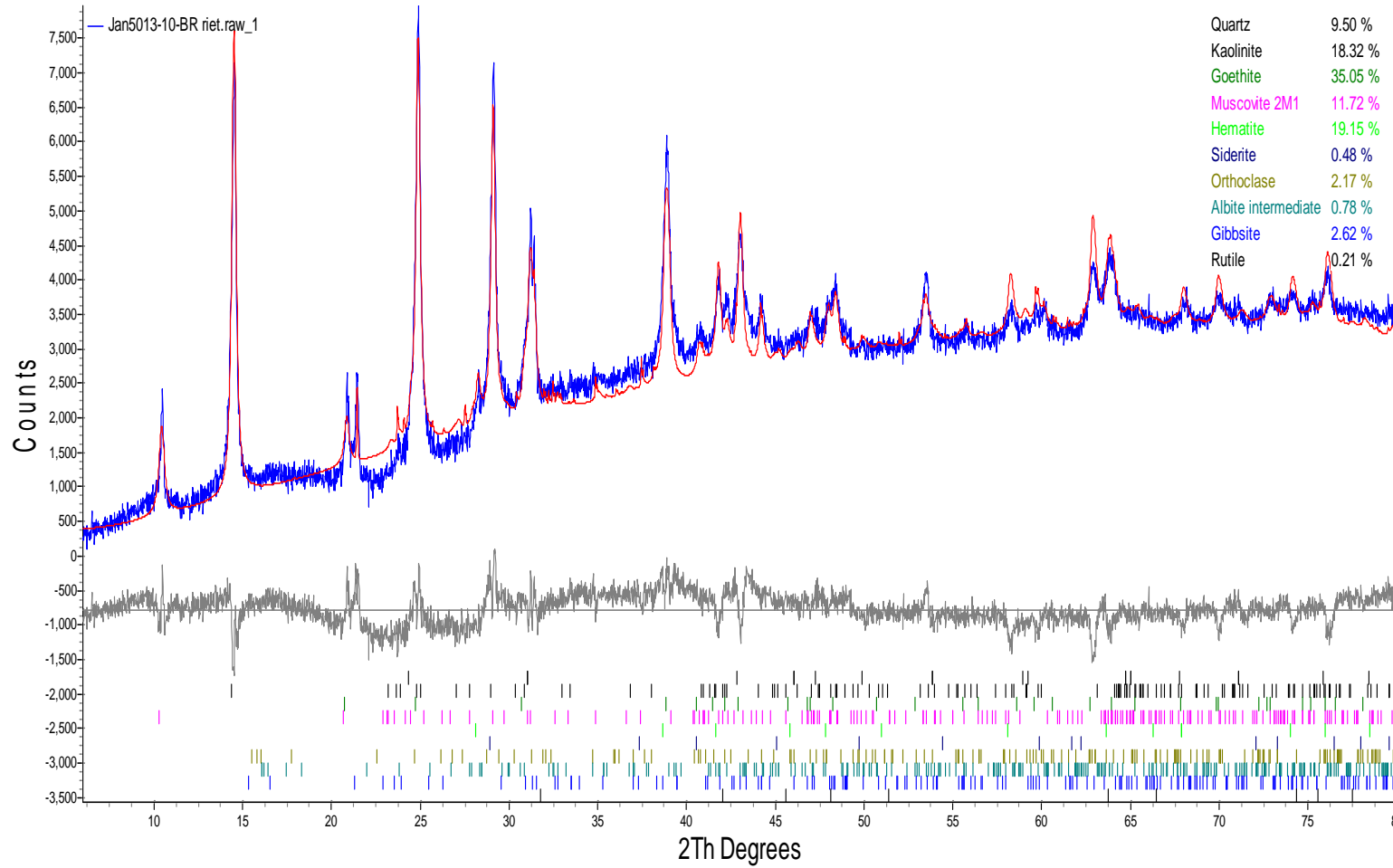
## MP3B 33-45



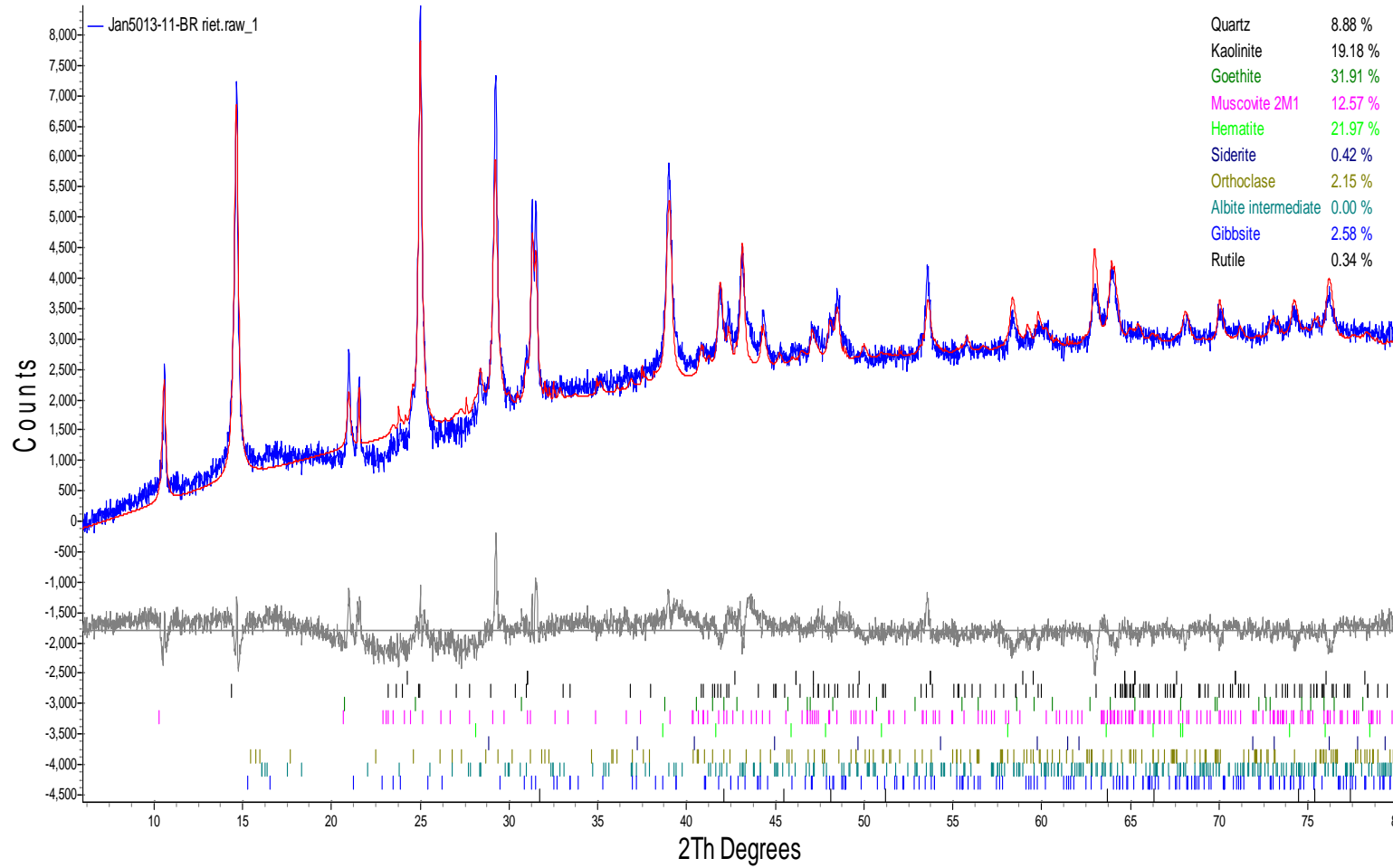
MP4A 22-45



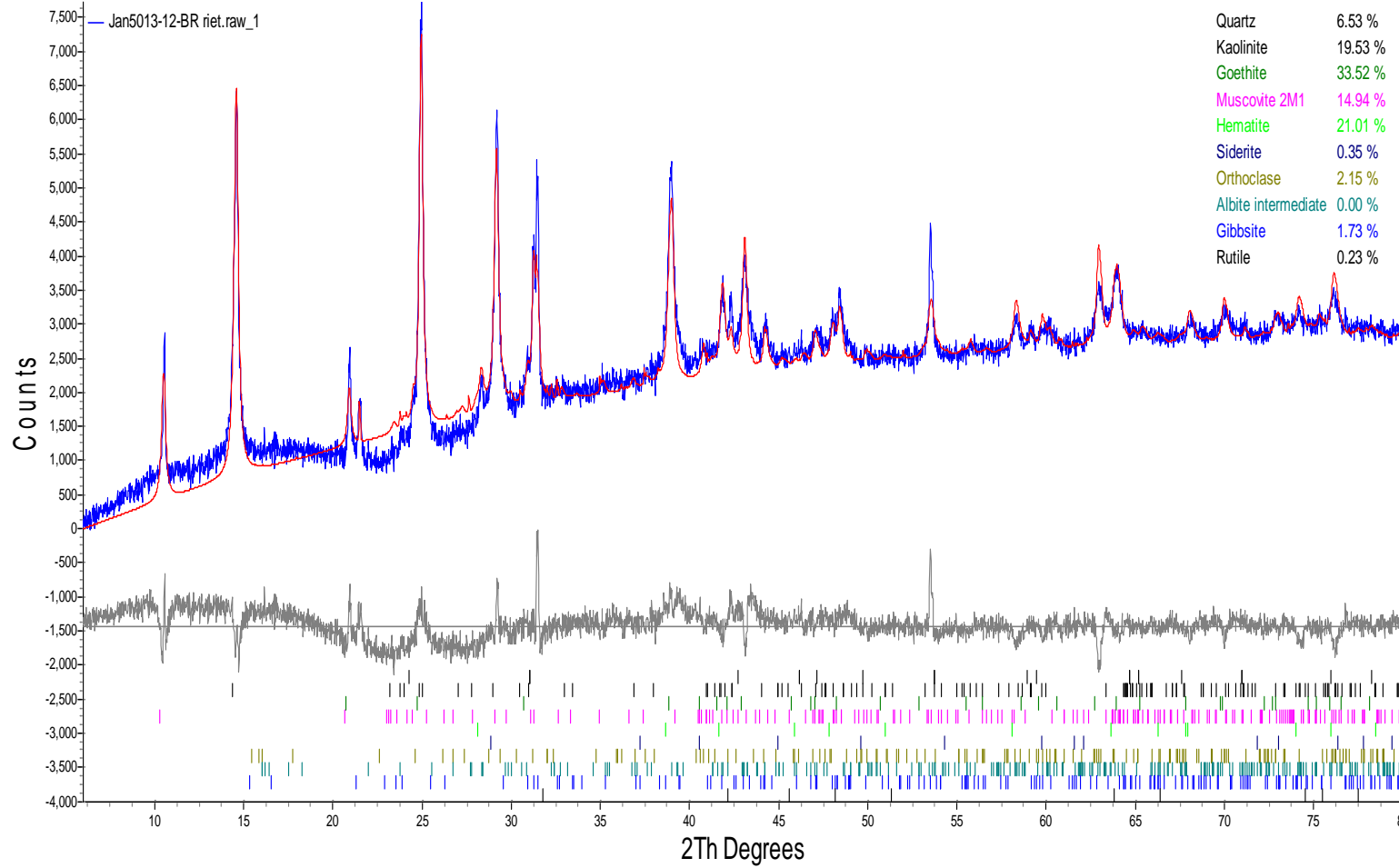
MP4B 28-45



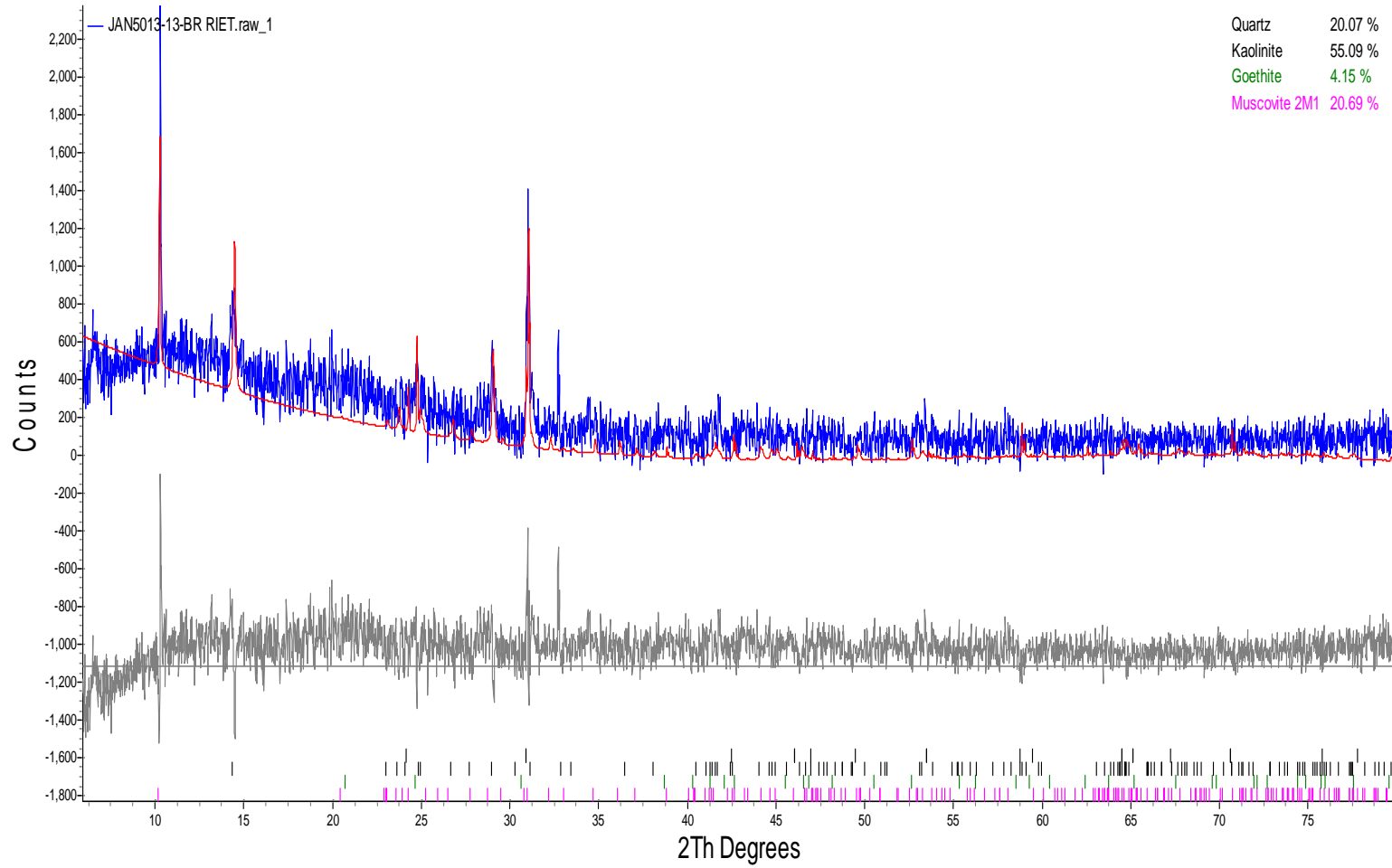
MP2002C 38-45



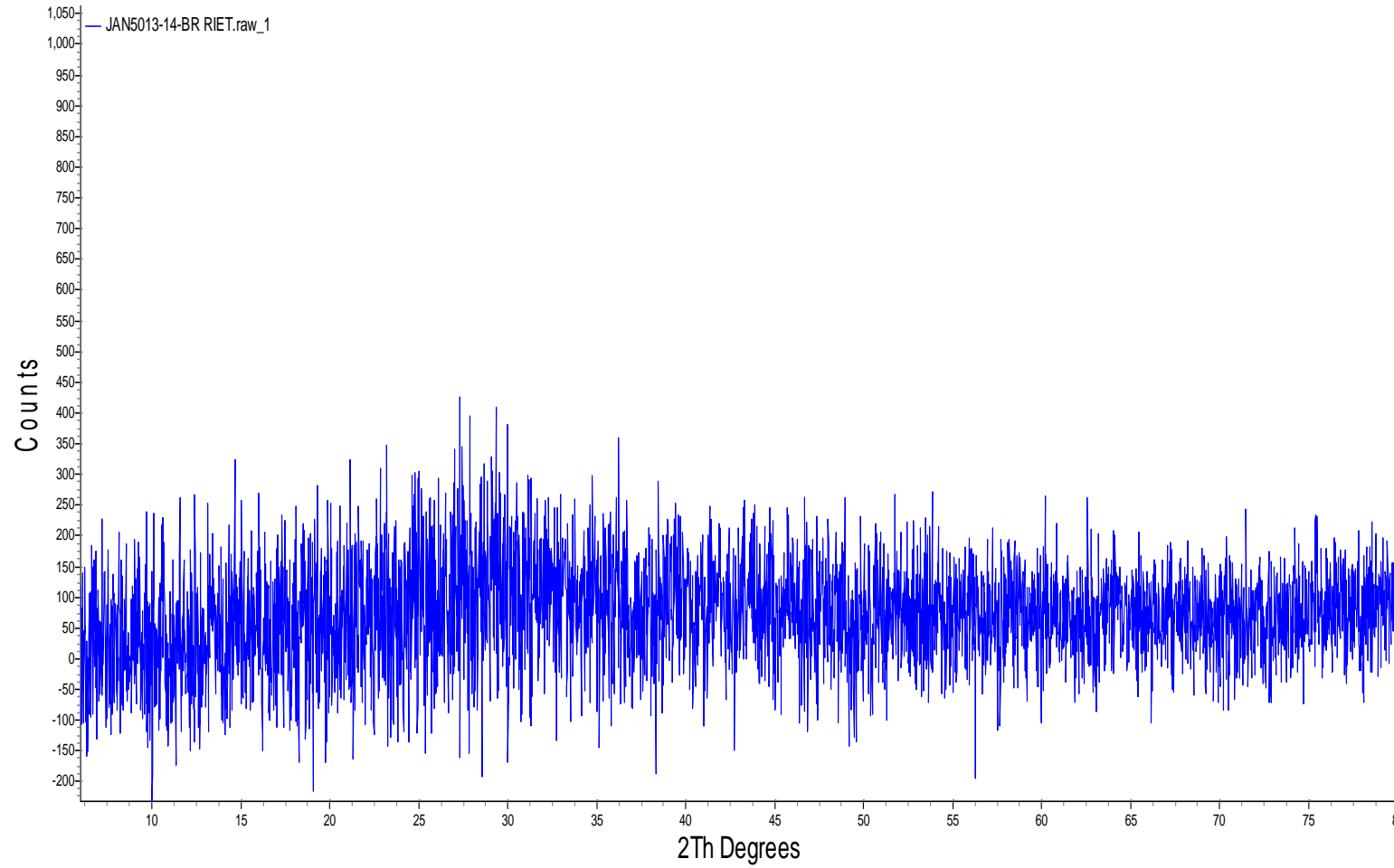
MP2003C 32-45



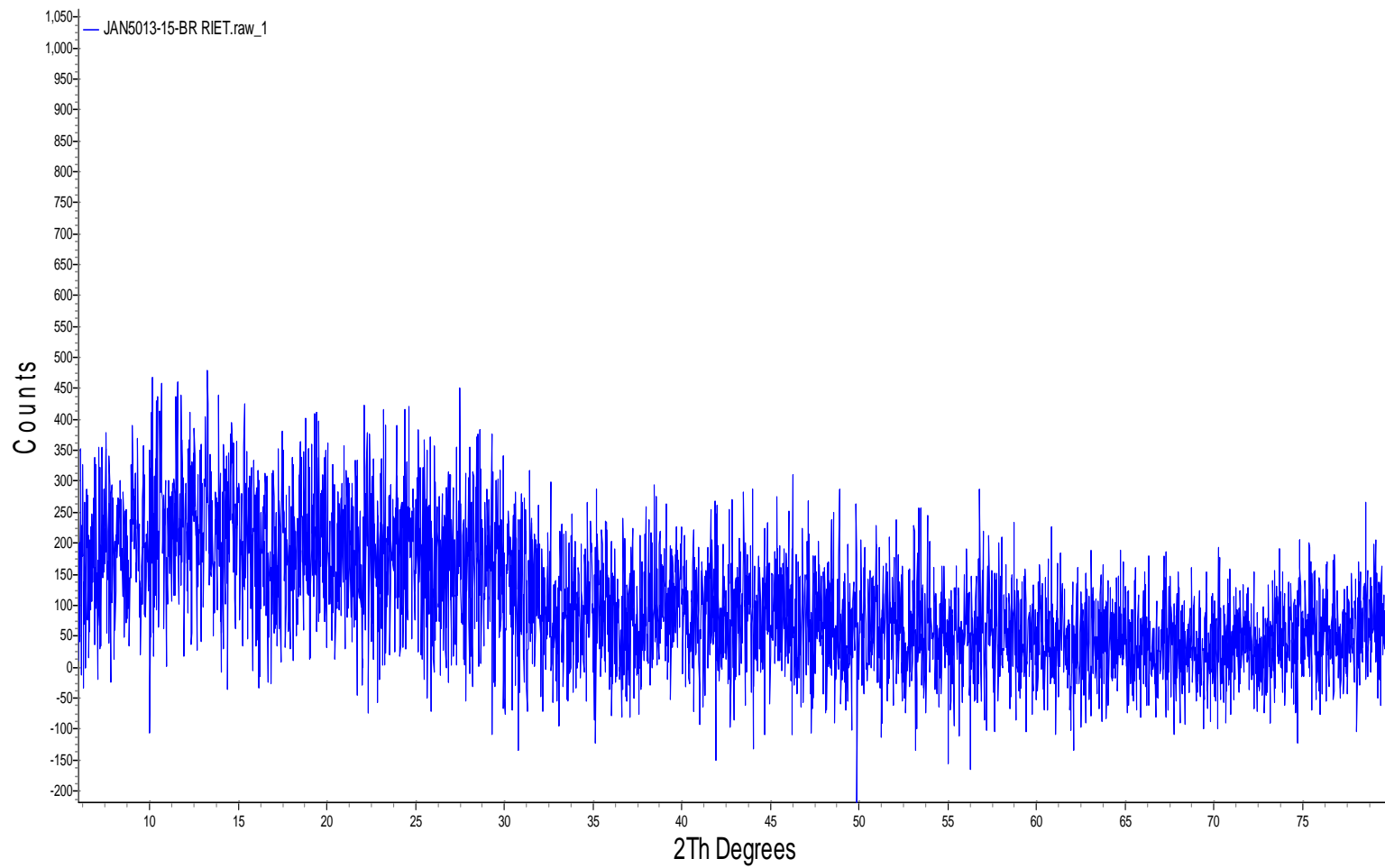
C1A 8-22



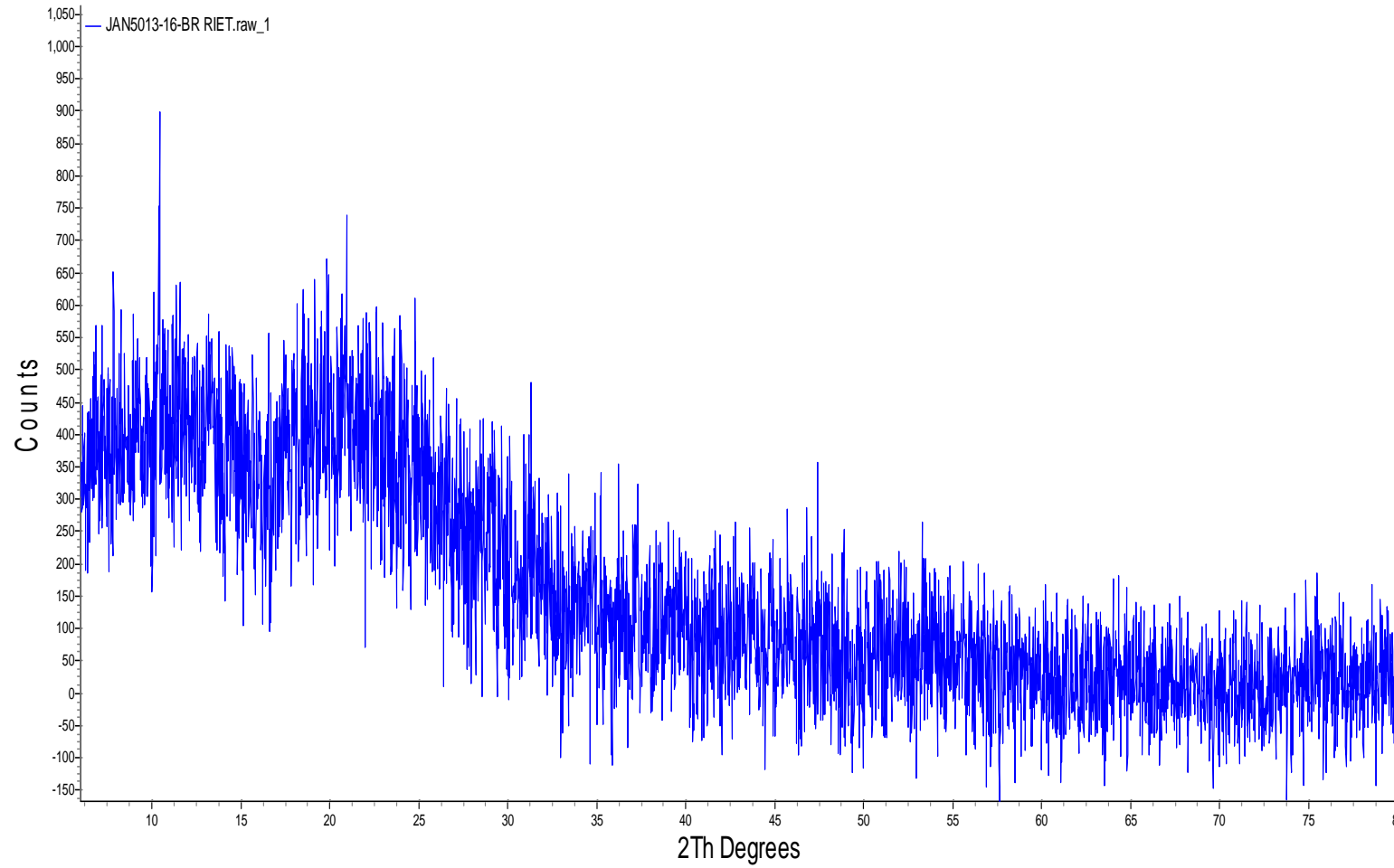
C1B 10-22



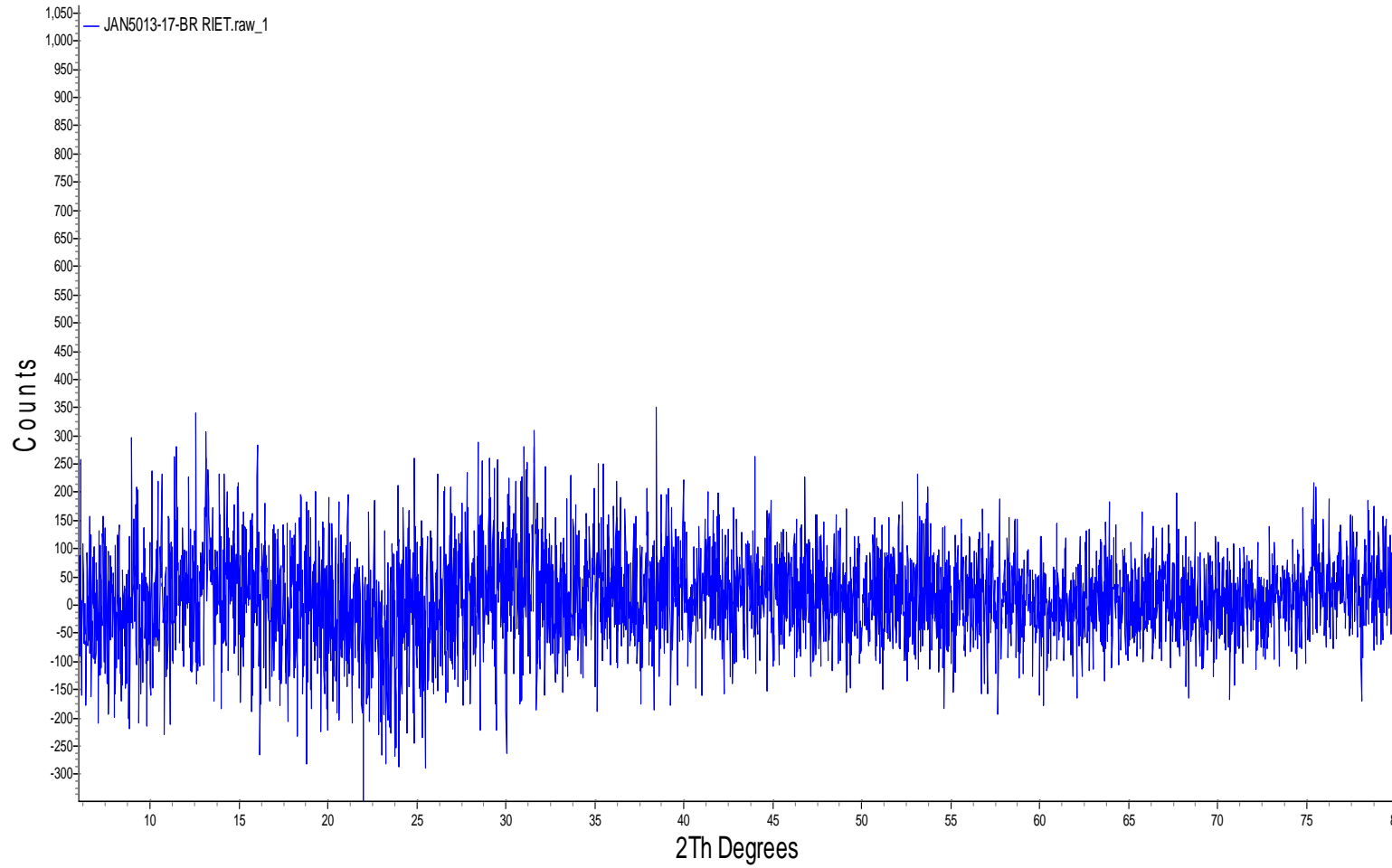
C1C 4-22



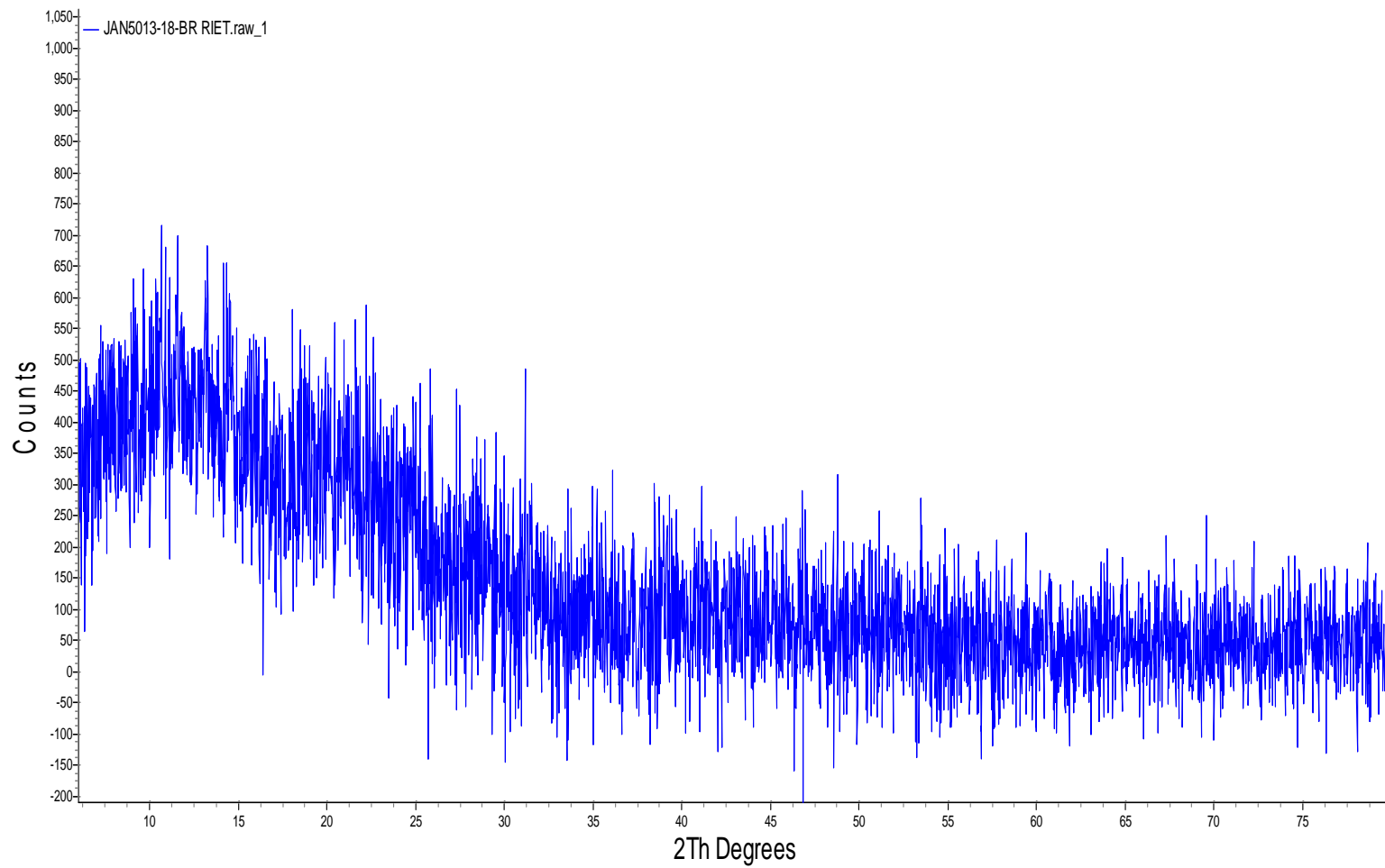
C2A 6-22



C2B 2-22

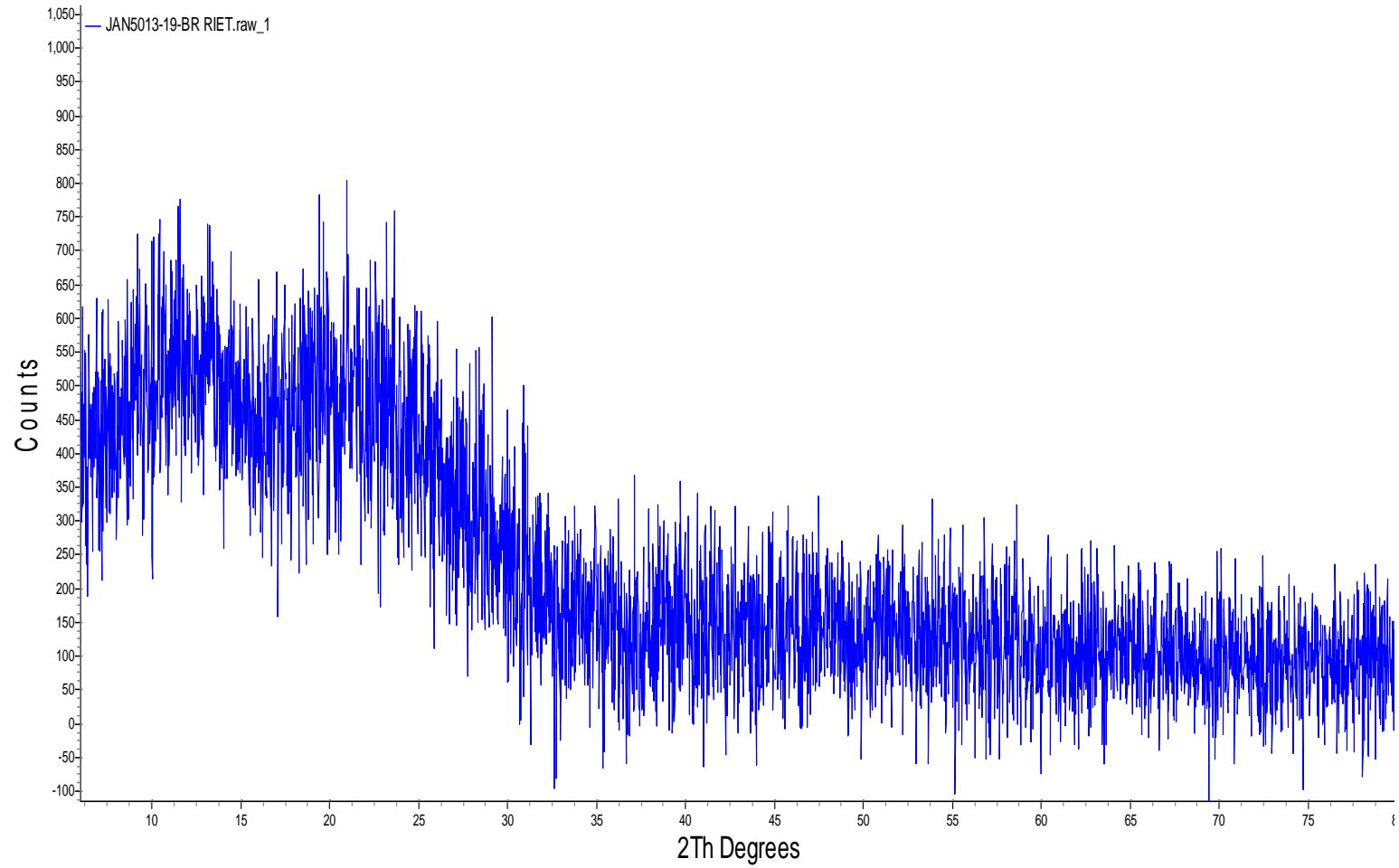


C2C 7-22



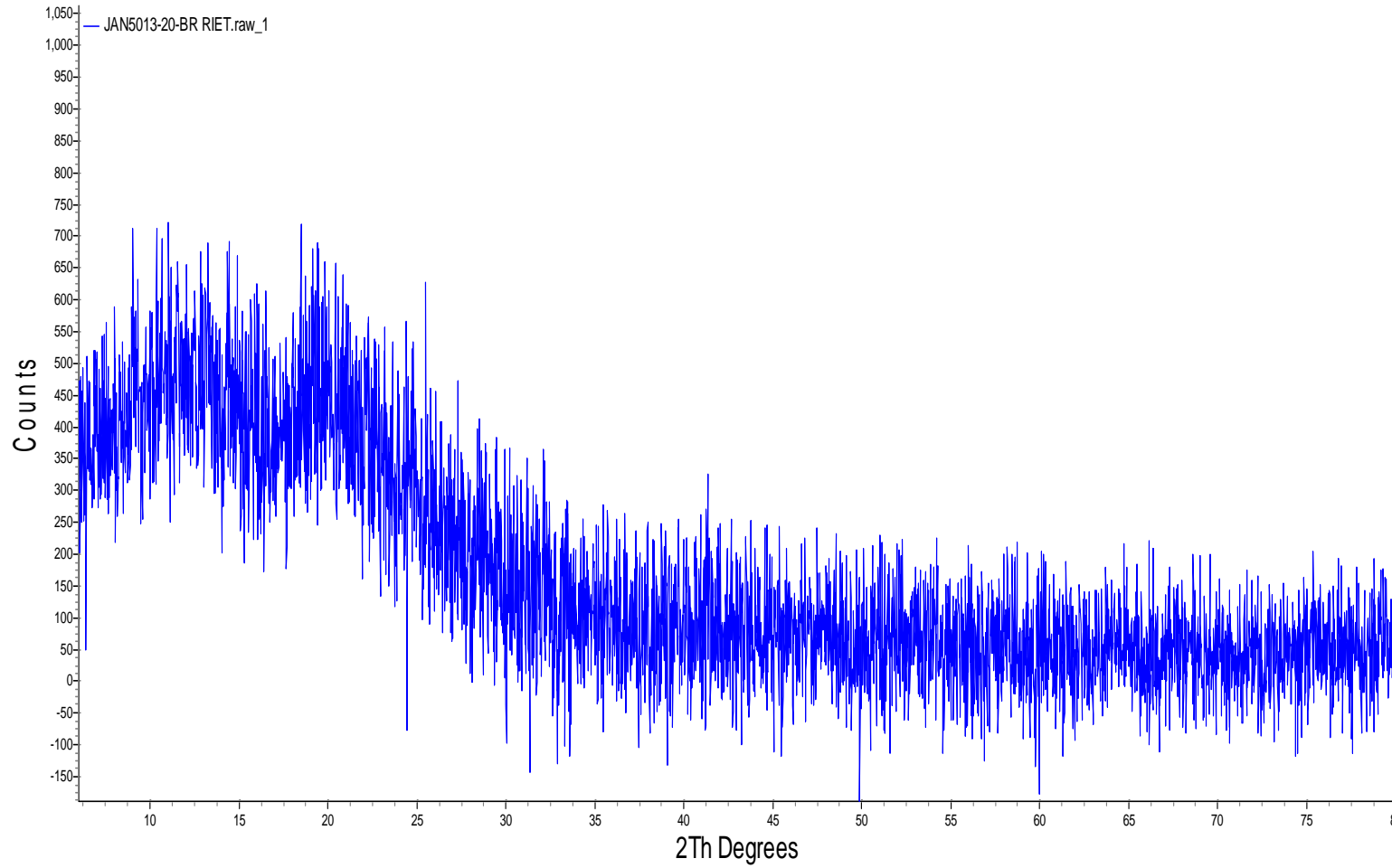


C3A 11-22

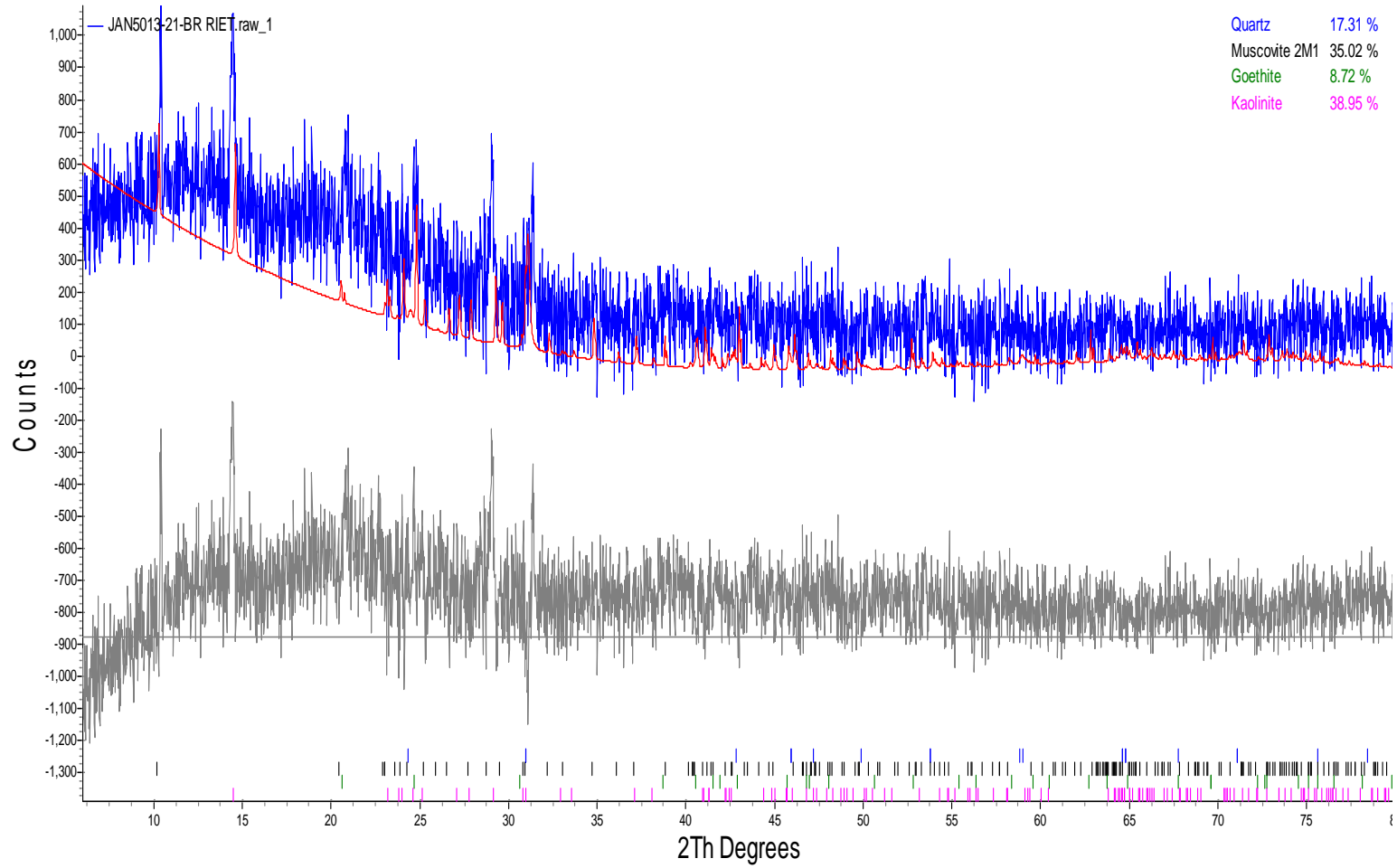




C3B 21-22

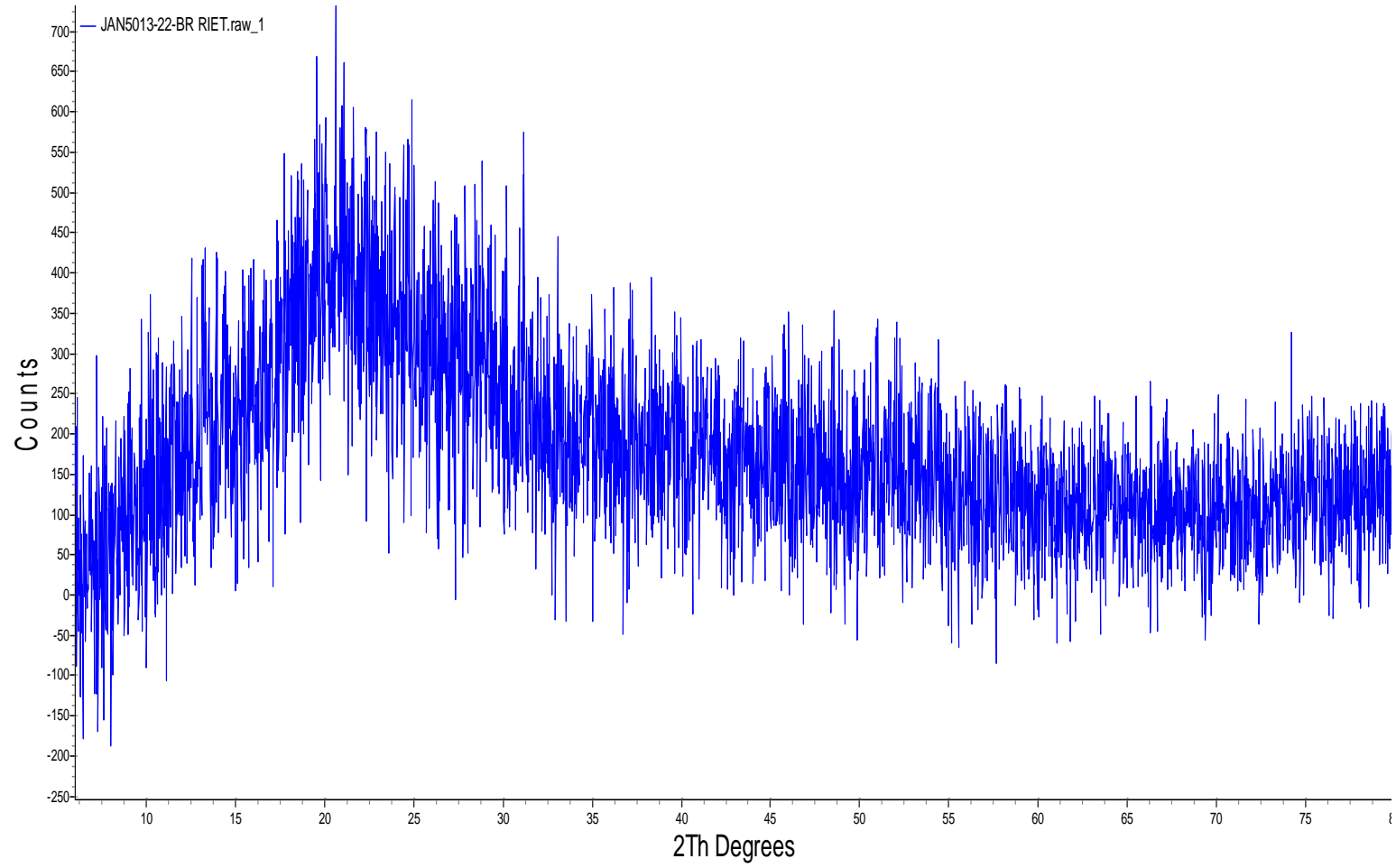


C4A 16-22





C4B 15-22





## Quantitative X-Ray Diffraction by Rietveld Refinement

**Report Prepared for:** Environmental -Analytical

**Project Number/ LIMS No.** Custom MIN/MI5029-MAR17

**Sample Receipt:** March 27, 2017

**Sample Analysis:** April 18, 2017

**Reporting Date:** April 19, 2017

---

**Instrument:** BRUKER AXS D8 Advance Diffractometer

**Test Conditions:** Co radiation, 40 kV, 35 mA  
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°

**Interpretations :** PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.

**Detection Limit :** 0.5-2%. Strongly dependent on crystallinity.

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**Contents:**

- 1) Method Summary
- 2) Summary of Mineral Assemblages
- 3) Quantitative XRD Results
- 4) XRD Pattern(s)

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Kim Gibbs, H.B.Sc., P.Geol.  
Senior Mineralogist

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Huyun Zhou, Ph.D., P.Geol.  
Senior Mineralogist

**ACCREDITATION:** SGS Minerals Services Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada - Minerals Services - Lakefield: <http://palcan.scc.ca/SpecsSearch/GLSearchForm.do>.



## Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

### ***Mineral Identification and Interpretation:***

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

### ***Quantitative Rietveld Analysis:***

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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**WARNING:** The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.



## Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

### Quantitative X-ray Diffraction Results

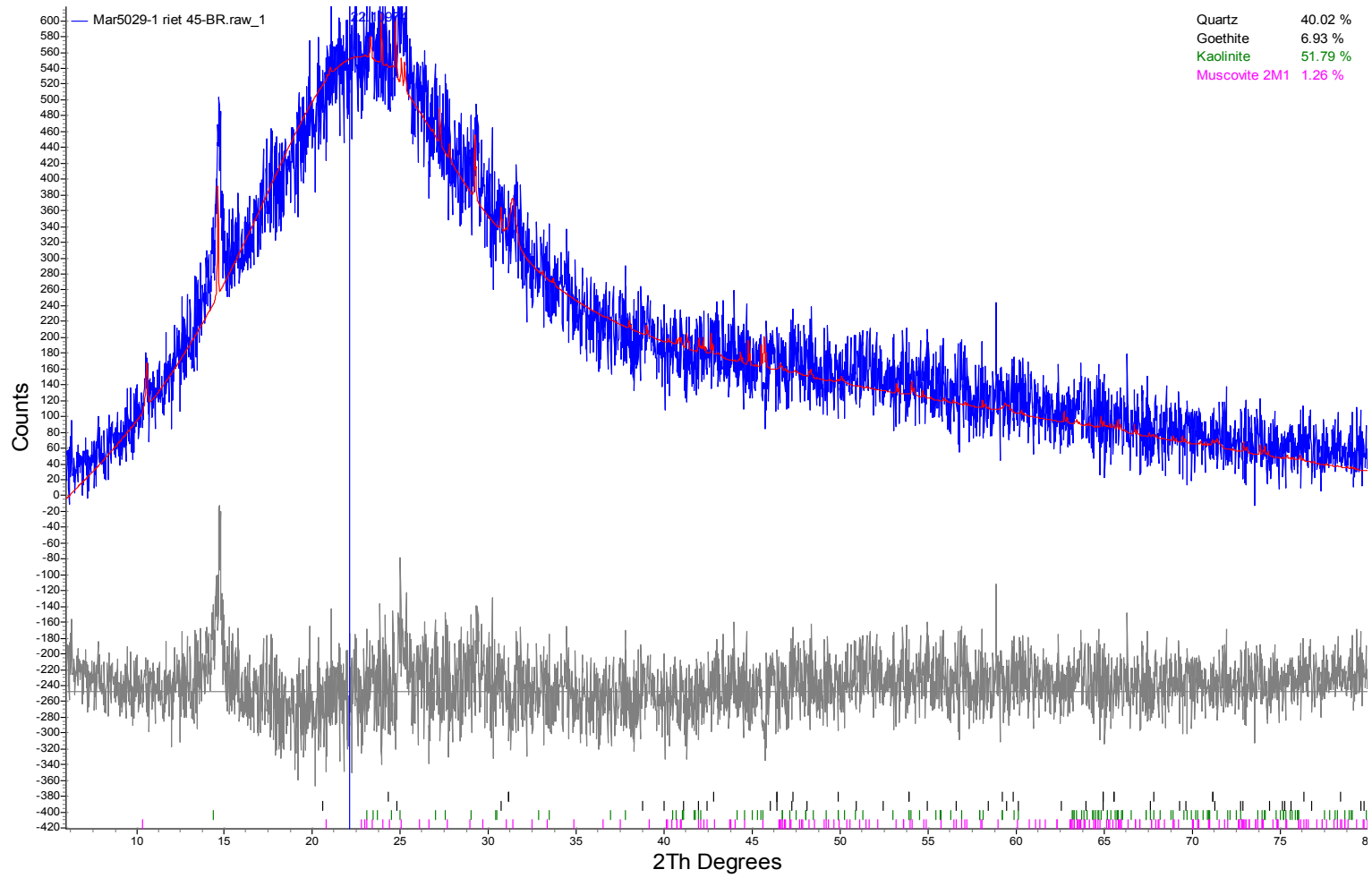
Mineral/Compound	MP7A	C7A	MP7B	C7B	MP7C	C7C	MP8A	C8A	MP2008A	C2008A
	MAR5029-1 (wt %)	MAR5029-2 (wt %)	MAR5029-3 (wt %)	MAR5029-4 (wt %)	MAR5029-5 (wt %)	MAR5029-6 (wt %)	MAR5029-7 (wt %)	MAR5029-8 (wt %)	MAR5029-9 (wt %)	MAR5029-10 (wt %)
Quartz	40.0	12.6	7.3	3.3	2.1	0.3	28.7	15.4	12.2	
Goethite	6.9	14.6	6.2	18.9	15.1	7.2	13.4	23.9	11.7	5.6
Kaolinite	51.8	72.8	26.6	43.8	62.6	77.1	10.6	45.5	18.4	58.3
Muscovite	1.3	-	14.7	10.8	2.1	4.0	8.5	15.2	0.0	-
Orthoclase	-	-	45.2	11.7	13.4	3.8	8.4	-	11.5	9.9
Hematite	-	-	-	-	4.7	0.0	13.0	-	9.0	2.7
Lepidocrocite	-	-	-	-	-	7.5	-	-	-	23.5
Gibbsite	-	-	-	11.4	-	-	3.5	-	1.9	-
Chlorite	-	-	-	-	-	-	6.2	-	11.6	-
Grunerite	-	-	-	-	-	-	1.4	-	-	-
Butlerite	-	-	-	-	-	-	6.2	-	10.2	-
Albite	-	-	-	-	-	-	-	-	13.5	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

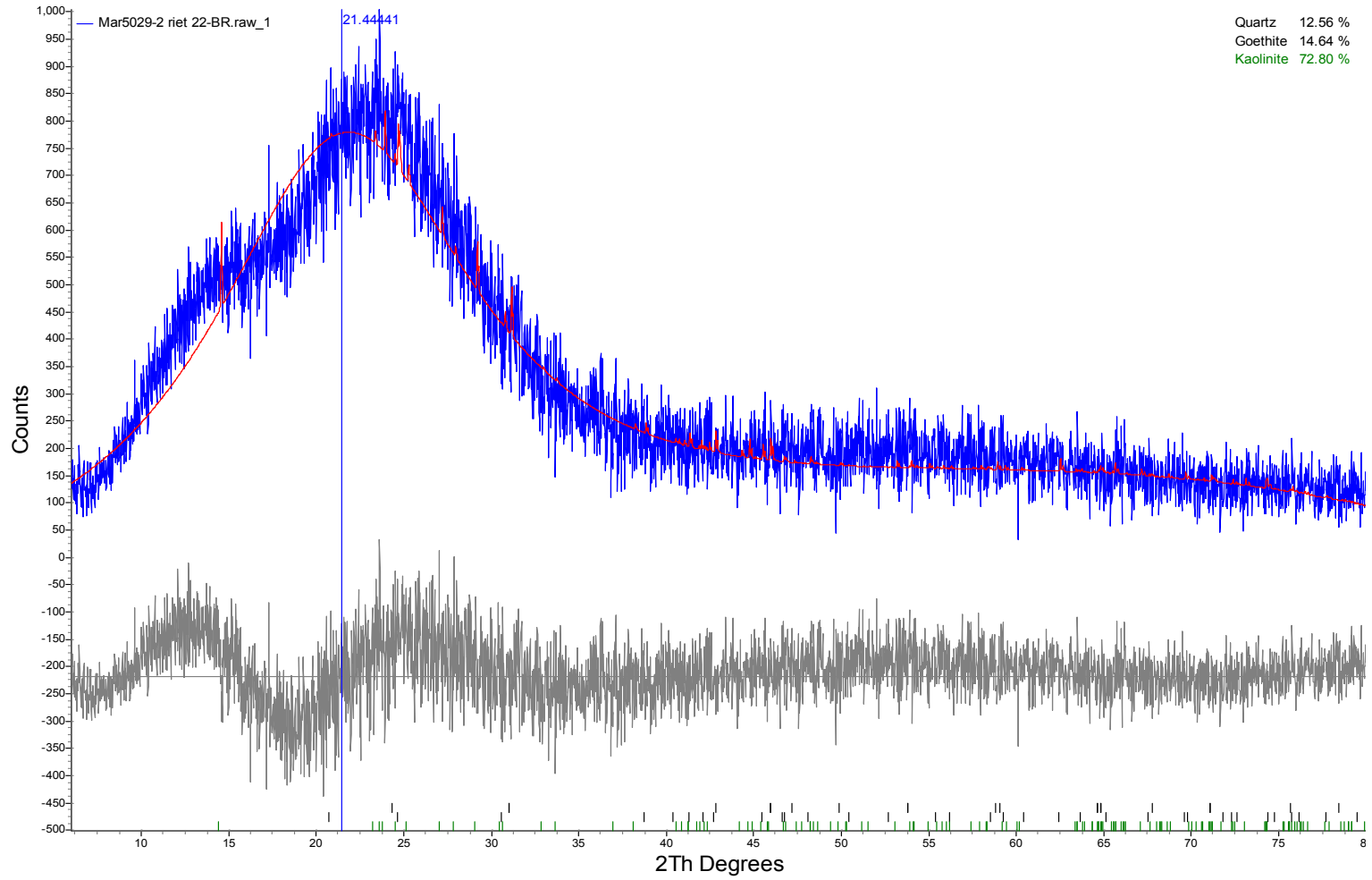
Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

Mineral/Compound	Formula
Quartz	SiO <sub>2</sub>
Goethite	αFeO·OH
Kaolinite	Al <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> (OH) <sub>4</sub>
Muscovite	KA <sub>1/2</sub> (AlSi <sub>3</sub> O <sub>10</sub> )(OH) <sub>2</sub>
Orthoclase	KAISi <sub>3</sub> O <sub>8</sub>
Hematite	Fe <sub>2</sub> O <sub>3</sub>
Lepidocrocite	FeOOH
Gibbsite	Al(OH) <sub>3</sub>
Chlorite	(Fe, (Mg, Mn) <sub>5</sub> , Al)(Si <sub>3</sub> Al)O <sub>10</sub> (OH) <sub>8</sub>
Grunerite	Fe <sub>7</sub> Si <sub>8</sub> O <sub>22</sub> (OH) <sub>2</sub>
Butlerite	Fe <sup>+3</sup> SO <sub>4</sub> (OH)·2H <sub>2</sub> O
Albite	NaAlSi <sub>3</sub> O <sub>8</sub>

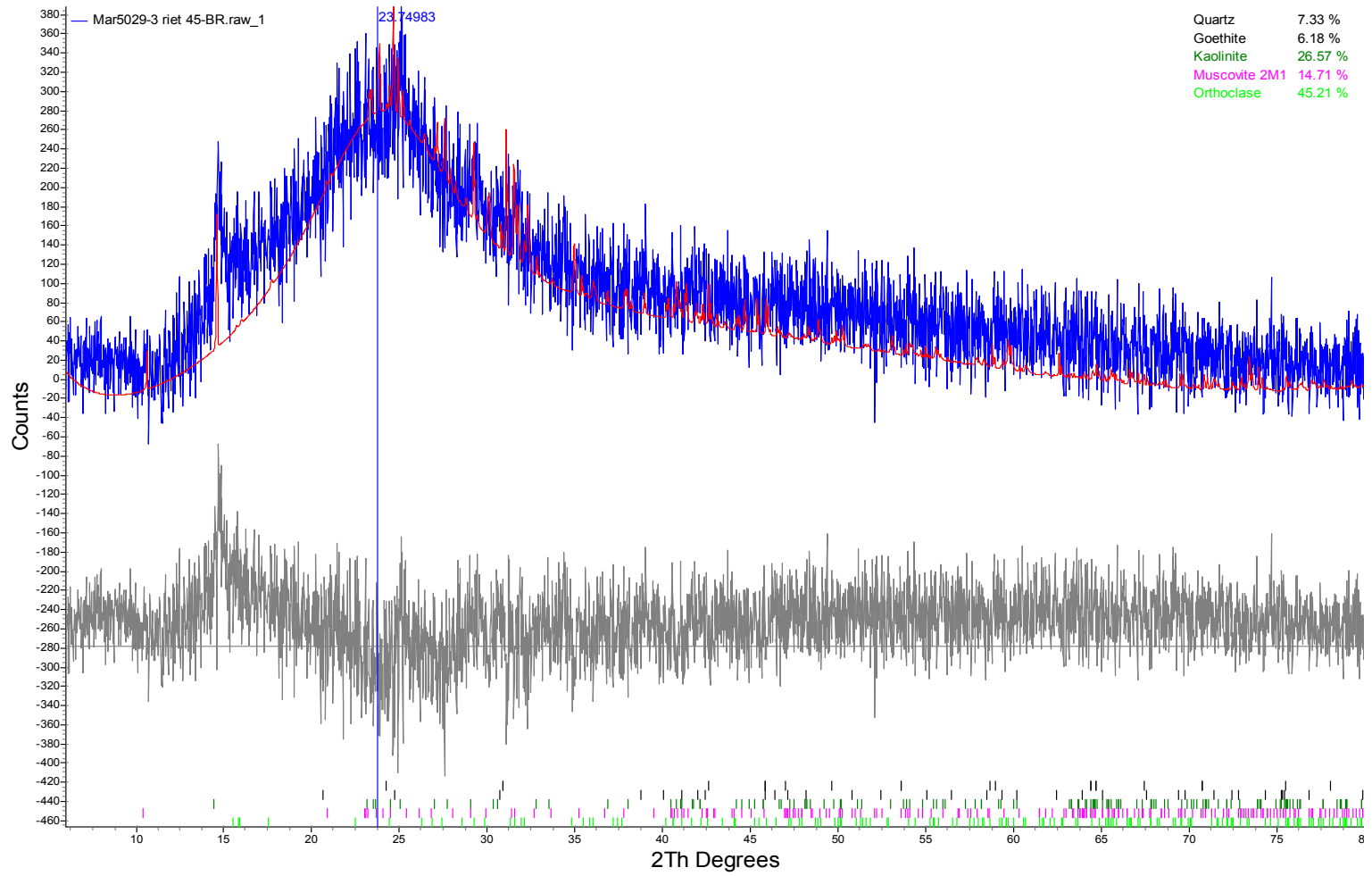
## MP7A



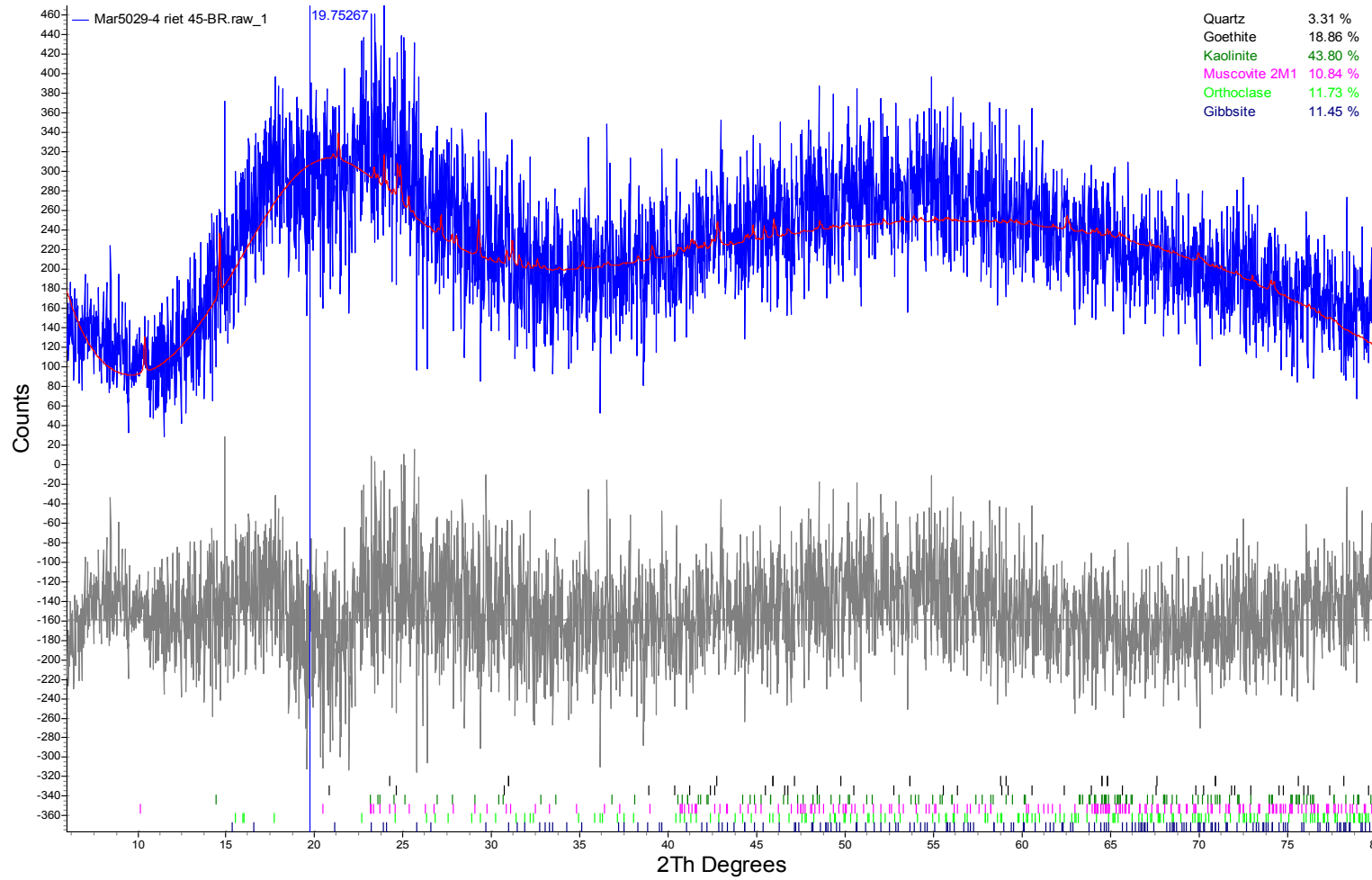
C7A



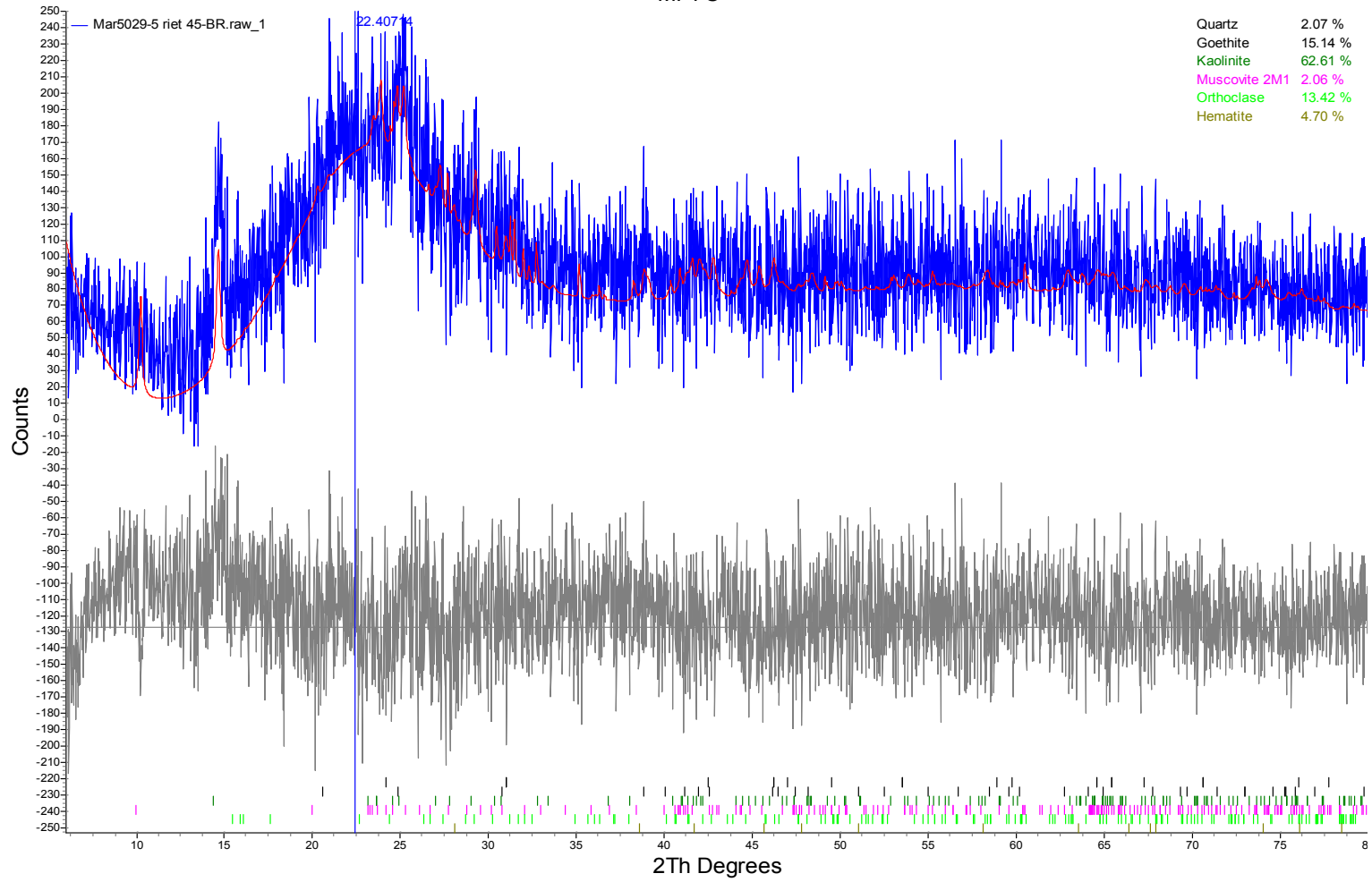
## MP7B



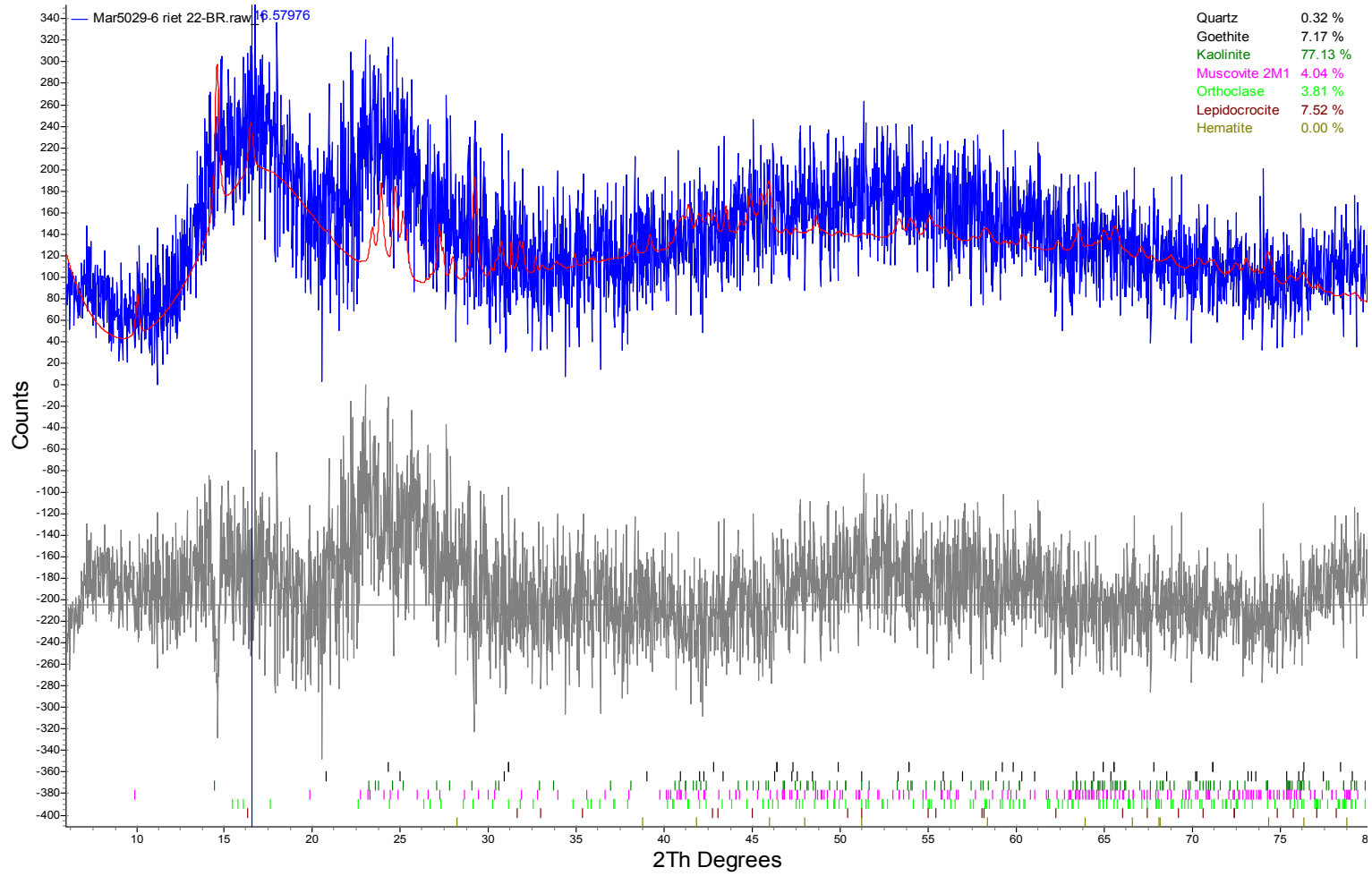
C7B



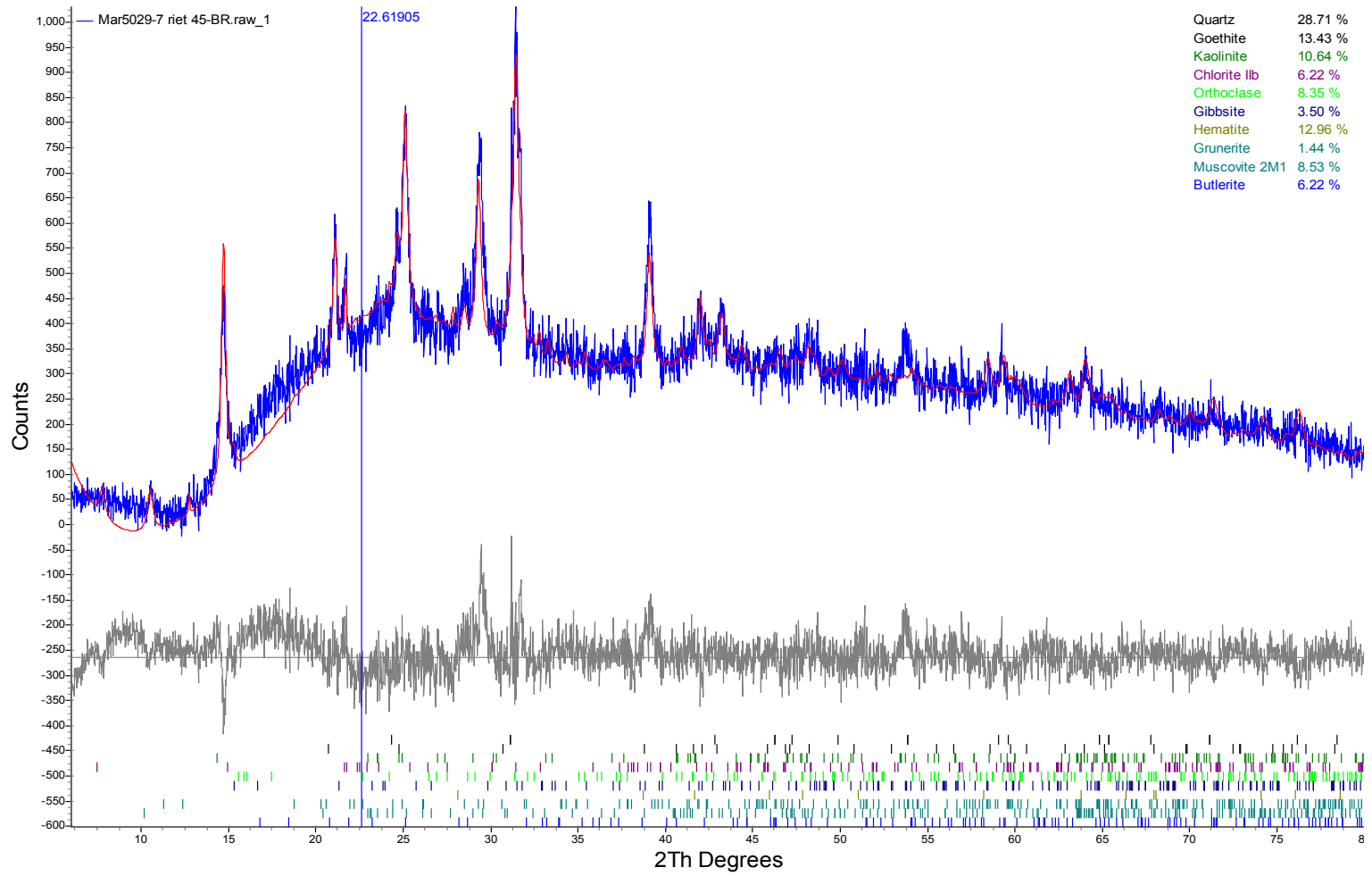
## MP7C



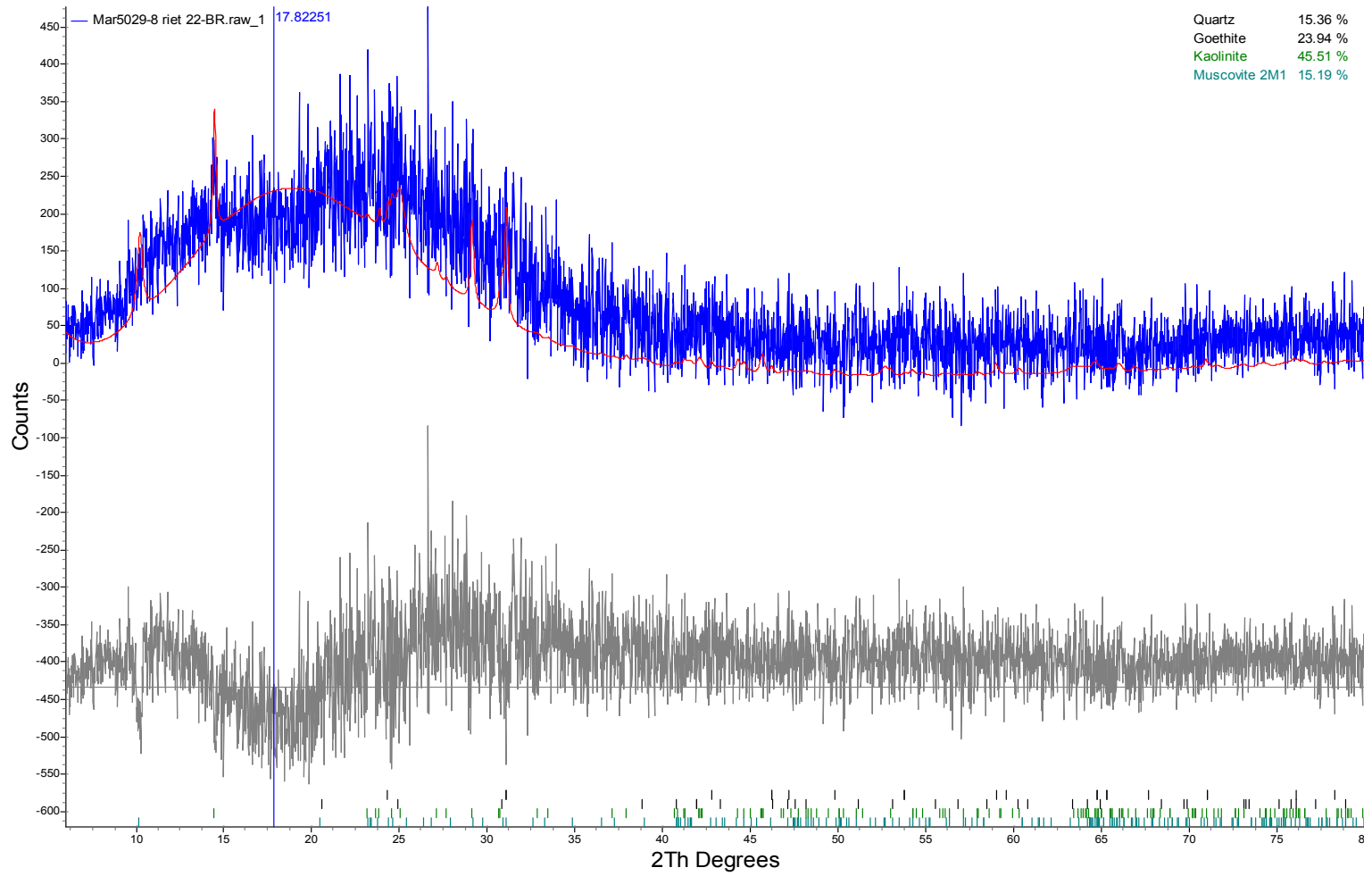
C7C



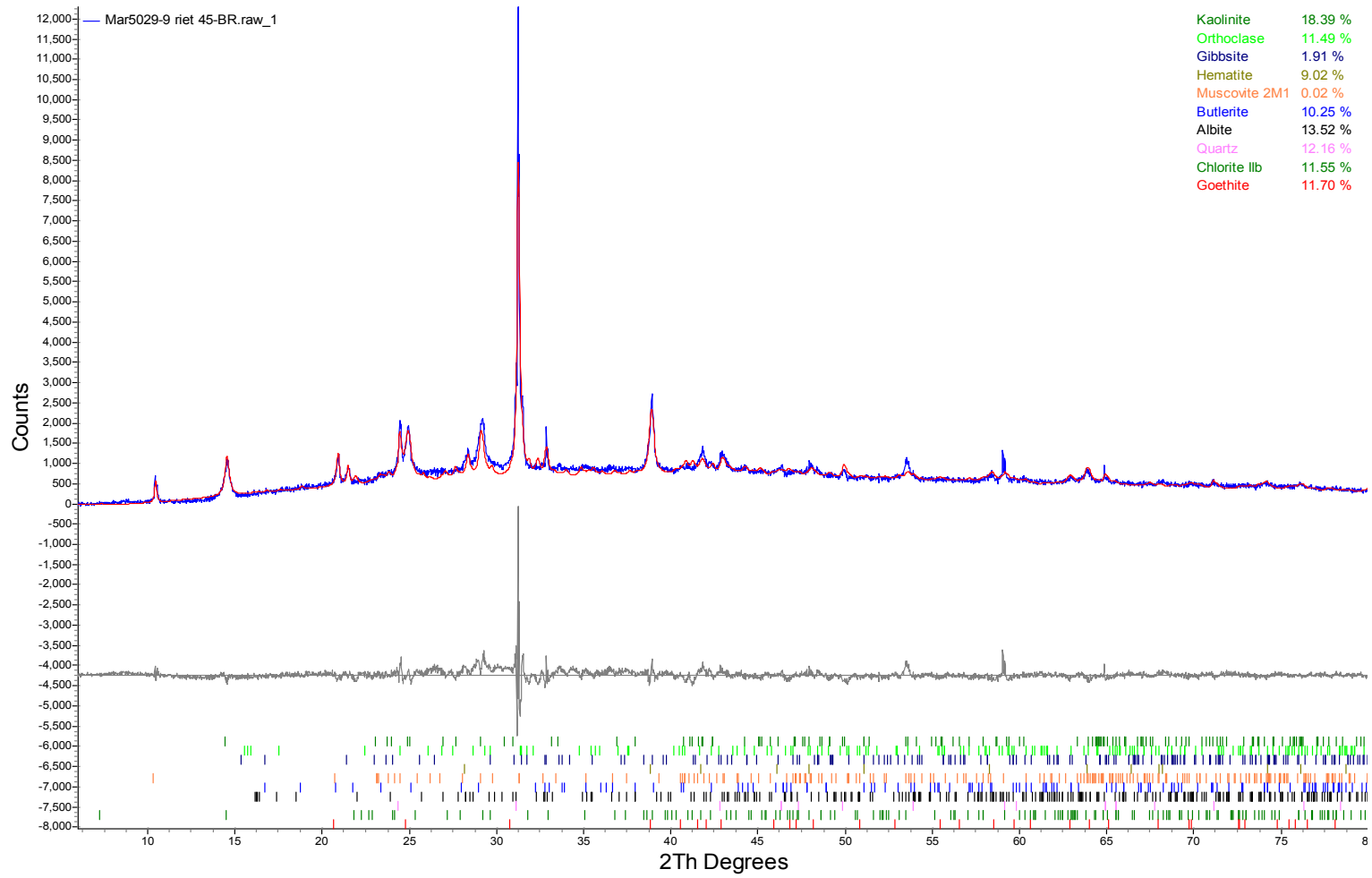
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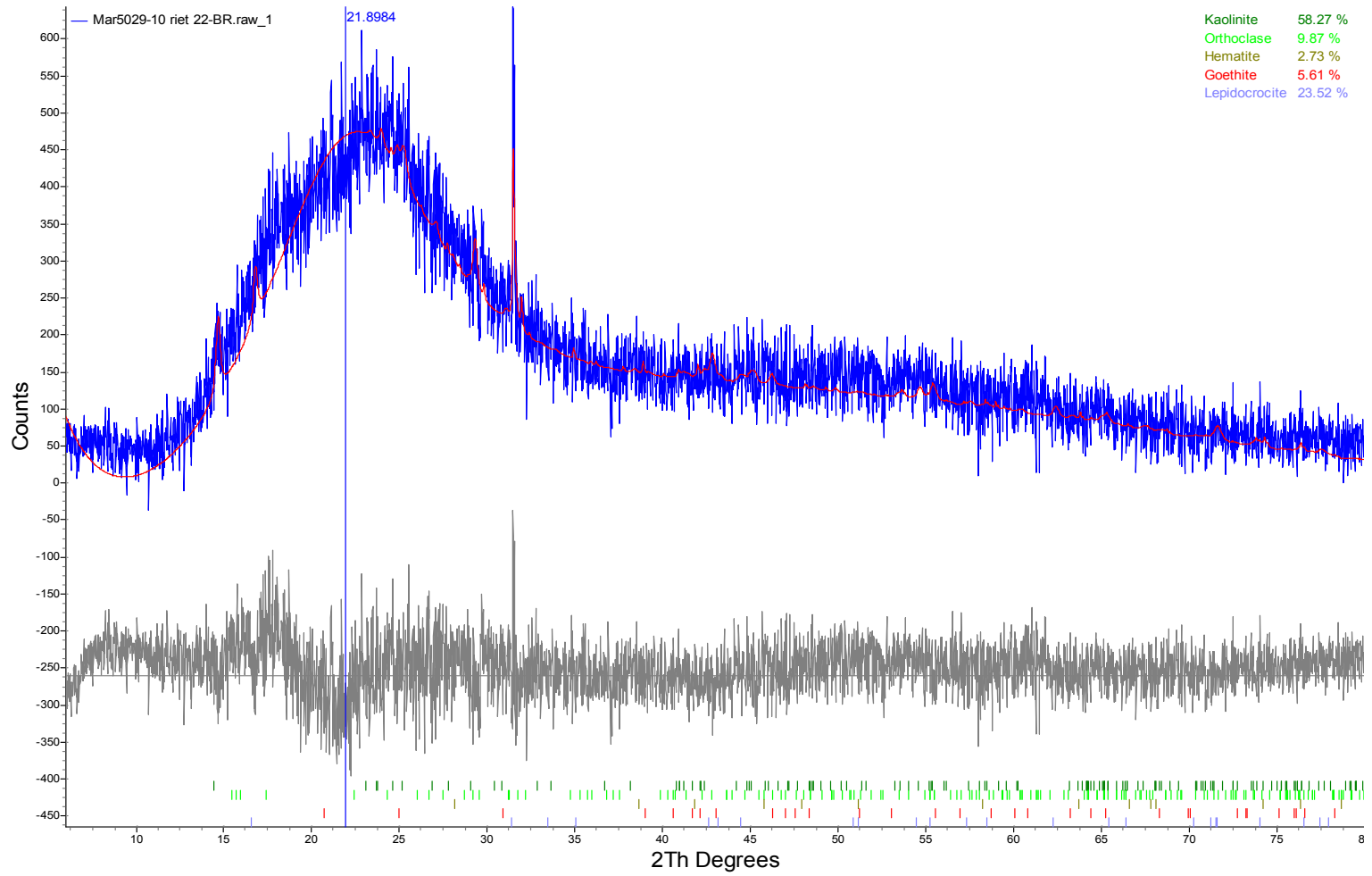
C8A



## MP7A



C2008A



**SGS Canada Inc.**

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28-July-2017

**Golder Associates Limited**

Attn : Kristin Salzsauler

Suite 200 - 2920 Virtual Way  
 Vancouver, BC  
 V5M 0C4,

Phone: 905-567-4444  
 Fax:905-567-0166

**Date Rec. :** 09 January 2017  
**LR Report:** CA15126-JAN17  
**Reference:** 159-515-2282

**Copy:** #2

## CERTIFICATE OF ANALYSIS

### Final Report - Revised

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Approval Date	4: Analysis Approval Time	5: SD1	6: SD2	7: SD3
Sample Date & Time					Date:N/A	Date:N/A	Date:N/A
% Moisture (wet wt) [%]	12-Jan-17	10:47	13-Jan-17	08:37	12.5	19.2	33.0
Paste pH	12-Jan-17	09:34	13-Jan-17	13:58	8.10	8.09	8.06
Conductivity [uS/cm]	10-Jan-17	13:21	11-Jan-17	11:52	40	63	40
Total Organic Carbon [%]	18-Jan-17	13:58	18-Jan-17	14:49	0.070	0.114	0.299
Total Inorganic Carbon [%]	18-Jan-17	13:58	18-Jan-17	14:49	0.011	0.014	0.075
Sulphur (total) [%]	13-Jan-17	09:15	13-Jan-17	13:58	< 0.005	0.006	0.010
Carbon (total) [%]	13-Jan-17	09:15	13-Jan-17	13:58	0.081	0.128	0.374
Total Kjeldahl Nitrogen [as N %]	11-Jan-17	07:45	13-Jan-17	15:44	0.01	0.01	0.01
Ammonia+Ammonium (N) [%]	11-Jan-17	20:00	12-Jan-17	11:12	< 0.01	< 0.01	< 0.01
Mercury [µg/g]	13-Jan-17	12:22	13-Jan-17	13:49	0.18	0.12	0.14
Aluminum [µg/g]	13-Jan-17	11:45	16-Jan-17	11:55	1700	4100	12000
Silver [µg/g]	13-Jan-17	19:20	27-Jul-17	10:43	< 0.01	0.01	< 0.01
Arsenic [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	3.7	7.2	9.6
Barium [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	19	29	56
Beryllium [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	0.21	0.37	0.63
Boron [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	< 1	< 1	< 1
Calcium [µg/g]	13-Jan-17	11:45	30-Jan-17	16:39	260	270	290
Cadmium [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	0.02	0.04	0.11
Cobalt [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	1.9	2.8	11
Chromium [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	14	29	76
Copper [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	4.8	10	30
Iron [µg/g]	13-Jan-17	11:45	16-Jan-17	11:55	98000	180000	170000
Potassium [µg/g]	13-Jan-17	11:45	16-Jan-17	11:55	31	57	190
Magnesium [µg/g]	13-Jan-17	11:45	16-Jan-17	11:55	55	79	210
Manganese [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	600	860	2000
Molybdenum [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	0.6	0.7	1.0
Sodium [µg/g]	13-Jan-17	11:45	16-Jan-17	11:55	8.2	12	21

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Approval Date	4: Analysis Approval Time	5: SD1	6: SD2	7: SD3
Nickel [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	3.7	7.0	26
Lead [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	3.3	7.4	16
Phosphorus (total) [µg/g]	13-Jan-17	11:45	16-Jan-17	11:55	180	410	540
Sulphur [µg/g]	13-Jan-17	11:45	16-Jan-17	11:55	18	26	80
Selenium [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	< 0.7	< 0.7	< 0.7
Antimony [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	< 0.8	< 0.8	< 0.8
Tin [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	< 0.5	0.6	0.9
Strontium [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	2.2	2.8	4.3
Thallium [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	0.04	0.07	0.13
Titanium [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	52	110	190
Uranium [µg/g]	13-Jan-17	19:20	27-Jul-17	10:42	0.49	1.2	2.5
Vanadium [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	8	17	55
Zinc [µg/g]	13-Jan-17	19:20	16-Jan-17	15:40	4.0	8.5	23

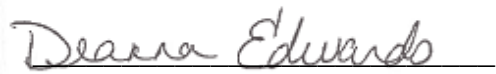
Analysis	8: SD4	9: SD2002	10: SD1002
Sample Date & Time	Date:N/A	Date:N/A	Date:N/A
% Moisture (wet wt) [%]	19.8	17.7	1.9
Paste pH	7.79	7.87	---
Conductivity [uS/cm]	40	58	---
Total Organic Carbon [%]	0.117	0.116	---
Total Inorganic Carbon [%]	0.017	0.013	---
Sulphur (total) [%]	< 0.005	0.005	---
Carbon (total) [%]	0.134	0.129	---
Total Kjeldahl Nitrogen [as N %]	0.01	0.01	---
Ammonia+Ammonium (N) [%]	< 0.01	< 0.01	---
Mercury [µg/g]	0.15	0.12	< 0.05
Aluminum [µg/g]	4700	4400	26
Silver [ug/g]	0.01	< 0.01	< 0.01
Arsenic [µg/g]	8.2	7.6	< 0.5
Barium [µg/g]	33	29	19
Beryllium [µg/g]	0.42	0.38	< 0.02
Boron [µg/g]	< 1	< 1	< 1
Calcium [µg/g]	280	260	8.6
Cadmium [µg/g]	0.04	0.05	< 0.02
Cobalt [µg/g]	3.3	2.8	0.93
Chromium [µg/g]	30	29	220
Copper [µg/g]	12	11	1.4
Iron [µg/g]	200000	190000	3100
Potassium [µg/g]	58	62	3.0

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Analysis	8:	9:	10:
	SD4	SD2002	SD1002
Magnesium [µg/g]	81	78	1.9
Manganese [µg/g]	1000	890	29
Molybdenum [µg/g]	0.8	0.7	1.8
Sodium [µg/g]	9.6	13	7.2
Nickel [µg/g]	8.1	7.2	4.6
Lead [µg/g]	8.4	7.6	0.2
Phosphorus (total) [µg/g]	440	410	3.6
Sulphur [µg/g]	23	26	5
Selenium [µg/g]	< 0.7	< 0.7	< 0.7
Antimony [µg/g]	< 0.8	< 0.8	< 0.8
Tin [µg/g]	0.6	0.8	0.5
Strontium [µg/g]	3.2	2.9	0.57
Thallium [µg/g]	0.07	0.07	< 0.02
Titanium [µg/g]	120	110	0.7
Uranium [ug/g]	1.4	1.2	0.022
Vanadium [µg/g]	18	17	< 3
Zinc [µg/g]	9.7	8.8	0.8

  
 Deanna Edwards, B.Sc, C.Chem  
 Project Specialist  
 Environmental Services, Analytical



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LR Report :

CA15126-JAN17

## Quality Control Report

Inorganic Analysis												
Parameter	Reporting Limit	Unit	Method Blank	RPD		LCS / Spike Blank				Matrix Spike / Reference Material		
				RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)		
							Low	High		Low	High	
<i>Ammonia by SFA - QCBatchID: SKA0083-JAN17</i>												
Ammonia+Ammonium (N)	0.01	%	<0.01		ND	10	99	90	110	94	75	125
<i>Carbon/Sulphur - QCBatchID: ECS0035-JAN17</i>												
Carbon (total)	0.005	%	<0.005		0	20	100	80	120			
Sulphur (total)	0.005	%	<0.005		1	20	112	80	120			
<i>Carbon/Sulphur - QCBatchID: ECS0040-JAN17</i>												
Total Inorganic Carbon	0.005	%	< 0.005		ND	20	104	80	120			
Total Organic Carbon	0.005	%	< 0.005		N/A	20	N/A	80	120			
<i>Mercury by CVAAS - QCBatchID: EHG0012-JAN17</i>												
Mercury	0.05	µg/g	< 0.001		ND	20	100	80	120	108	70	130
<i>Metals in Soil - Aqua-regia/ICP-MS - QCBatchID: EMS0038-JAN17</i>												
Antimony	0.8	µg/g	<0.8		ND	20	100	70	130	106	70	130
Arsenic	0.5	µg/g	<0.5		14	20	100	70	130	95	70	130
Barium	0.01	µg/g	<0.01		11	20	96	70	130	92	70	130
Beryllium	0.02	µg/g	<0.02		ND	20	106	70	130	114	70	130
Boron	1	µg/g	<1		ND	20	90	70	130	109	70	130
Cadmium	0.02	µg/g	<0.02		15	20	103	70	130	101	70	130
Chromium	0.5	µg/g	<0.5		2	20	101	70	130	98	70	130
Cobalt	0.01	µg/g	<0.01		2	20	102	70	130	99	70	130
Copper	0.1	µg/g	<0.1		4	20	100	70	130	92	70	130
Lead	0.1	µg/g	<0.1		10	20	98	70	130	101	70	130
Manganese	0.1	µg/g	<0.1		3	20	103	70	130	97	70	130
Molybdenum	0.1	µg/g	<0.1		ND	20	101	70	130	107	70	130
Nickel	0.1	µg/g	<0.1		5	20	105	70	130	98	70	130
Selenium	0.7	µg/g	<0.7		ND	20	100	70	130	90	70	130
Silver	0.01	ug/g	<0.01		ND	20	102	70	130	97	70	130
Strontium	0.02	µg/g	<0.02		5	20	100	70	130	98	70	130
Thallium	0.02	µg/g	<0.02		ND	20	98	70	130	105	70	130
Tin	0.5	µg/g	<0.5		10	20	101	70	130	102	70	130
Titanium	0.1	µg/g	<0.1		4	20	100	70	130	85	70	130
Uranium	0.002	ug/g	<0.002		9	20	96	70	130	NV	70	130
Vanadium	3	µg/g	<3		4	20	102	70	130	99	70	130
Zinc	0.7	µg/g	<0.7		16	20	105	70	130	90	70	130
<i>Metals in Soil - ICP-OES - QCBatchID: ESG0033-JAN17</i>												
Aluminum	1	µg/g	<1		0	20	98	80	120	81	70	130
Calcium	1	µg/g	<1		1	20	98	80	120	94	70	130



**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.  
 Lakefield - Ontario - KOL 2H0  
 Phone: 705-652-2000 FAX: 705-652-6365

**LR Report : CA15126-JAN17**

Inorganic Analysis											
Parameter	Reporting Limit	Unit	Method Blank	RPD	Acceptance Criteria	Spike Recovery (%)	LCS / Spike Blank		Matrix Spike / Reference Material		
							Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							Low	High		Low	High
Iron	0.3	µg/g	<0.3	1	20	98	80	120	100	70	130
Magnesium	0.1	µg/g	<0.1	2	20	99	80	120	85	70	130
Phosphorus (total)	3	µg/g	<3	6	20	100	80	120	93	70	130
Potassium	0.3	µg/g	<0.3	0	20	99	80	120	100	70	130
Sodium	1	µg/g	<1	1	20	98	80	120	91	70	130
Sulphur	3	µg/g	<3	4	20	93	80	120	NV	70	130



**SGS Canada Inc.**

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28-July-2017

**Golder Associates Limited**

Attn : Kristin Salzsauler

Suite 200 - 2920 Virtual Way, Vancouver  
, V5M 0C4  
Phone: 905-567-4444, Fax:905-567-0166

**Date Rec. :** 17 March 2017  
**LR Report:** CA15390-MAR17  
**Reference:** 159-515-2282

**Copy:** #2

# CERTIFICATE OF ANALYSIS

## Final Report - Revised

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Approval Date	4: Analysis Approval Time	5: SD1A	6: SD1001A	7: SD2001A
Sample Date & Time					Date:N/A	Date:N/A	Date:N/A
% Moisture (wet wt) [%]	24-Mar-17	14:09	28-Mar-17	13:09	29.4	---	32.0
Paste pH	29-Mar-17	08:06	30-Mar-17	15:48	7.12	---	7.33
Conductivity [uS/cm]	24-Mar-17	08:00	11-Apr-17	14:48	nss	---	nss
Total Organic Carbon [%]	29-Mar-17	10:26	29-Mar-17	10:38	0.170	---	0.169
Total Inorganic Carbon [%]	29-Mar-17	10:26	29-Mar-17	10:38	0.040	---	0.038
Sulphur (total) [%]	28-Mar-17	12:39	28-Mar-17	13:09	0.012	---	0.009
Carbon (total) [%]	28-Mar-17	12:39	28-Mar-17	13:09	0.210	---	0.207
Total Kjeldahl Nitrogen [as N %]	29-Mar-17	07:54	05-Apr-17	10:15	0.02	---	0.02
Ammonia+Ammonium (N) [%]	24-Mar-17	19:27	29-Mar-17	11:13	< 0.01	---	< 0.01
Mercury [ug/g]	29-Mar-17	06:20	29-Mar-17	10:12	0.13	< 0.05	0.13
Silver [ug/g]	28-Mar-17	13:46	27-Jul-17	10:44	0.04	0.03	0.04
Aluminum [ug/g]	29-Mar-17	14:15	29-Mar-17	15:13	7300	14	7000
Arsenic [ug/g]	28-Mar-17	13:46	29-Mar-17	15:13	11	< 0.5	10
Barium [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	41	19	40
Beryllium [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	0.46	< 0.02	0.47
Boron [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	< 1	< 1	< 1
Calcium [ug/g]	29-Mar-17	14:15	29-Mar-17	15:14	240	10	240
Cadmium [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	0.03	< 0.02	0.02
Cobalt [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	5.3	0.94	5.1
Chromium [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	48	240	47
Copper [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	16	2.6	17
Iron [ug/g]	29-Mar-17	14:15	29-Mar-17	15:14	230000	2700	220000
Potassium [ug/g]	29-Mar-17	14:15	29-Mar-17	15:14	99	2.3	100
Magnesium [ug/g]	29-Mar-17	14:15	29-Mar-17	15:14	140	1.1	140
Manganese [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	1300	30	1300
Molybdenum [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	0.9	1.7	0.9
Sodium [ug/g]	29-Mar-17	14:15	29-Mar-17	15:14	16	6.0	15

Online LIMS

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<b>Analysis</b>	<b>1: Analysis Start Date</b>	<b>2: Analysis Start Time</b>	<b>3: Analysis Approval Date</b>	<b>4: Analysis Approval Time</b>	<b>5: SD1A</b>	<b>6: SD1001A</b>	<b>7: SD2001A</b>
Nickel [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	12	4.7	12
Lead [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	11	0.2	11
Phosphorus (total) [ug/g]	29-Mar-17	14:15	29-Mar-17	15:14	510	< 3	510
Sulphur [ug/g]	29-Mar-17	14:15	29-Mar-17	15:14	37	5	32
Selenium [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	< 0.7	< 0.7	< 0.7
Antimony [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	< 0.8	< 0.8	< 0.8
Tin [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	< 0.5	< 0.5	< 0.5
Strontium [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	3.3	0.55	2.9
Thallium [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	0.10	< 0.02	0.11
Titanium [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	160	0.7	160
Uranium [ug/g]	28-Mar-17	13:46	27-Jul-17	10:44	1.7	0.020	1.7
Vanadium [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	29	< 3	29
Zinc [ug/g]	28-Mar-17	13:46	29-Mar-17	15:14	14	1.9	13

<b>Analysis</b>	<b>8: SD1B</b>	<b>9: SD1C</b>	<b>10: SD1D</b>	<b>11: SD3A</b>	<b>12: SD3B</b>	<b>13: SD3C</b>	<b>14: SD3D</b>
Sample Date & Time	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A
% Moisture (wet wt) [%]	15.0	14.9	20.2	16.3	15.4	12.7	12.2
Paste pH	8.02	7.60	5.88	7.93	8.18	8.46	8.29
Conductivity [uS/cm]	47	66	48	59	53	44	59
Total Organic Carbon [%]	0.077	0.152	1.48	0.092	0.031	0.005	0.036
Total Inorganic Carbon [%]	0.016	0.013	0.016	0.018	0.010	0.008	0.043
Sulphur (total) [%]	0.005	0.006	0.017	0.006	0.005	< 0.005	0.005
Carbon (total) [%]	0.093	0.165	1.49	0.109	0.041	0.013	0.079
Total Kjeldahl Nitrogen [as N %]	< 0.01	< 0.01	0.04	<0.01	< 0.01	< 0.01	< 0.01
Ammonia+Ammonium (N) [%]	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Mercury [ug/g]	0.09	0.06	0.06	0.11	< 0.05	< 0.05	< 0.05
Silver [ug/g]	0.03	0.04	0.10	0.03	0.03	0.02	0.01
Aluminum [ug/g]	3500	3100	8500	4100	1300	550	1600
Arsenic [ug/g]	7.2	6.5	20	7.6	2.5	1.4	2.4
Barium [ug/g]	25	17	35	25	8.5	3.4	7.2
Beryllium [ug/g]	0.33	0.28	0.29	0.38	0.14	0.08	0.13
Boron [ug/g]	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Calcium [ug/g]	260	200	250	260	90	53	120
Cadmium [ug/g]	0.02	0.03	0.05	< 0.02	< 0.02	< 0.02	< 0.02
Cobalt [ug/g]	2.4	2.9	8.2	3.2	0.85	0.44	1.4
Chromium [ug/g]	23	21	62	26	8.4	4.0	11
Copper [ug/g]	11	10	27	11	5.1	3.8	5.4
Iron [ug/g]	160000	120000	74000	160000	69000	48000	61000
Potassium [ug/g]	45	56	470	57	30	16	30

<b>Analysis</b>	<b>8: SD1B</b>	<b>9: SD1C</b>	<b>10: SD1D</b>	<b>11: SD3A</b>	<b>12: SD3B</b>	<b>13: SD3C</b>	<b>14: SD3D</b>
Magnesium [ug/g]	73	78	590	81	28	21	250
Manganese [ug/g]	780	600	600	830	250	100	210
Molybdenum [ug/g]	0.6	0.5	1.0	0.7	0.3	0.1	0.2
Sodium [ug/g]	14	19	43	19	19	16	24
Nickel [ug/g]	5.9	7.1	20	7.6	2.4	1.1	3.0
Lead [ug/g]	7.0	6.0	28	7.6	2.3	1.1	1.8
Phosphorus (total) [ug/g]	370	270	260	410	130	71	120
Sulphur [ug/g]	20	33	140	27	7	< 3	10
Selenium [ug/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Antimony [ug/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Tin [ug/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Strontium [ug/g]	3.2	2.4	2.5	3.0	1.3	0.76	1.3
Thallium [ug/g]	0.06	0.05	0.10	0.06	0.02	< 0.02	< 0.02
Titanium [ug/g]	110	100	140	150	46	21	43
Uranium [ug/g]	1.0	0.76	1.3	1.2	0.34	0.16	0.36
Vanadium [ug/g]	14	14	34	16	5	< 3	6
Zinc [ug/g]	8.4	7.8	16	8.7	3.3	1.5	4.5

<b>Analysis</b>	<b>15: SD5A</b>	<b>16: SD1005A</b>	<b>17: SD5B</b>	<b>18: SD5C</b>	<b>19: SD5D</b>	<b>20: SD6A</b>	<b>21: SD6B</b>
Sample Date & Time	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A
% Moisture (wet wt) [%]	14.2	---	12.3	16.2	11.6	22.1	16.5
Paste pH	8.07	---	8.01	8.09	8.07	7.95	8.06
Conductivity [uS/cm]	46	---	46	44	54	51	58
Total Organic Carbon [%]	0.018	---	0.068	0.079	0.037	0.158	0.067
Total Inorganic Carbon [%]	0.009	---	0.014	0.017	0.011	0.020	0.015
Sulphur (total) [%]	< 0.005	---	0.005	0.005	< 0.005	0.006	< 0.005
Carbon (total) [%]	0.027	---	0.082	0.096	0.048	0.179	0.082
Total Kjeldahl Nitrogen [as N %]	< 0.01	---	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ammonia+Ammonium (N) [%]	< 0.01	---	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Mercury [ug/g]	< 0.05	< 0.05	0.09	0.12	0.06	0.15	0.08
Silver [ug/g]	0.03	0.04	0.04	0.04	0.04	0.05	0.03
Aluminum [ug/g]	1800	13	3500	4000	2400	7100	3200
Arsenic [ug/g]	3.7	< 0.5	7.9	8.9	5.1	11	7.0
Barium [ug/g]	17	19	26	32	17	45	23
Beryllium [ug/g]	0.18	< 0.02	0.39	0.44	0.26	0.55	0.35
Boron [ug/g]	< 1	< 1	< 1	< 1	< 1	1	< 1
Calcium [ug/g]	130	6.3	260	350	200	390	290
Cadmium [ug/g]	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.03	< 0.02
Cobalt [ug/g]	2.0	0.90	2.4	2.6	1.4	3.8	2.2

<b>Analysis</b>	<b>15: SD5A</b>	<b>16: SD1005A</b>	<b>17: SD5B</b>	<b>18: SD5C</b>	<b>19: SD5D</b>	<b>20: SD6A</b>	<b>21: SD6B</b>
Chromium [ug/g]	11	240	24	28	14	38	21
Copper [ug/g]	6.8	2.9	9.3	10	6.0	14	8.0
Iron [ug/g]	99000	2600	170000	220000	130000	260000	160000
Potassium [ug/g]	33	2.4	51	48	43	140	55
Magnesium [ug/g]	36	1.1	67	72	44	130	65
Manganese [ug/g]	400	32	820	950	480	1300	700
Molybdenum [ug/g]	0.3	1.8	0.7	0.8	0.4	1.0	0.6
Sodium [ug/g]	11	5.5	17	21	17	18	15
Nickel [ug/g]	4.8	4.3	6.1	6.8	3.9	9.9	5.5
Lead [ug/g]	3.4	0.2	7.0	8.9	4.8	11	6.6
Phosphorus (total) [ug/g]	170	< 3	360	450	270	610	360
Sulphur [ug/g]	4	< 3	13	22	32	53	33
Selenium [ug/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Antimony [ug/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Tin [ug/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5
Strontium [ug/g]	2.8	0.55	3.5	4.5	2.2	5.5	3.3
Thallium [ug/g]	0.03	0.03	0.08	0.08	0.04	0.10	0.06
Titanium [ug/g]	56	0.9	130	150	94	190	130
Uranium [ug/g]	0.57	0.027	1.2	1.3	0.76	1.9	1.0
Vanadium [ug/g]	7	< 3	13	15	9	23	13
Zinc [ug/g]	4.8	1.2	8.1	9.7	5.2	14	7.9

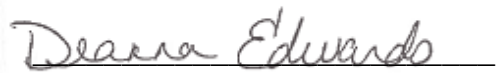
<b>Analysis</b>	<b>22: SD6C</b>	<b>23: SD7</b>	<b>24: SD8</b>	<b>25: SD1008</b>	<b>26: SD2008</b>	<b>27: SD8A</b>	<b>28: SD9A</b>
Sample Date & Time	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A
% Moisture (wet wt) [%]	14.8	13.2	10.2	---	6.3	10.4	12.7
Paste pH	8.10	8.49	8.16	---	8.18	7.36	8.19
Conductivity [uS/cm]	70	60	7	---	6	6	63
Total Organic Carbon [%]	0.083	0.015	0.016	---	0.006	0.016	0.065
Total Inorganic Carbon [%]	0.015	0.010	0.006	---	0.006	0.010	0.017
Sulphur (total) [%]	0.005	< 0.005	0.005	---	< 0.005	< 0.005	< 0.005
Carbon (total) [%]	0.098	0.025	0.022	---	0.011	0.026	0.082
Total Kjeldahl Nitrogen [as N %]	< 0.01	< 0.01	< 0.01	---	< 0.01	<0.01	< 0.01
Ammonia+Ammonium (N) [%]	< 0.01	< 0.01	< 0.01	---	< 0.01	< 0.01	< 0.01
Mercury [ug/g]	0.10	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.09
Silver [ug/g]	0.04	0.02	0.03	0.02	0.02	0.03	0.03
Aluminum [ug/g]	3900	5400	670	15	580	1800	3400
Arsenic [ug/g]	7.9	4.2	13	< 0.5	21	34	7.9
Barium [ug/g]	30	31	34	18	80	55	23
Beryllium [ug/g]	0.40	0.28	0.10	< 0.02	0.08	0.16	0.37

<b>Analysis</b>	<b>22: SD6C</b>	<b>23: SD7</b>	<b>24: SD8</b>	<b>25: SD1008</b>	<b>26: SD2008</b>	<b>27: SD8A</b>	<b>28: SD9A</b>
Boron [ug/g]	< 1	< 1	< 1	< 1	1	1	3
Calcium [ug/g]	320	430	54	8.9	42	100	400
Cadmium [ug/g]	0.04	< 0.02	< 0.02	< 0.02	0.03	< 0.02	0.02
Cobalt [ug/g]	2.6	4.0	1.9	0.83	2.0	4.0	2.1
Chromium [ug/g]	24	50	7.3	240	8.0	16	27
Copper [ug/g]	9.2	5.7	3.3	0.9	2.3	4.6	6.7
Iron [ug/g]	180000	110000	74000	3000	64000	74000	170000
Potassium [ug/g]	67	180	62	2.3	62	300	42
Magnesium [ug/g]	75	1300	79	1.2	76	330	59
Manganese [ug/g]	850	610	540	31	760	680	680
Molybdenum [ug/g]	0.8	0.5	0.1	1.6	0.2	0.3	0.7
Sodium [ug/g]	19	8.5	4.1	6.4	3.8	7.5	16
Nickel [ug/g]	6.8	9.9	3.8	4.2	4.8	8.2	5.4
Lead [ug/g]	7.8	4.8	1.6	0.2	1.8	2.8	6.3
Phosphorus (total) [ug/g]	430	200	69	< 3	59	98	370
Sulphur [ug/g]	41	32	18	19	21	28	43
Selenium [ug/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Antimony [ug/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Tin [ug/g]	0.6	0.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Strontium [ug/g]	3.8	3.0	0.83	0.43	0.54	0.92	4.3
Thallium [ug/g]	0.07	0.07	0.03	< 0.02	0.03	0.06	0.05
Titanium [ug/g]	140	130	46	0.9	43	120	140
Uranium [ug/g]	1.2	0.76	0.34	0.025	0.22	0.56	1.0
Vanadium [ug/g]	15	13	6	< 3	7	10	15
Zinc [ug/g]	9.2	6.1	3.4	1.1	3.1	6.1	7.4

<b>Analysis</b>	<b>29: SD1009A</b>	<b>30: SD9B</b>	<b>31: SD9C</b>	<b>32: MRC2</b>
Sample Date & Time	Date:N/A	Date:N/A	Date:N/A	Date:N/A
% Moisture (wet wt) [%]	---	14.4	10.8	---
Paste pH	---	7.92	7.53	---
Conductivity [uS/cm]	---	80	73	---
Total Organic Carbon [%]	---	0.068	0.080	---
Total Inorganic Carbon [%]	---	0.012	0.011	---
Sulphur (total) [%]	---	< 0.005	0.005	---
Carbon (total) [%]	---	0.080	0.091	---
Total Kjeldahl Nitrogen [as N %]	---	< 0.01	< 0.01	---
Ammonia+Ammonium (N) [%]	---	< 0.01	< 0.01	---
Mercury [ug/g]	< 0.05	0.06	0.06	0.09
Silver [ug/g]	0.02	0.02	0.04	0.33

Analysis	29: SD1009A	30: SD9B	31: SD9C	32: MRC2
Aluminum [ug/g]	15	2400	2300	11000
Arsenic [ug/g]	< 0.5	5.3	5.4	21
Barium [ug/g]	18	18	11	300
Beryllium [ug/g]	< 0.02	0.30	0.31	0.43
Boron [ug/g]	1	1	1	9
Calcium [ug/g]	8.2	300	240	16000
Cadmium [ug/g]	< 0.02	< 0.02	< 0.02	0.96
Cobalt [ug/g]	0.85	1.5	1.7	14
Chromium [ug/g]	250	17	16	26
Copper [ug/g]	0.6	4.5	4.6	32
Iron [ug/g]	3100	130000	130000	34000
Potassium [ug/g]	2.4	41	37	920
Magnesium [ug/g]	1.2	56	56	7500
Manganese [ug/g]	31	510	540	3800
Molybdenum [ug/g]	1.8	0.5	0.4	1.1
Sodium [ug/g]	6.3	11	6.1	250
Nickel [ug/g]	4.6	3.6	3.8	20
Lead [ug/g]	0.2	5.2	4.9	38
Phosphorus (total) [ug/g]	< 3	280	270	1400
Sulphur [ug/g]	19	37	40	2300
Selenium [ug/g]	< 0.7	< 0.7	< 0.7	1.3
Antimony [ug/g]	< 0.8	< 0.8	< 0.8	1.2
Tin [ug/g]	< 0.5	< 0.5	< 0.5	1.5
Strontium [ug/g]	0.58	2.7	2.4	29
Thallium [ug/g]	< 0.02	0.04	0.05	0.30
Titanium [ug/g]	0.8	92	79	340
Uranium [ug/g]	0.025	0.69	0.65	8.1
Vanadium [ug/g]	< 3	9	9	46
Zinc [ug/g]	1.3	5.5	5.5	140

NSS- Non sufficient sample to perform analysis

  
 Deanna Edwards, B.Sc, C.Chem  
 Project Specialist  
 Environmental Services, Analytical



## Quality Control Report

Inorganic Analysis												
Parameter	Reporting Limit	Unit	Method Blank	LCS / Spike Blank						Matrix Spike / Reference Material		
				RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)		
							Low	High		Low	High	
				%								
<i>Ammonia by SFA - QCBatchID: SKA0214-MAR17</i>												
Ammonia+Ammonium (N)	0.01	%	<0.01		0	10	101	90	110	99	75	125
<i>Ammonia by SFA - QCBatchID: SKA0221-MAR17</i>												
Ammonia+Ammonium (N)	0.01	%	<0.01		4	10	103	90	110	96	75	125
<i>Ammonia by SFA - QCBatchID: SKA0230-MAR17</i>												
Ammonia+Ammonium (N)	0.01	%	<0.01		0	10	97	90	110	96	75	125
<i>Carbon/Sulphur - QCBatchID: ECS0046-MAR17</i>												
Carbon (total)	0.005	%	<0.005		5	20				103	70	130
Sulphur (total)	0.005	%	<0.005		16	20				110	70	130
<i>Carbon/Sulphur - QCBatchID: ECS0048-MAR17</i>												
Total Inorganic Carbon	0.005	%	< 0.005		0.047	20				1.018	70	130
Total Organic Carbon	0.005	%	N/A		N/A	20				N/A	70	130
<i>Conductivity - QCBatchID: EWL0354-MAR17</i>												
Conductivity	2	uS/cm	< 2		ND	10	NA	90	110	NA		
<i>Conductivity - QCBatchID: EWL0356-MAR17</i>												
Conductivity	2	uS/cm	< 2		0	10				NA		
<i>Mercury by CVAAS - QCBatchID: EHG0030-MAR17</i>												
Mercury	0.05	ug/g	<0.05		0	20	96	80	120	103	70	130
<i>Metals in Soil - Aqua-regia/ICP-MS - QCBatchID: EMS0125-MAR17</i>												
Antimony	0.8	ug/g	<0.8		ND	20	100	70	130	103	70	130
Arsenic	0.5	ug/g	<0.5		2	20	102	70	130	103	70	130
Barium	0.01	ug/g	<0.01		2	20	100	70	130	102	70	130
Beryllium	0.02	ug/g	<0.02		4	20	97	70	130	97	70	130
Boron	1	ug/g	<1		ND	20	99	70	130	101	70	130
Cadmium	0.02	ug/g	<0.02		ND	20	98	70	130	100	70	130
Chromium	0.5	ug/g	<0.5		3	20	100	70	130	111	70	130
Cobalt	0.01	ug/g	<0.01		4	20	101	70	130	110	70	130
Copper	0.1	ug/g	<0.1		8	20	100	70	130	101	70	130
Lead	0.1	ug/g	<0.1		2	20	101	70	130	109	70	130
Manganese	0.1	ug/g	<0.1		4	20	102	70	130	111	70	130
Molybdenum	0.1	ug/g	<0.1		13	20	98	70	130	111	70	130
Nickel	0.1	ug/g	<0.1		7	20	102	70	130	108	70	130
Selenium	0.7	ug/g	<0.7		ND	20	100	70	130	88	70	130
Silver	0.01	ug/g	<0.01		ND	20	103	70	130	99	70	130
Strontium	0.02	ug/g	<0.02		4	20	99	70	130	104	70	130
Thallium	0.02	ug/g	<0.02		4	20	100	70	130	101	70	130



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.  
 Lakefield - Ontario - KOL 2H0  
 Phone: 705-652-2000 FAX: 705-652-6365

LR Report : CA15390-MAR17

Inorganic Analysis											
Parameter	Reporting Limit	Unit	Method Blank	RPD	Acceptance Criteria	Spike Recovery (%)	LCS / Spike Blank		Matrix Spike / Reference Material		
							Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							Low	High		Low	High
Tin	0.5	ug/g	<0.5	ND	20	98	70	130	104	70 130	
Titanium	0.1	ug/g	<0.1	1	20	92	70	130	88	70 130	
Uranium	0.002	ug/g	<0.002	4	20	101	70	130	NV	70 130	
Vanadium	3	ug/g	<3	1	20	100	70	130	106	70 130	
Zinc	0.7	ug/g	<0.7	3	20	103	70	130	92	70 130	
<i>Metals in Soil - ICP-OES - QCBatchID: ESG0094-MAR17</i>											
Aluminum	1	ug/g	<1	3	20	97	80	120	88	70 130	
Calcium	1	ug/g	<1	2	20	96	80	120	102	70 130	
Iron	0.3	ug/g	<0.3	1	20	96	80	120	111	70 130	
Magnesium	0.1	ug/g	<0.1	1	20	97	80	120	93	70 130	
Phosphorus (total)	3	ug/g	<3	1	20	96	80	120	100	70 130	
Potassium	0.3	ug/g	<0.3	4	20	98	80	120	102	70 130	
Sodium	1	ug/g	<1	1	20	95	80	120	99	70 130	
Sulphur	3	ug/g	<3	6	20	103	80	120	NV	70 130	

## TEST REPORT

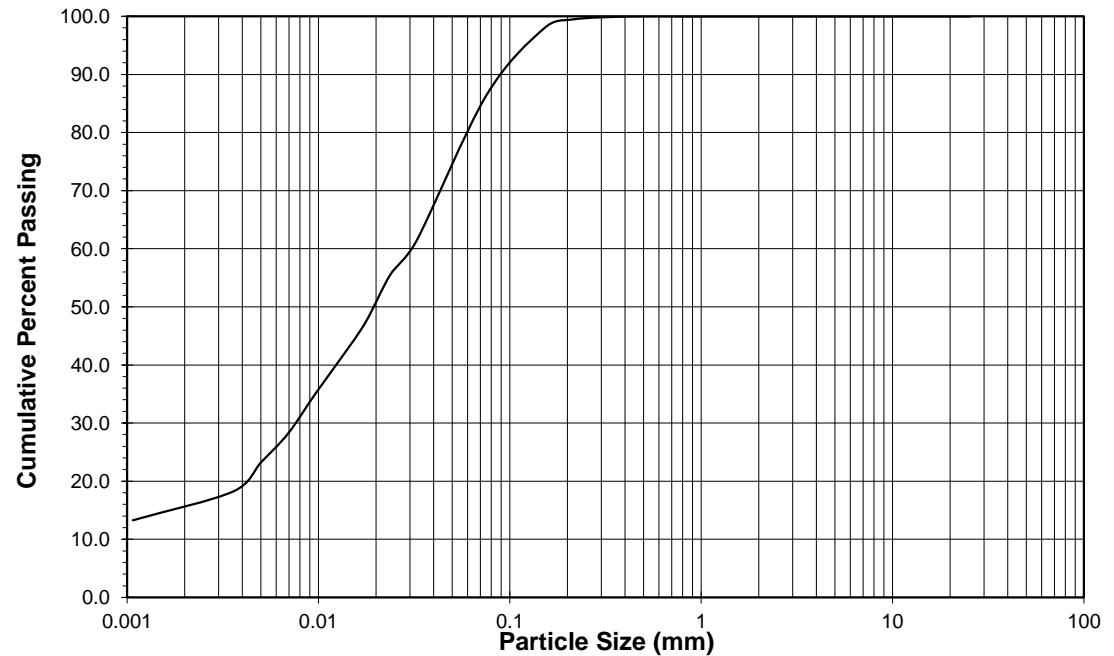
Particle Size Analysis by Hydrometer

Sample ID: SD1B  
 Date Completed: Apr. 21, 2017  
 Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.44

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	100.0
#65	0.212	99.5
#100	0.150	97.9
#200	0.075	86.4
-	0.032	61.4
-	0.024	55.6
-	0.018	47.3
-	0.013	40.7
-	0.010	34.9
-	0.007	28.2
-	0.005	23.2
-	0.004	18.3
-	0.001	13.3

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

Project Technician, Environmental Testing

B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

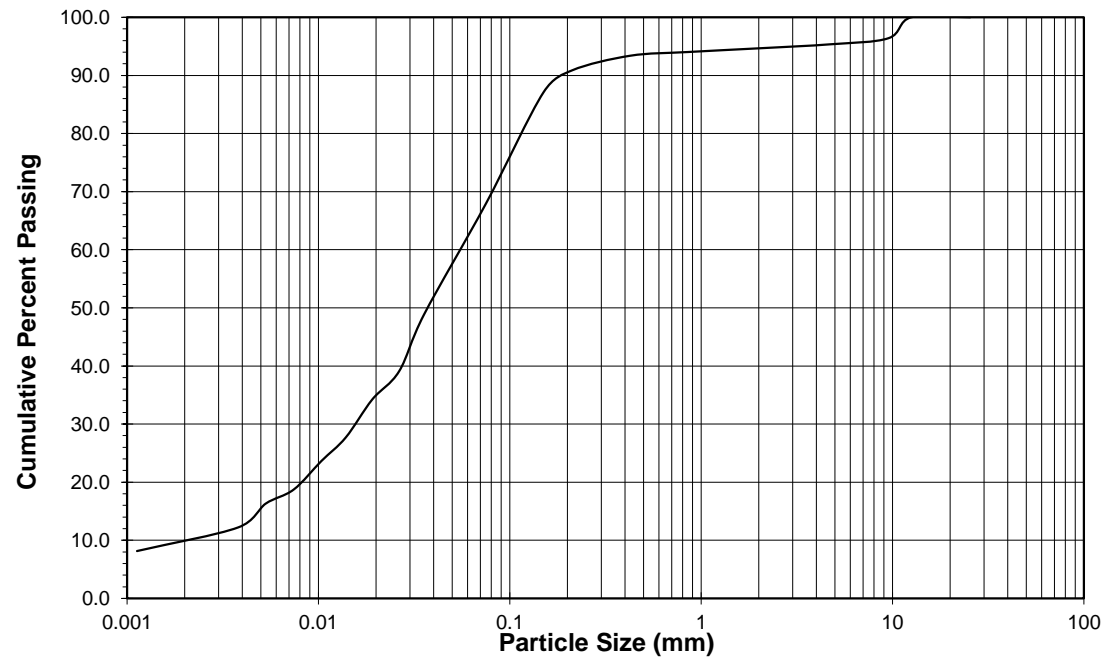
Particle Size Analysis by Hydrometer

Sample ID: SD1C  
Date Completed: Apr. 21, 2017  
Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.26

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	96.4
#4	4.750	95.4
#9	2.000	94.7
#20	0.850	94.0
#35	0.425	93.4
#65	0.212	90.9
#100	0.150	87.1
#200	0.075	67.9
-	0.036	48.9
-	0.026	39.1
-	0.019	34.2
-	0.014	27.7
-	0.010	23.6
-	0.007	18.7
-	0.005	16.3
-	0.004	12.2
-	0.001	8.1

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

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B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

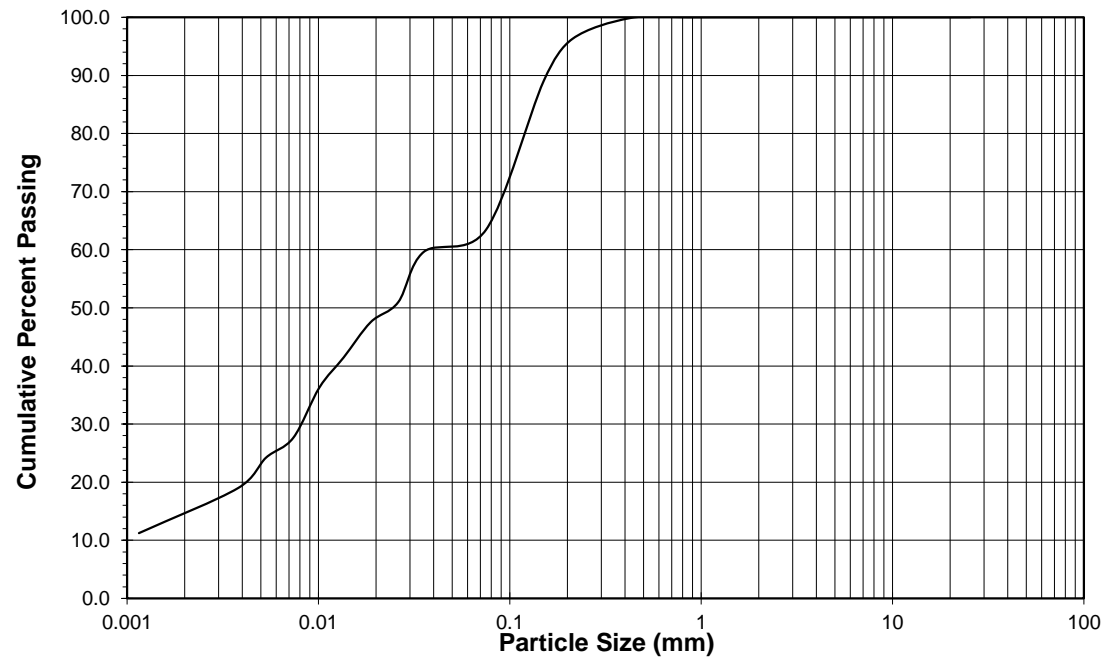
Particle Size Analysis by Hydrometer

Sample ID: SD3A  
 Date Completed: Apr. 21, 2017  
 Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.18

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	99.9
#65	0.212	96.3
#100	0.150	89.0
#200	0.075	63.4
-	0.035	59.6
-	0.026	51.0
-	0.019	47.5
-	0.014	41.5
-	0.010	36.3
-	0.007	27.7
-	0.005	24.2
-	0.004	19.0
-	0.001	11.2

Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

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B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

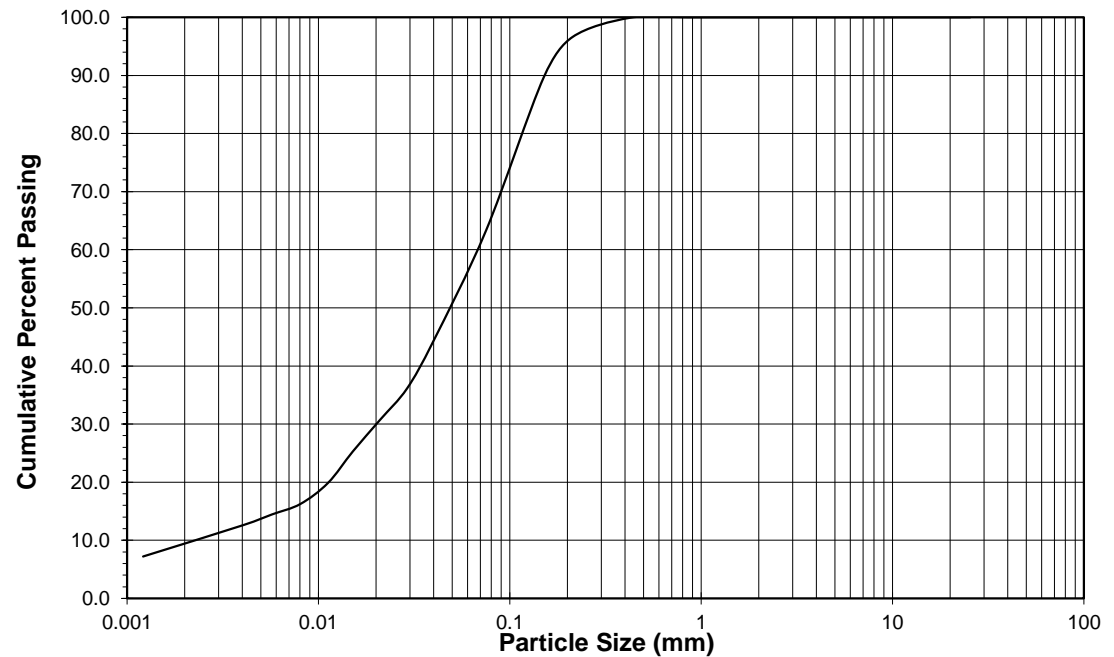
### Particle Size Analysis by Hydrometer

Sample ID: SD3B  
Date Completed: Apr. 21, 2017  
Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.03

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	99.9
#65	0.212	96.6
#100	0.150	89.7
#200	0.075	63.3
-	0.040	44.3
-	0.029	36.2
-	0.021	30.7
-	0.015	25.3
-	0.011	19.9
-	0.008	16.3
-	0.006	14.5
-	0.004	12.7
-	0.001	7.2

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated



D. French

Project Technician, Environmental Testing



B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

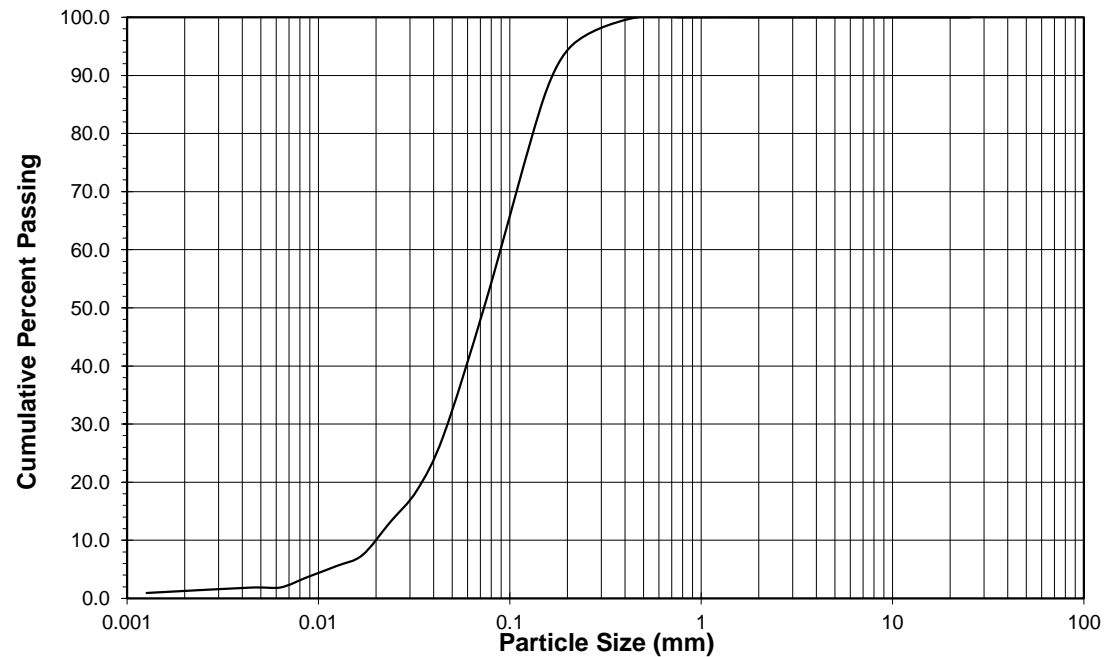
Particle Size Analysis by Hydrometer

Sample ID: SD3C  
Date Completed: Apr. 27, 2017  
Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 2.85

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	99.8
#65	0.212	95.3
#100	0.150	86.1
#200	0.075	51.3
-	0.045	28.0
-	0.033	18.6
-	0.024	13.0
-	0.017	7.5
-	0.012	5.6
-	0.009	3.7
-	0.006	1.9
-	0.004	1.9
-	0.001	0.9

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

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B. Bowman

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## TEST REPORT

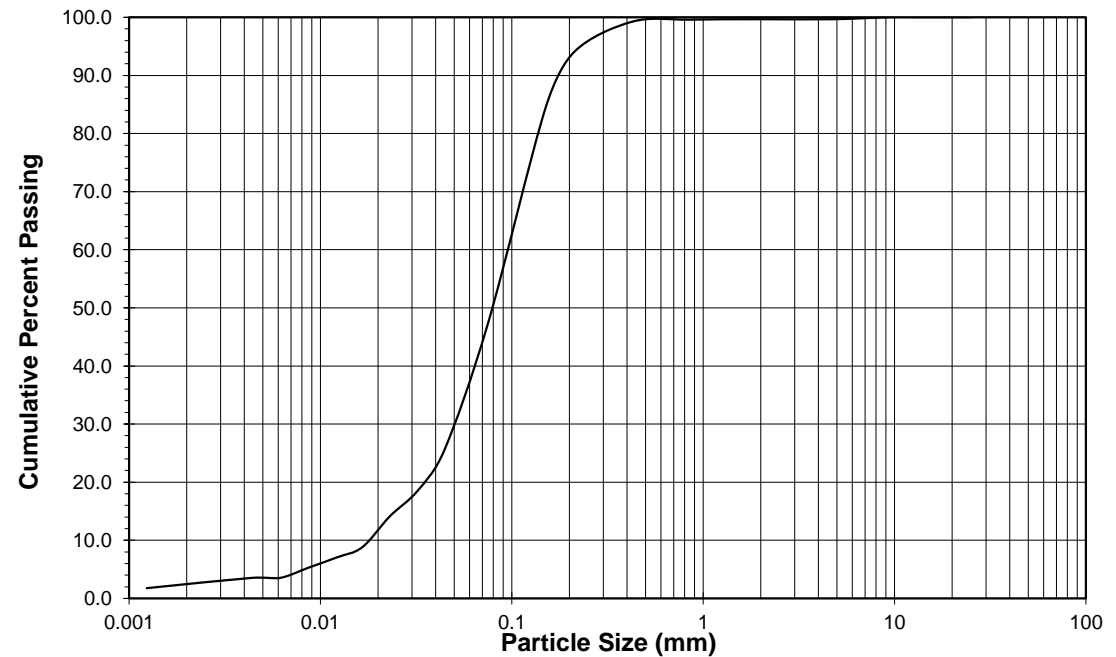
Particle Size Analysis by Hydrometer

Sample ID: SD3D  
Date Completed: Apr. 27, 2017  
Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 2.90

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	99.6
#9	2.000	99.6
#20	0.850	99.6
#35	0.425	99.2
#65	0.212	94.1
#100	0.150	84.4
#200	0.075	47.3
-	0.044	25.6
-	0.032	18.5
-	0.023	14.1
-	0.017	8.8
-	0.012	7.1
-	0.009	5.3
-	0.006	3.5
-	0.004	3.5
-	0.001	1.8

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

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B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

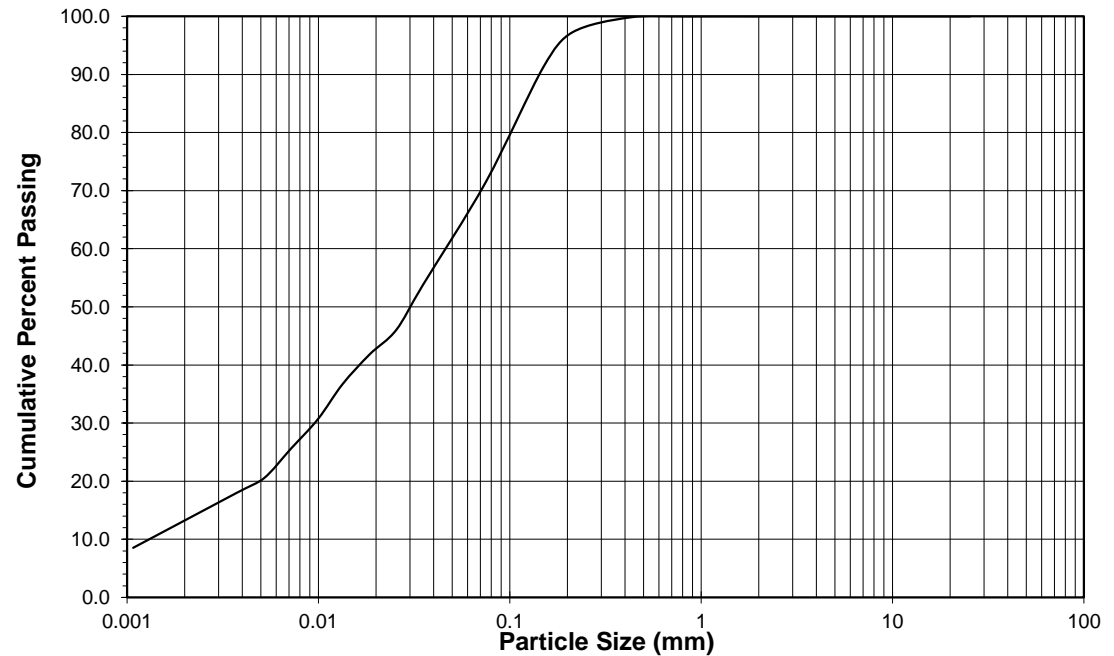
Particle Size Analysis by Hydrometer

Sample ID: SD5B  
Date Completed: Apr. 27, 2017  
Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.35

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	99.8
#65	0.212	97.3
#100	0.150	91.4
#200	0.075	71.6
-	0.035	53.7
-	0.026	46.0
-	0.018	41.8
-	0.013	36.7
-	0.010	30.7
-	0.007	25.6
-	0.005	20.5
-	0.004	17.9
-	0.001	8.5

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

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B. Bowman

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## TEST REPORT

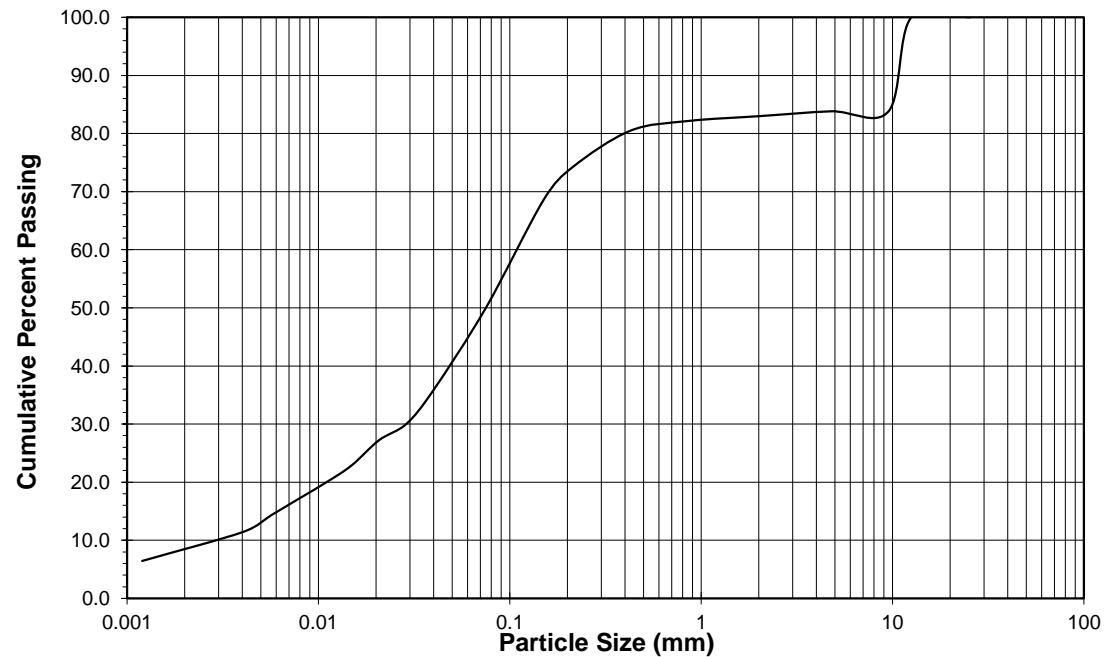
### Particle Size Analysis by Hydrometer

Sample ID: SD1D  
 Date Completed: Apr. 28, 2017  
 Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.00

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	83.8
#4	4.750	83.8
#9	2.000	83.0
#20	0.850	82.1
#35	0.425	80.5
#65	0.212	74.2
#100	0.150	68.6
#200	0.075	50.1
-	0.040	35.8
-	0.029	30.1
-	0.021	27.2
-	0.015	22.9
-	0.011	20.0
-	0.008	17.2
-	0.006	14.3
-	0.004	11.5
-	0.001	6.4

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

Project Technician, Environmental Testing

B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

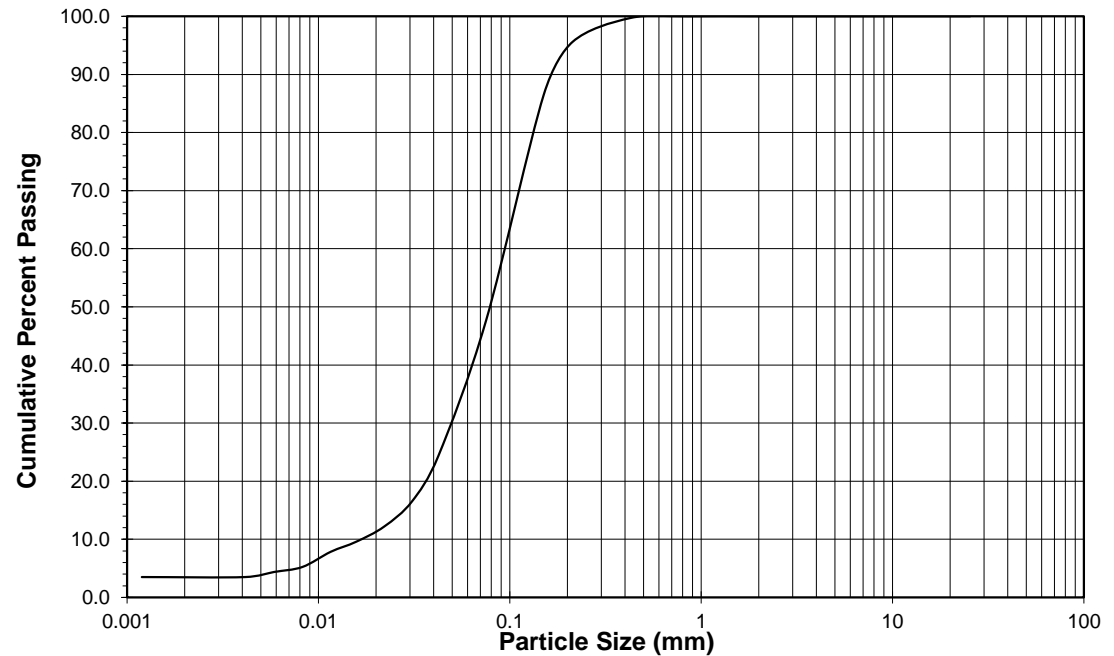
### Particle Size Analysis by Hydrometer

Sample ID: SD5A  
Date Completed: Apr. 28, 2017  
Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.04

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	99.7
#65	0.212	95.6
#100	0.150	86.5
#200	0.075	47.6
-	0.042	24.3
-	0.031	16.5
-	0.022	12.2
-	0.016	9.6
-	0.012	7.8
-	0.008	5.2
-	0.006	4.3
-	0.004	3.5
-	0.001	3.5

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

Project Technician, Environmental Testing

B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

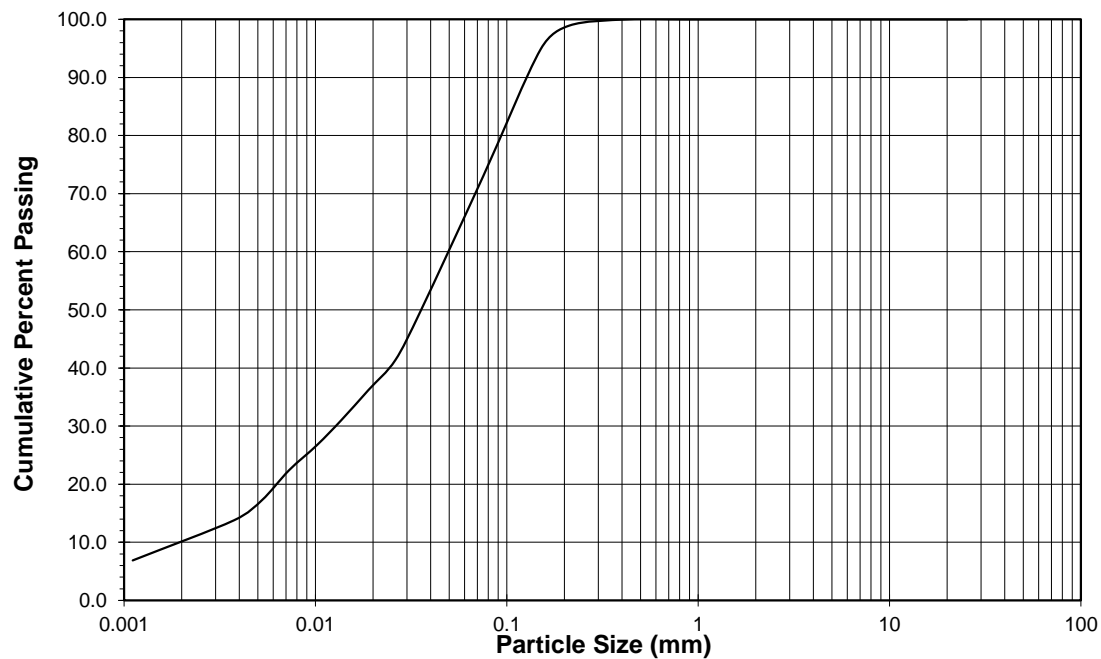
Particle Size Analysis by Hydrometer

**Sample ID:** SD5C  
**Date Completed:** Apr. 28, 2017  
**Reference:** ASTM D 422, SOP 7-18-6

**Specific Gravity:** 3.28

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	100.0
#65	0.212	98.9
#100	0.150	94.9
#200	0.075	73.0
-	0.036	50.0
-	0.026	41.4
-	0.019	36.2
-	0.014	31.0
-	0.010	26.7
-	0.007	22.4
-	0.005	17.2
-	0.004	13.8
-	0.001	6.9

### Particle Size Distribution



*Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated*

D. French

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## TEST REPORT

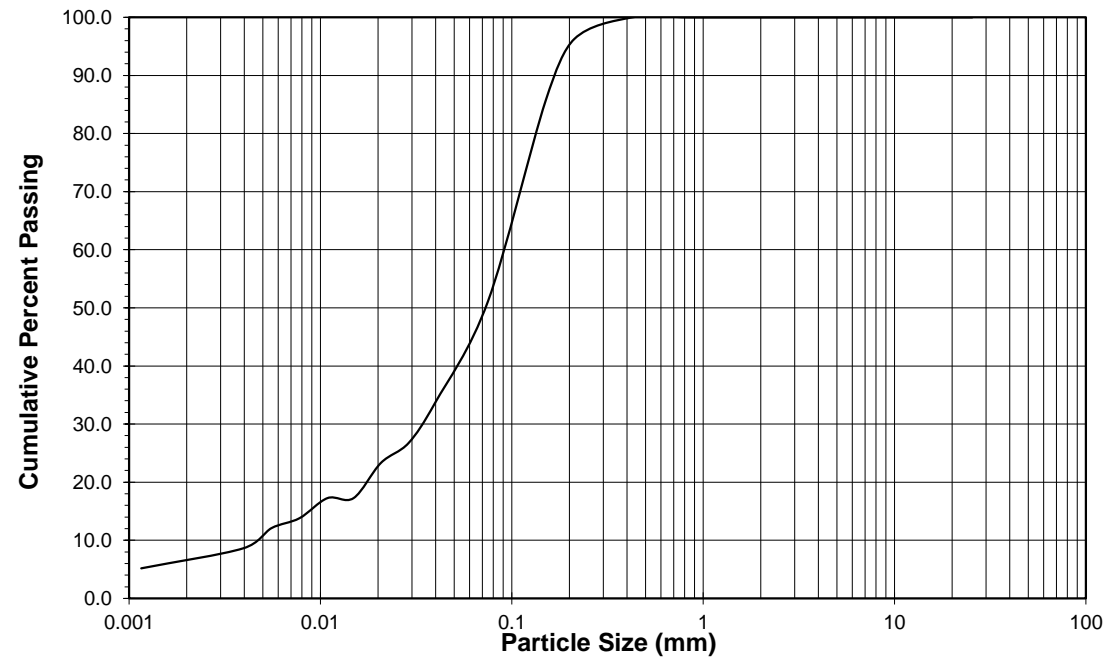
Particle Size Analysis by Hydrometer

Sample ID: SD5D  
Date Completed: Apr. 28, 2017  
Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.13

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	100.0
#65	0.212	96.3
#100	0.150	85.7
#200	0.075	51.1
-	0.040	33.7
-	0.029	26.8
-	0.021	23.3
-	0.015	17.3
-	0.011	17.3
-	0.008	13.8
-	0.006	12.1
-	0.004	8.6
-	0.001	5.2

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

Project Technician, Environmental Testing

B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

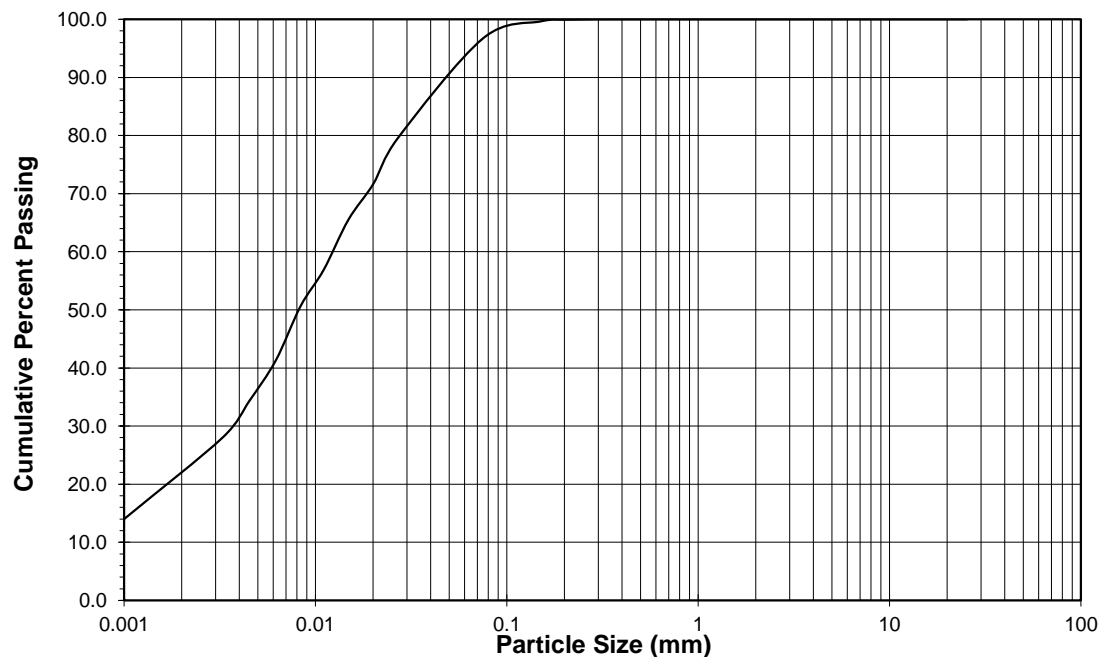
Particle Size Analysis by Hydrometer

Sample ID: SD6A  
Date Completed: Apr. 28, 2017  
Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.60

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	100.0
#65	0.212	99.9
#100	0.150	99.6
#200	0.075	96.7
-	0.027	79.5
-	0.020	71.7
-	0.015	65.5
-	0.011	56.9
-	0.008	50.7
-	0.006	41.3
-	0.005	34.3
-	0.003	28.1
-	0.001	14.0

**Particle Size Distribution**



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

Project Technician, Environmental Testing

B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

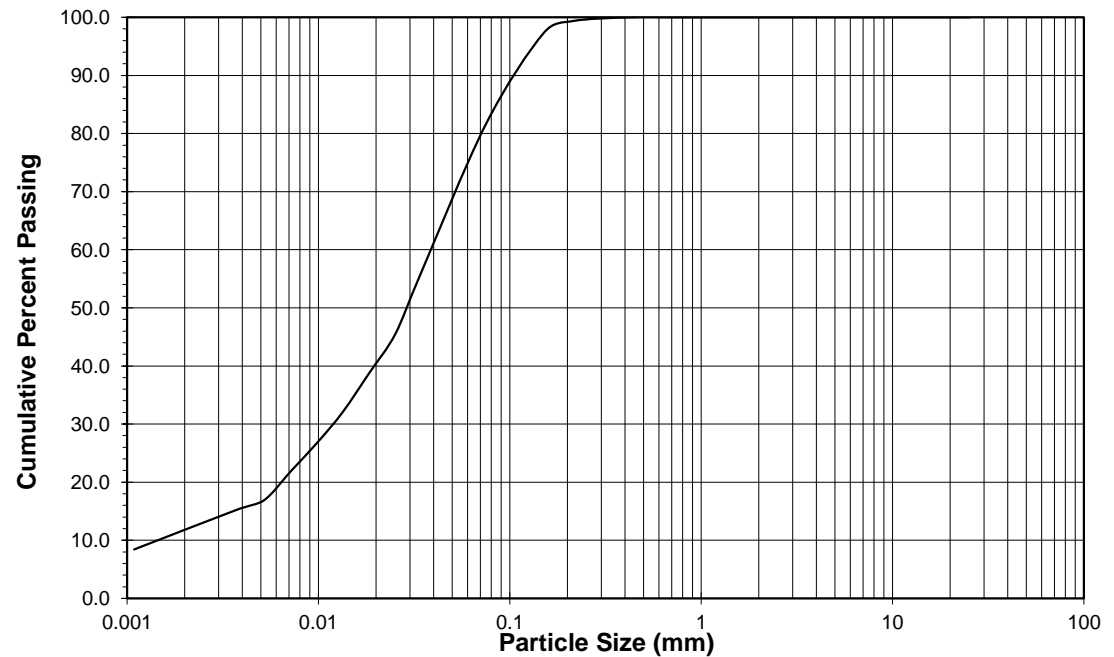
### Particle Size Analysis by Hydrometer

Sample ID: SD6B  
 Date Completed: Apr. 28, 2017  
 Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.31

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	100.0
#65	0.212	99.3
#100	0.150	97.3
#200	0.075	81.7
-	0.034	55.7
-	0.025	45.6
-	0.018	38.8
-	0.013	32.1
-	0.010	27.0
-	0.007	21.9
-	0.005	16.9
-	0.004	15.2
-	0.001	8.4

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

Project Technician, Environmental Testing

B. Bowman

Environmental Metallurgist, Environmental Testing

### TEST REPORT

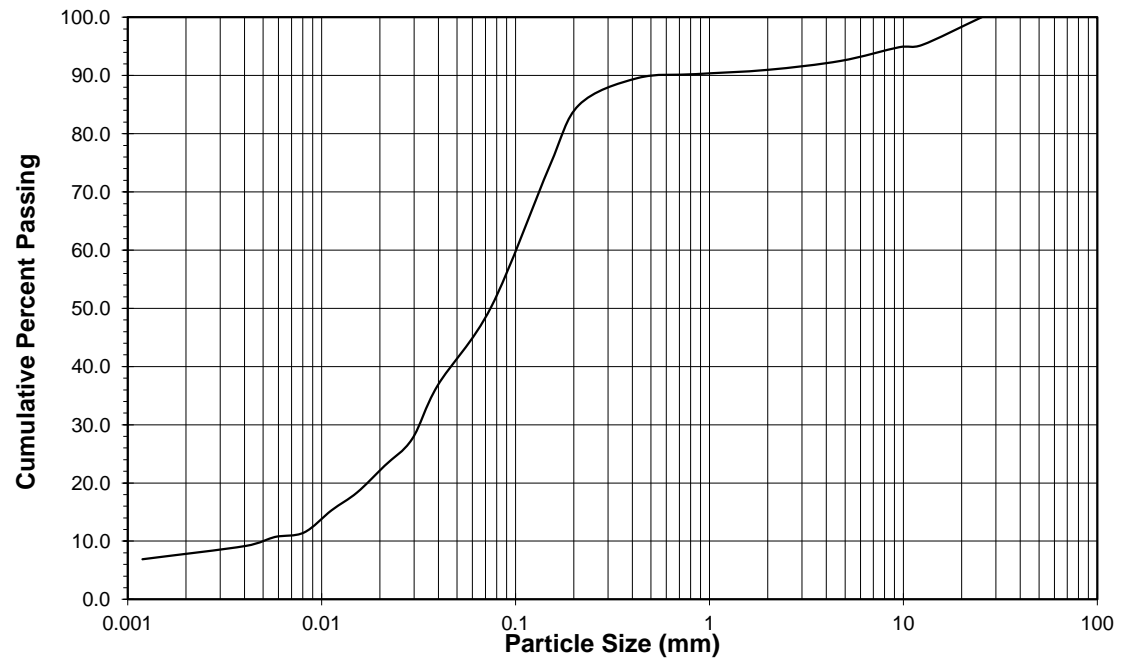
Particle Size Analysis by Hydrometer

Sample ID: SD1  
 Date Completed: 17-Feb-17  
 Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.12

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	95.2
3/8"	9.500	94.8
#4	4.750	92.5
#9	2.000	91.0
#20	0.850	90.2
#35	0.425	89.5
#65	0.212	84.9
#100	0.150	74.4
#200	0.075	50.2
-	0.040	36.7
-	0.029	27.5
-	0.021	22.9
-	0.015	18.4
-	0.011	15.3
-	0.008	11.5
-	0.006	10.7
-	0.004	9.2
-	0.001	6.9

Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

R. Caldwell  
 Manager, Environmental Testing

B. Bowman  
 Senior Technologist, Environmental Testing

### TEST REPORT

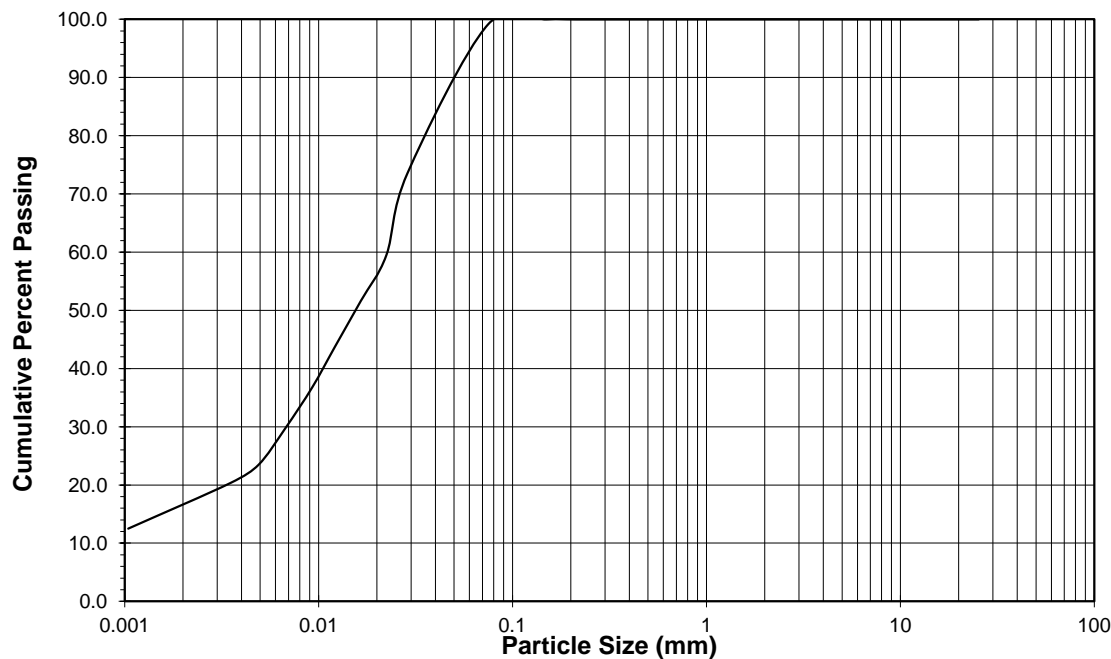
#### Particle Size Analysis by Hydrometer

**Sample ID:** SD2  
**Date Completed:** 17-Feb-17  
**Reference:** ASTM D 422, SOP 7-18-6

**Specific Gravity:** 3.59

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	100.0
#65	0.212	100.0
#100	0.150	100.0
#200	0.075	99.2
-	0.029	73.6
-	0.022	59.5
-	0.017	51.7
-	0.012	43.8
-	0.009	36.8
-	0.007	29.7
-	0.005	23.5
-	0.004	20.3
-	0.001	12.5

**Particle Size Distribution**



*Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated*



**R. Caldwell**  
 Manager, Environmental Testing



**B. Bowman**  
 Senior Technologist, Environmental Testing

### TEST REPORT

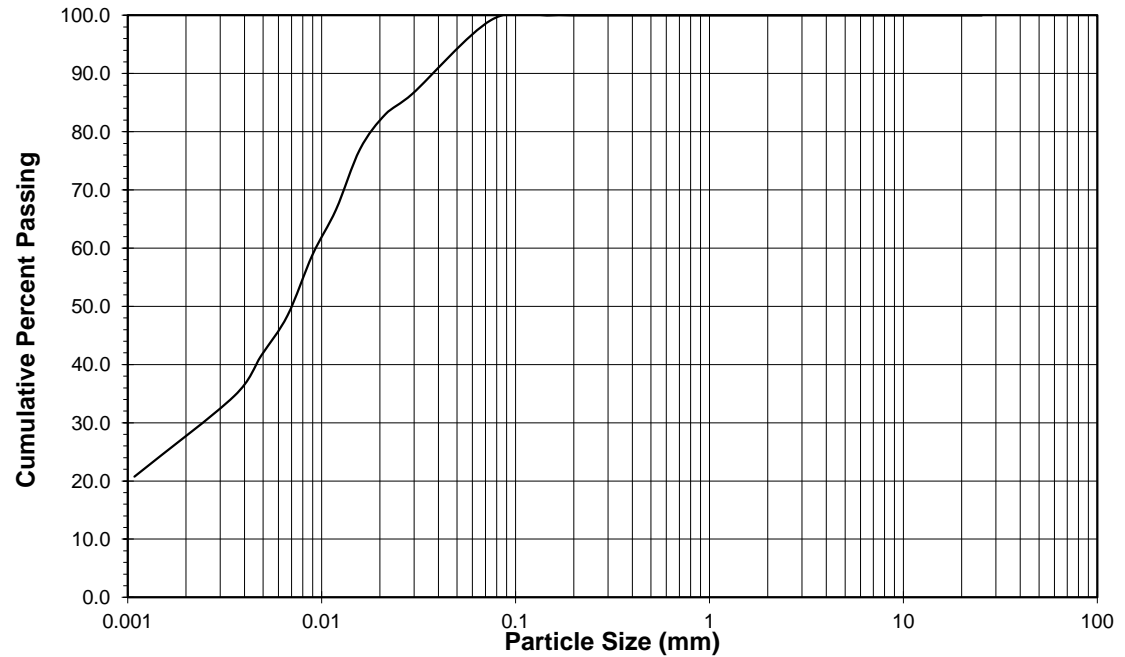
Particle Size Analysis by Hydrometer

Sample ID: SD3  
 Date Completed: 17-Feb-17  
 Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.35

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	100.0
#65	0.212	100.0
#100	0.150	100.0
#200	0.075	99.2
-	0.029	86.5
-	0.021	83.1
-	0.016	77.0
-	0.012	66.6
-	0.009	58.8
-	0.007	48.5
-	0.005	41.5
-	0.004	34.6
-	0.001	20.8

Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated



R. Caldwell  
 Manager, Environmental Testing



B. Bowman  
 Senior Technologist, Environmental Testing

### TEST REPORT

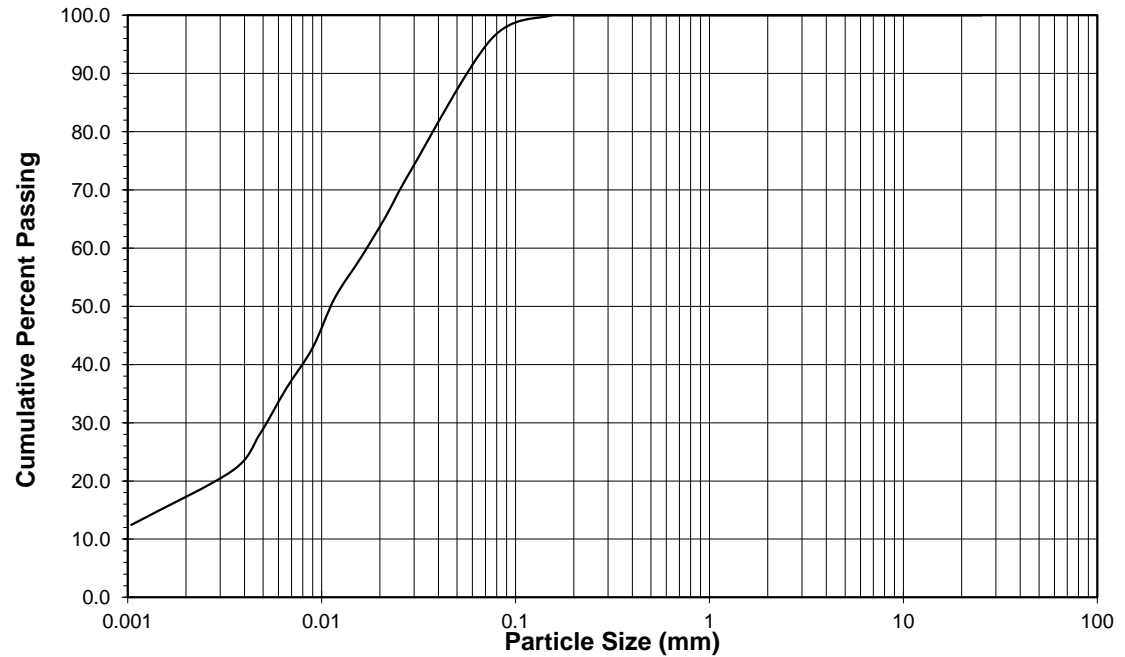
#### Particle Size Analysis by Hydrometer

**Sample ID:** SD4  
**Date Completed:** 17-Feb-17  
**Reference:** ASTM D 422, SOP 7-18-6

**Specific Gravity:** 3.57

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	100.0
#65	0.212	100.0
#100	0.150	99.9
#200	0.075	95.9
-	0.029	73.2
-	0.021	65.4
-	0.016	58.4
-	0.012	51.4
-	0.009	42.9
-	0.007	35.8
-	0.005	28.0
-	0.003	21.8
-	0.001	12.5

**Particle Size Distribution**



*Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated*



**R. Caldwell**  
 Manager, Environmental Testing



**B. Bowman**  
 Senior Technologist, Environmental Testing

### TEST REPORT

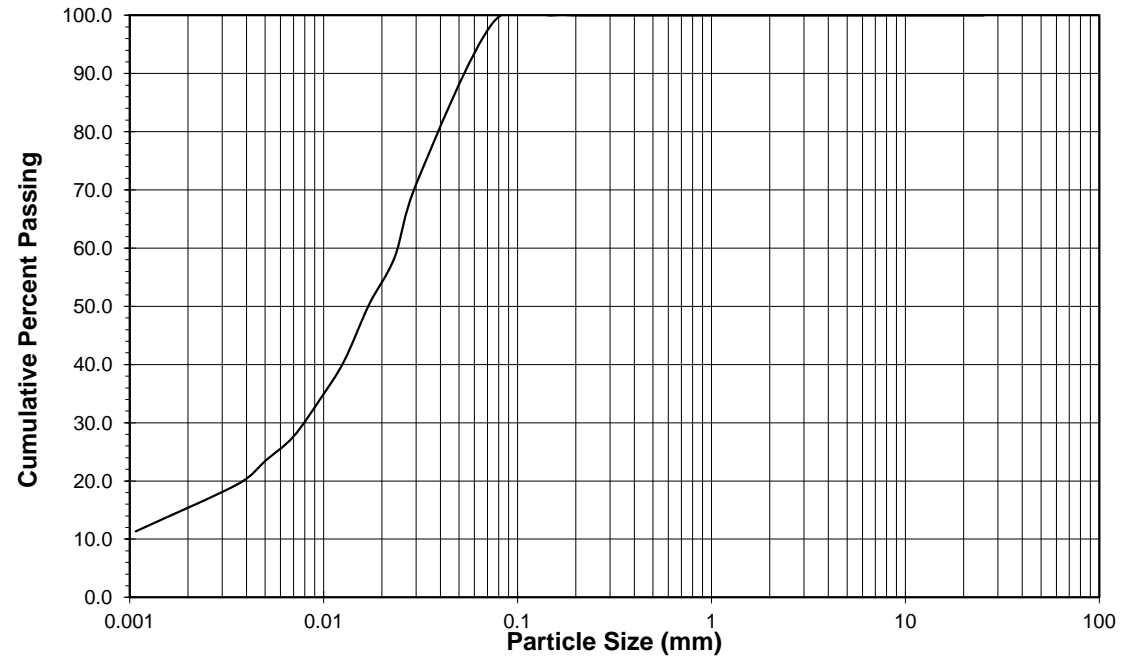
#### Particle Size Analysis by Hydrometer

**Sample ID:** SD2002  
**Date Completed:** 17-Feb-17  
**Reference:** ASTM D 422, SOP 7-18-6

**Specific Gravity:** 3.50

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	100.0
#65	0.212	100.0
#100	0.150	100.0
#200	0.075	98.8
-	0.030	71.5
-	0.023	58.5
-	0.017	50.4
-	0.013	40.6
-	0.010	34.1
-	0.007	27.6
-	0.005	23.6
-	0.004	19.5
-	0.001	11.4

**Particle Size Distribution**



*Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated*



**R. Caldwell**  
 Manager, Environmental Testing



**B. Bowman**  
 Senior Technologist, Environmental Testing

## TEST REPORT

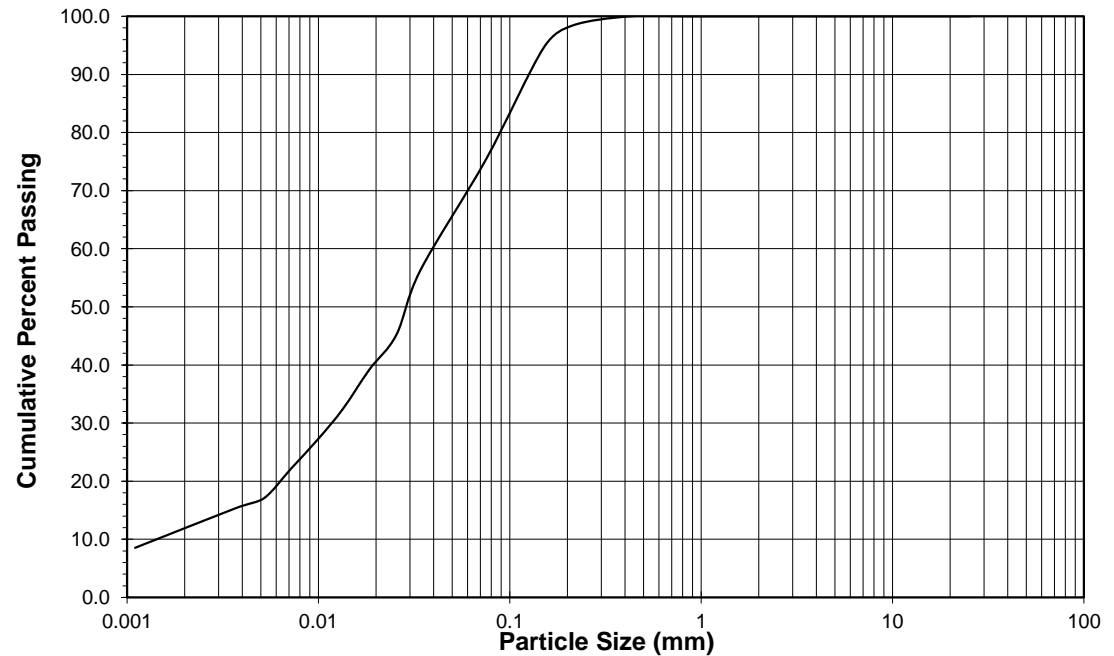
Particle Size Analysis by Hydrometer

Sample ID: SD6C  
Date Completed: 04-May-17  
Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.32

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	100.0
#9	2.000	100.0
#20	0.850	100.0
#35	0.425	100.0
#65	0.212	98.4
#100	0.150	94.6
#200	0.075	75.4
-	0.034	56.3
-	0.025	45.2
-	0.018	39.2
-	0.013	32.4
-	0.010	27.3
-	0.007	22.2
-	0.005	17.0
-	0.004	15.3
-	0.001	8.5

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

Project Technician, Environmental Testing

B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

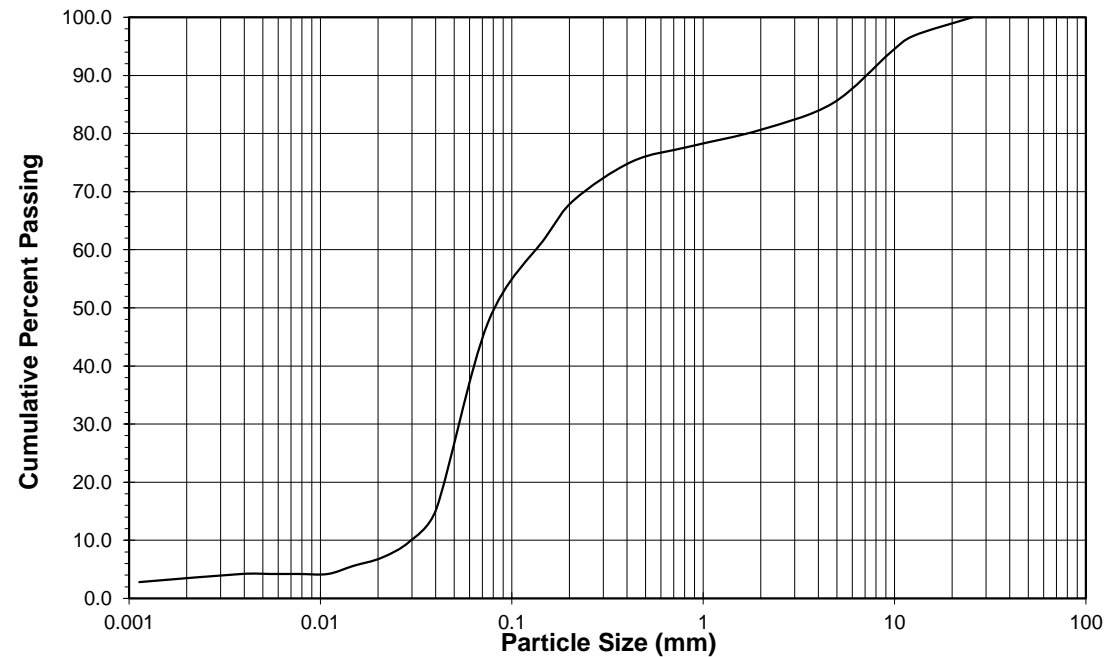
Particle Size Analysis by Hydrometer

Sample ID: SD7  
Date Completed: 04-May-17  
Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.28

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	96.8
3/8"	9.500	94.0
#4	4.750	85.2
#9	2.000	80.7
#20	0.850	77.8
#35	0.425	75.2
#65	0.212	68.6
#100	0.150	62.1
#200	0.075	47.5
-	0.040	15.4
-	0.029	9.8
-	0.021	7.0
-	0.015	5.6
-	0.011	4.2
-	0.008	4.2
-	0.005	4.2
-	0.004	4.2
-	0.001	2.8

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

Project Technician, Environmental Testing

B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

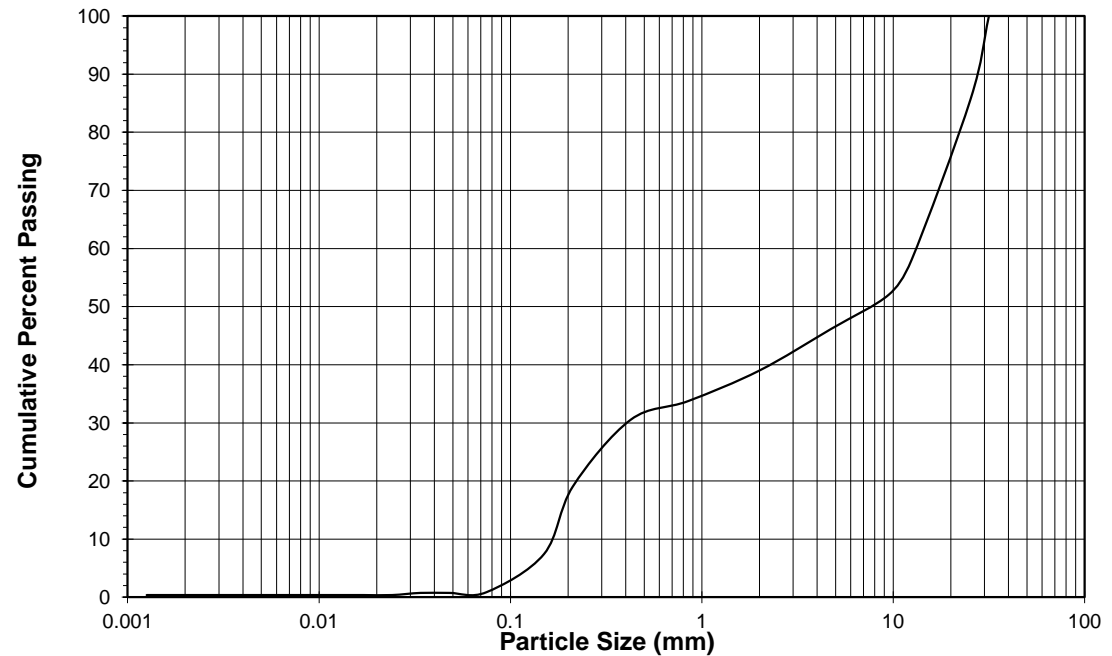
Particle Size Analysis by Hydrometer

Sample ID: SD8  
Date Completed: 05-May-17  
Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 2.89

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1 1/4"	31.650	100
1"	25.400	85.7
1/2"	12.500	58.1
3/8"	9.500	52.1
#4	4.750	46.2
#9	2.000	39.0
#20	0.850	33.7
#35	0.425	30.5
#65	0.212	19.0
#100	0.150	7.4
#200	0.075	0.9
-	0.048	0.7
-	0.034	0.7
-	0.024	0.4
-	0.017	0.4
-	0.012	0.4
-	0.009	0.4
-	0.006	0.4
-	0.004	0.4
-	0.001	0.4

Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

Project Technician, Environmental Testing

B. Bowman

Environmental Metallurgist, Environmental Testing

### TEST REPORT

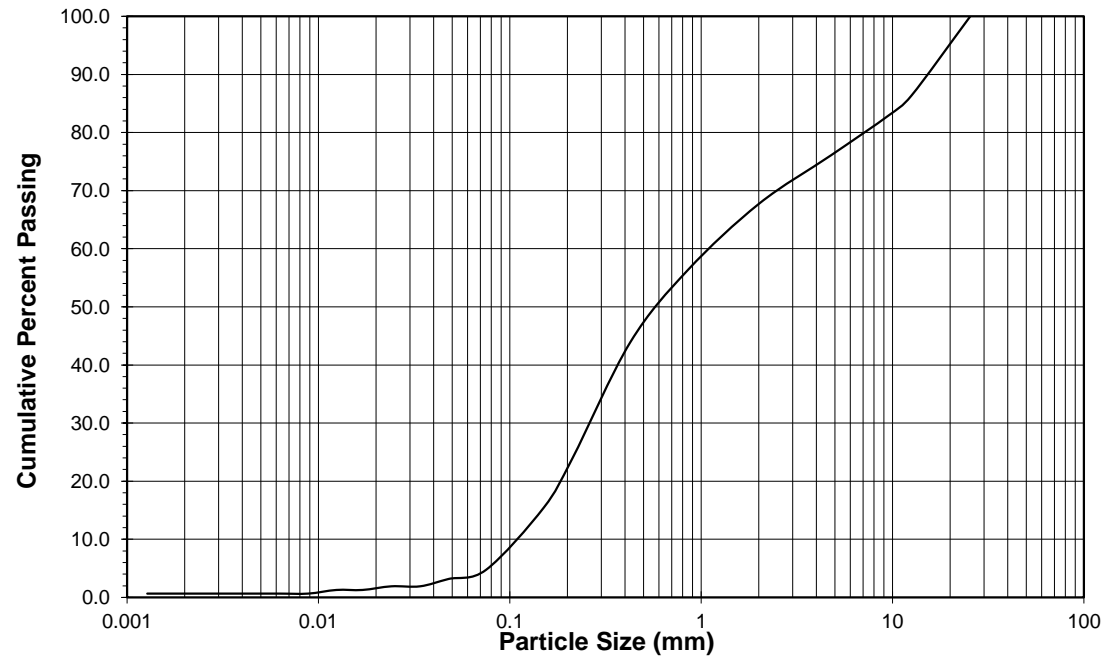
#### Particle Size Analysis by Hydrometer

Sample ID: SD8A  
 Date Completed: 05-May-17  
 Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 2.90

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	86.3
3/8"	9.500	82.9
#4	4.750	76.1
#9	2.000	67.7
#20	0.850	56.3
#35	0.425	43.9
#65	0.212	23.9
#100	0.150	15.4
#200	0.075	4.7
-	0.048	3.1
-	0.034	1.9
-	0.024	1.9
-	0.017	1.3
-	0.012	1.3
-	0.009	0.6
-	0.006	0.6
-	0.004	0.6
-	0.001	0.6

**Particle Size Distribution**



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

Project Technician, Environmental Testing

B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

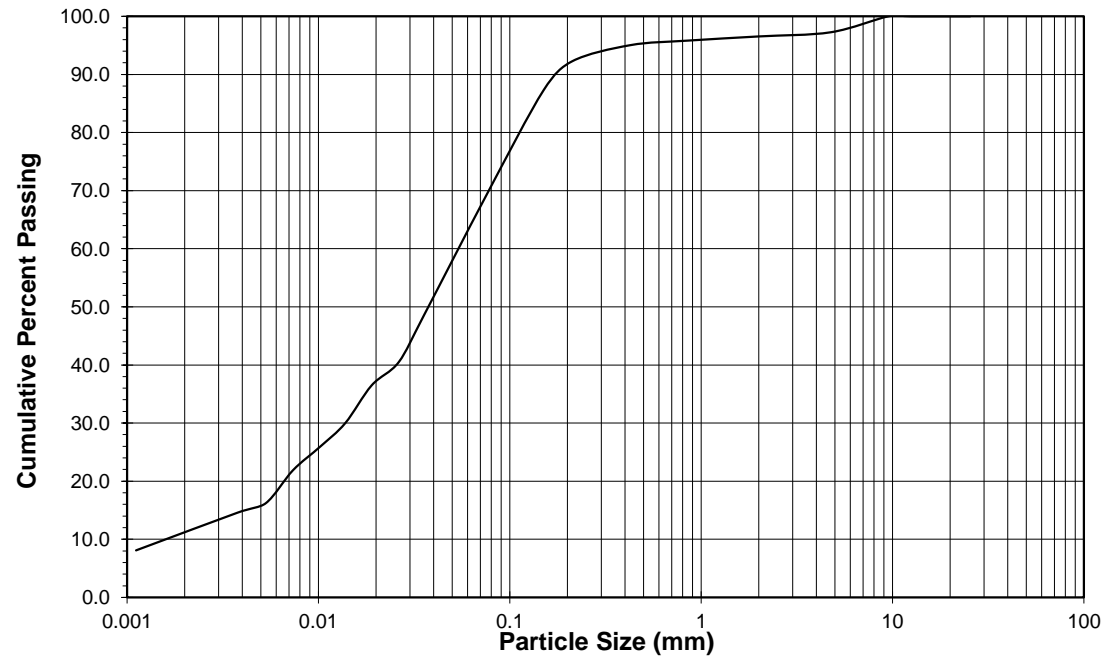
### Particle Size Analysis by Hydrometer

Sample ID: SD9A  
 Date Completed: 05-May-17  
 Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.28

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	100.0
#4	4.750	97.3
#9	2.000	96.5
#20	0.850	95.8
#35	0.425	95.0
#65	0.212	92.3
#100	0.150	87.3
#200	0.075	69.1
-	0.036	48.7
-	0.026	40.5
-	0.019	36.5
-	0.014	30.0
-	0.010	26.0
-	0.007	21.9
-	0.005	16.2
-	0.004	14.6
-	0.001	8.1

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

Project Technician, Environmental Testing

B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

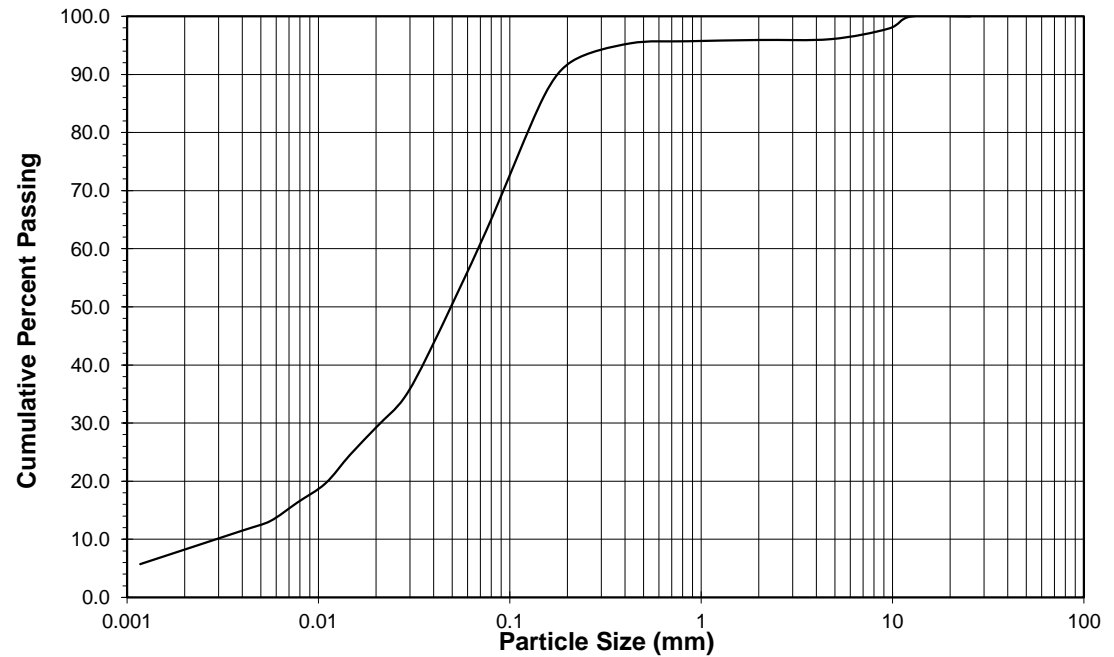
### Particle Size Analysis by Hydrometer

Sample ID: SD9B  
 Date Completed: 05-May-17  
 Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.13

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	100.0
3/8"	9.500	97.9
#4	4.750	96.1
#9	2.000	95.9
#20	0.850	95.7
#35	0.425	95.4
#65	0.212	92.3
#100	0.150	86.2
#200	0.075	63.0
-	0.038	42.5
-	0.028	34.3
-	0.020	29.4
-	0.015	24.5
-	0.011	19.6
-	0.008	16.4
-	0.006	13.1
-	0.004	11.4
-	0.001	5.7

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

Project Technician, Environmental Testing

B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

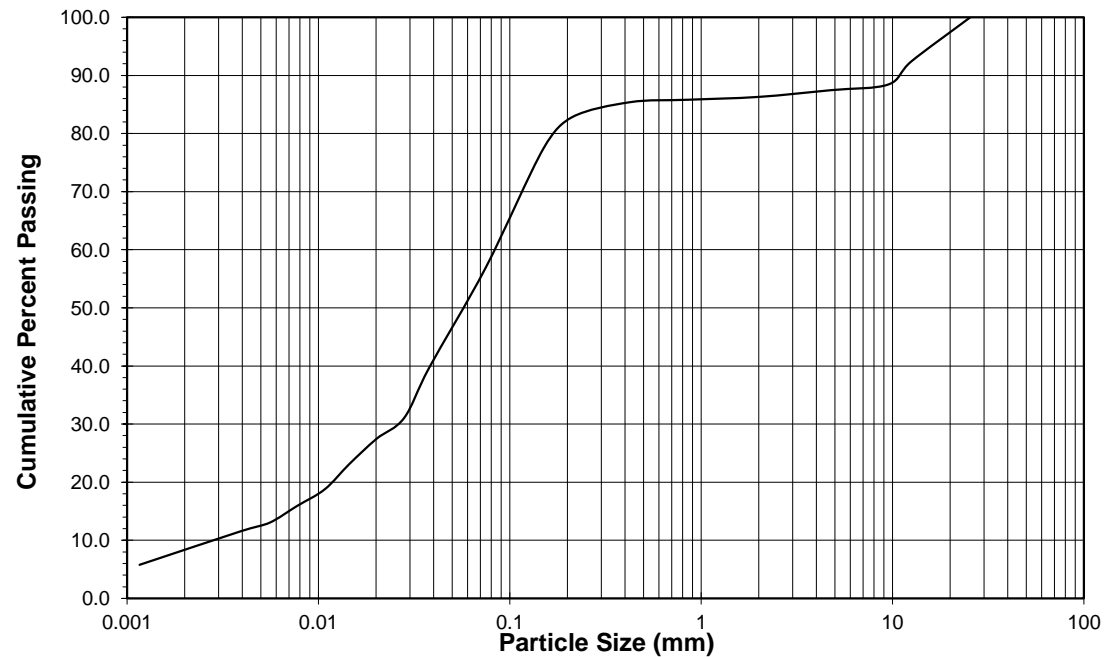
### Particle Size Analysis by Hydrometer

Sample ID: SD9C  
 Date Completed: 05-May-17  
 Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 3.13

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	92.4
3/8"	9.500	88.4
#4	4.750	87.5
#9	2.000	86.3
#20	0.850	85.8
#35	0.425	85.4
#65	0.212	82.8
#100	0.150	77.5
#200	0.075	57.0
-	0.038	39.7
-	0.028	31.1
-	0.020	27.4
-	0.014	23.1
-	0.011	18.8
-	0.008	15.9
-	0.006	13.0
-	0.004	11.6
-	0.001	5.8

### Particle Size Distribution



Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

Project Technician, Environmental Testing

B. Bowman

Environmental Metallurgist, Environmental Testing

## TEST REPORT

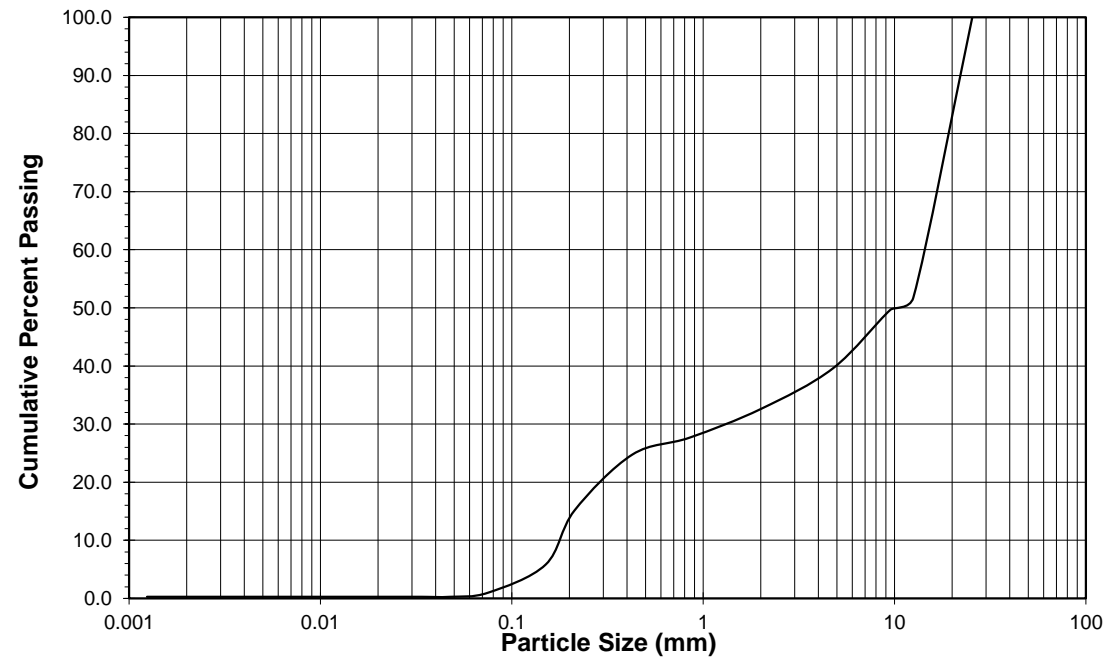
### Particle Size Analysis by Hydrometer

Sample ID: SD2008  
 Date Completed: 05-May-17  
 Reference: ASTM D 422, SOP 7-18-6

Specific Gravity: 2.91

Sieve Size (Tyler)	Particle Size (mm)	Weight Passing %
1"	25.400	100.0
1/2"	12.500	51.8
3/8"	9.500	49.7
#4	4.750	39.6
#9	2.000	32.6
#20	0.850	27.7
#35	0.425	24.8
#65	0.212	15.1
#100	0.150	5.8
#200	0.075	1.0
-	0.048	0.3
-	0.034	0.3
-	0.024	0.3
-	0.017	0.3
-	0.012	0.3
-	0.009	0.3
-	0.006	0.3
-	0.004	0.3
-	0.001	0.3

### Particle Size Distribution



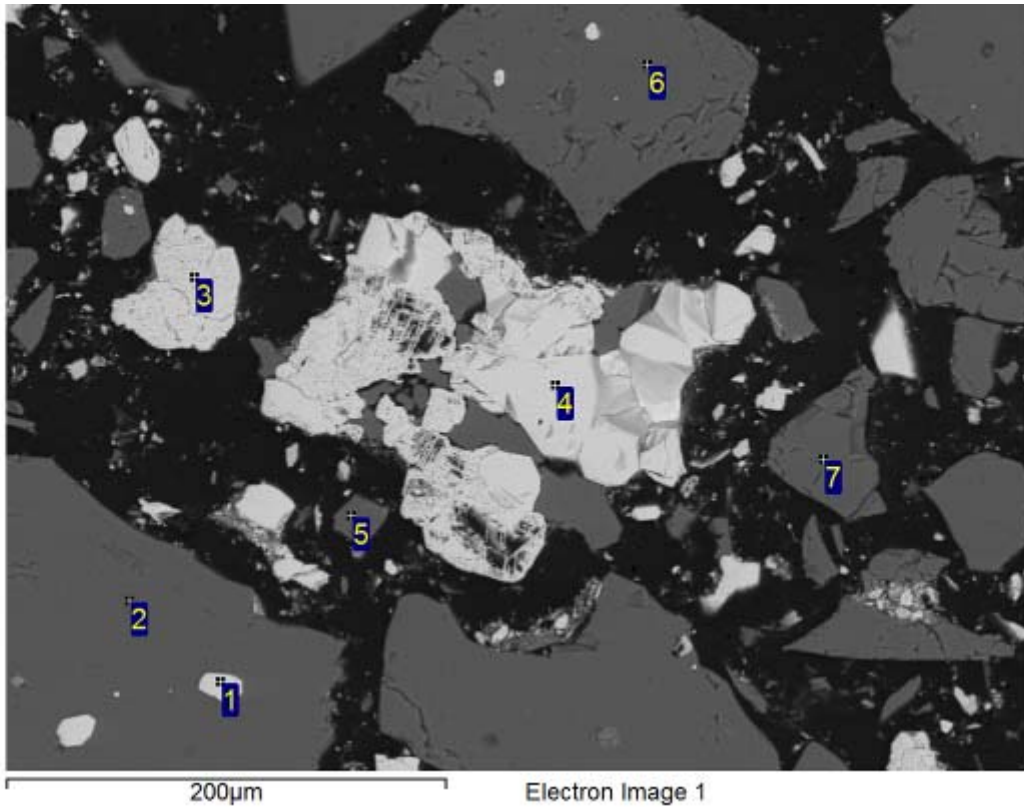
Note: Correction factors for SG's less than 2.45 and greater than 2.85 are calculated

D. French

Project Technician, Environmental Testing

B. Bowman

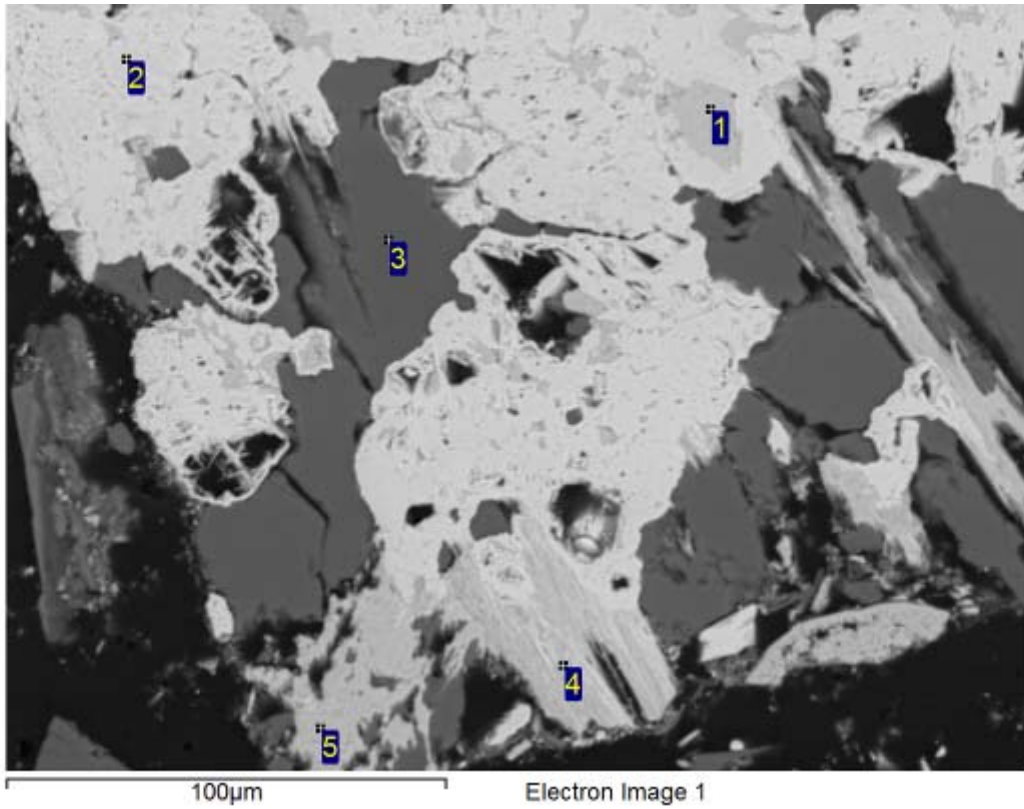
Environmental Metallurgist, Environmental Testing



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	36.5		63.5	100.0	Fe Oxide
2	56.6	43.2	0.2	100.0	Quartz
3	34.6		65.4	100.0	Fe Oxide
4	35.7		64.3	100.0	Fe Oxide
5	56.9	42.7	0.4	100.0	Quartz
6	56.3	43.4	0.2	100.0	Quartz
7	56.0	43.4	0.6	100.0	Quartz

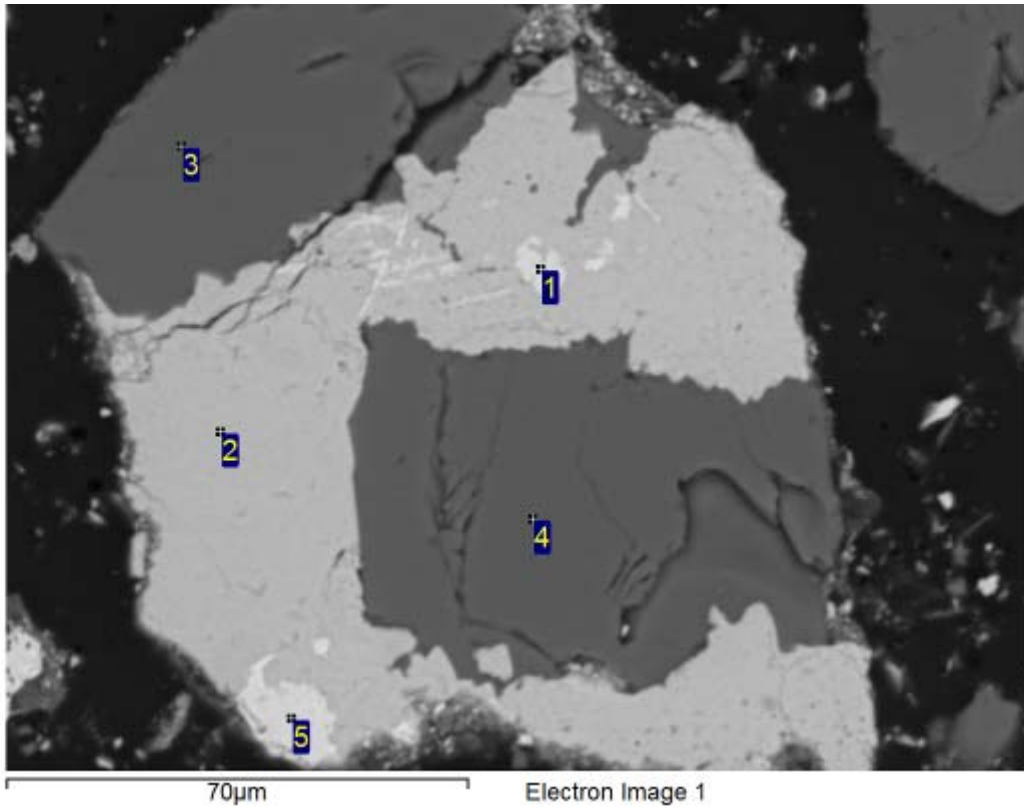
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	43.2	0.4	56.4	100.0	Fe Oxide
2	38.6	0.9	60.5	100.0	Fe Oxide
3	56.0	43.5	0.5	100.0	Quartz
4	34.6	0.6	64.8	100.0	Fe Oxide
5	43.9	0.4	55.7	100.0	Fe Oxide

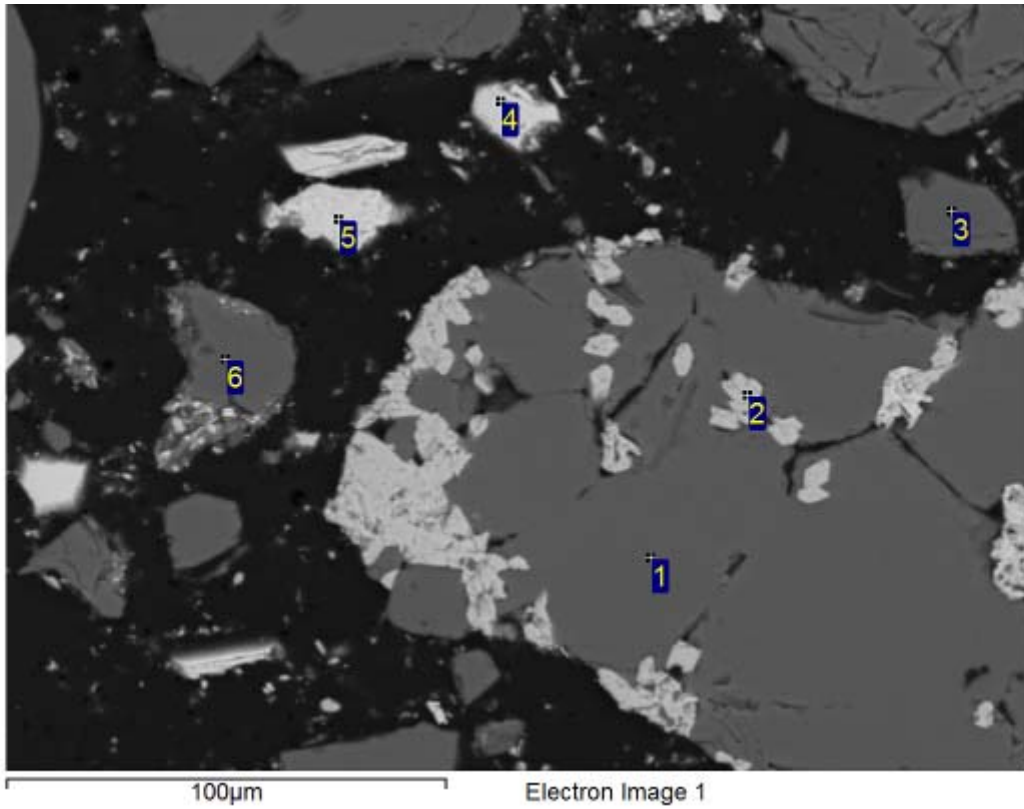
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	35.9	0.3	63.7	100.0	Fe Oxide
2	44.4	0.4	55.2	100.0	Fe Oxide
3	56.7	42.9	0.3	100.0	Quartz
4	56.0	43.4	0.5	100.0	Quartz
5	34.7	1.1	64.2	100.0	Fe Oxide

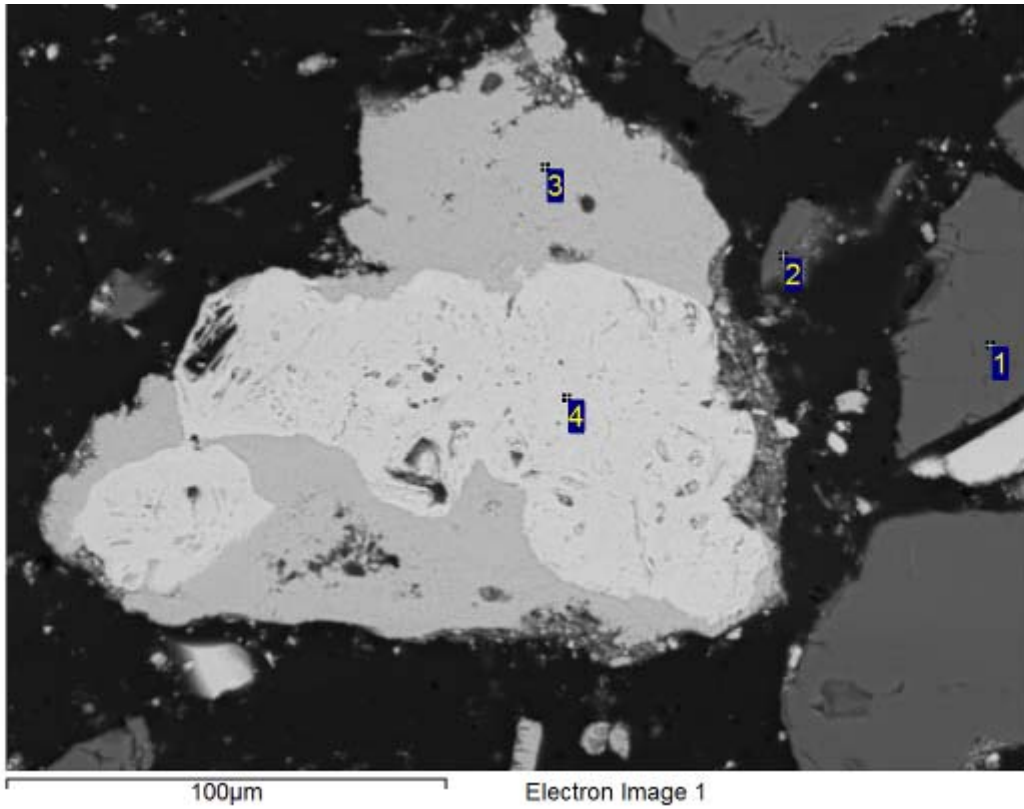
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	56.5	43.1	0.4	100.0	Quartz
2	44.8	1.0	54.2	100.0	Fe Oxide
3	56.4	43.3	0.3	100.0	Quartz
4	35.6		64.4	100.0	Fe Oxide
5	36.1	0.3	63.6	100.0	Fe Oxide
6	57.2	42.4	0.3	100.0	Quartz

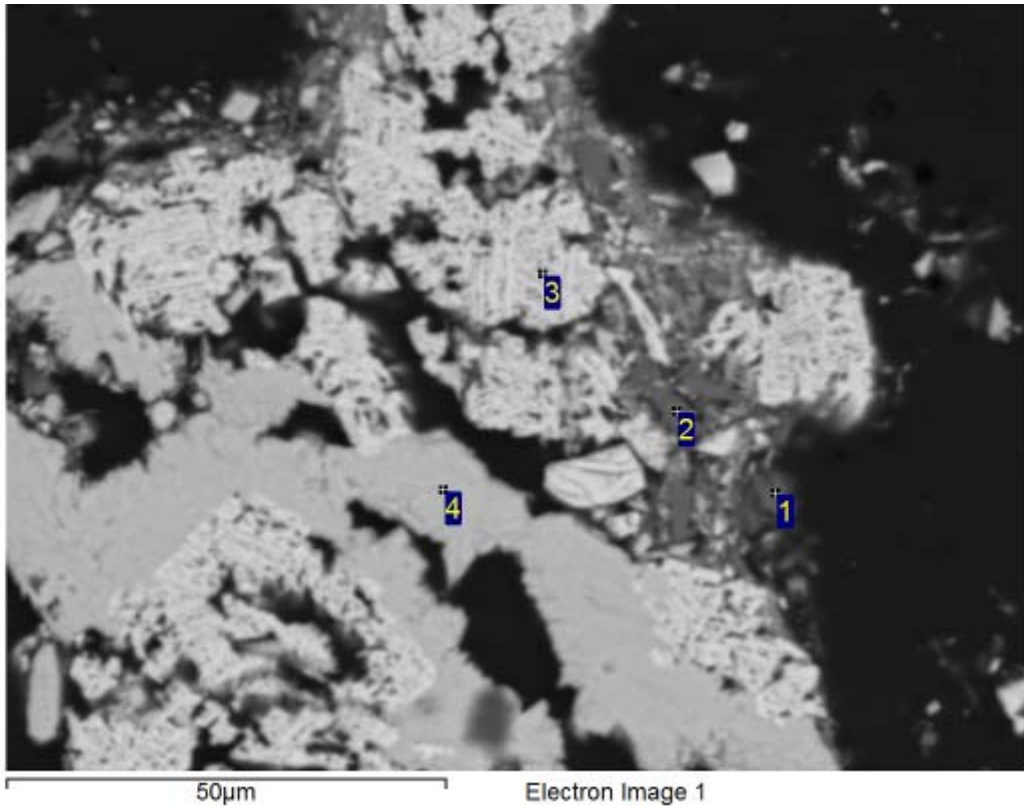
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	56.1		43.5	0.4	100.0	Quartz
2	54.4		44.5	1.1	100.0	Quartz
3	44.1	0.2	0.7	55.0	100.0	Fe Oxide
4	36.5			63.5	100.0	Fe Oxide

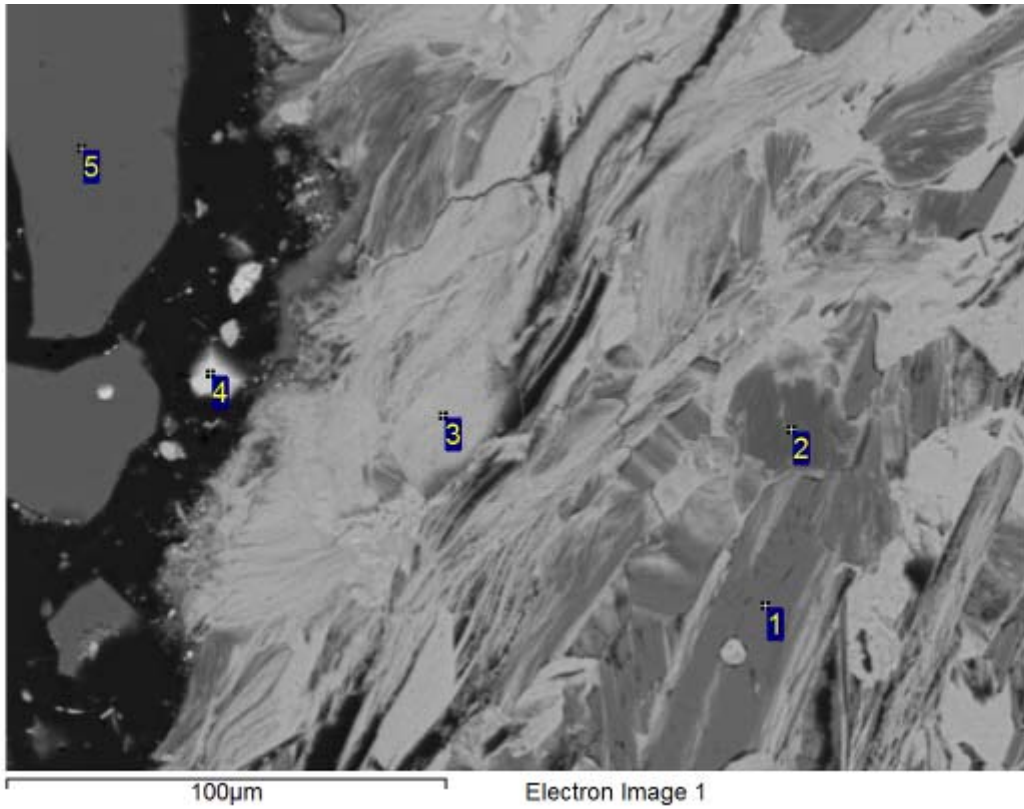
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Cl	K	Fe	Total	Mineral ID
1	57.0	3.4	31.8	0.4	0.5	7.0	100.0	Mica
2	55.6	0.5	36.8			7.1	100.0	Quartz
3	34.5		0.2			65.3	100.0	Fe Oxide
4	43.3		1.0			55.7	100.0	Fe Oxide

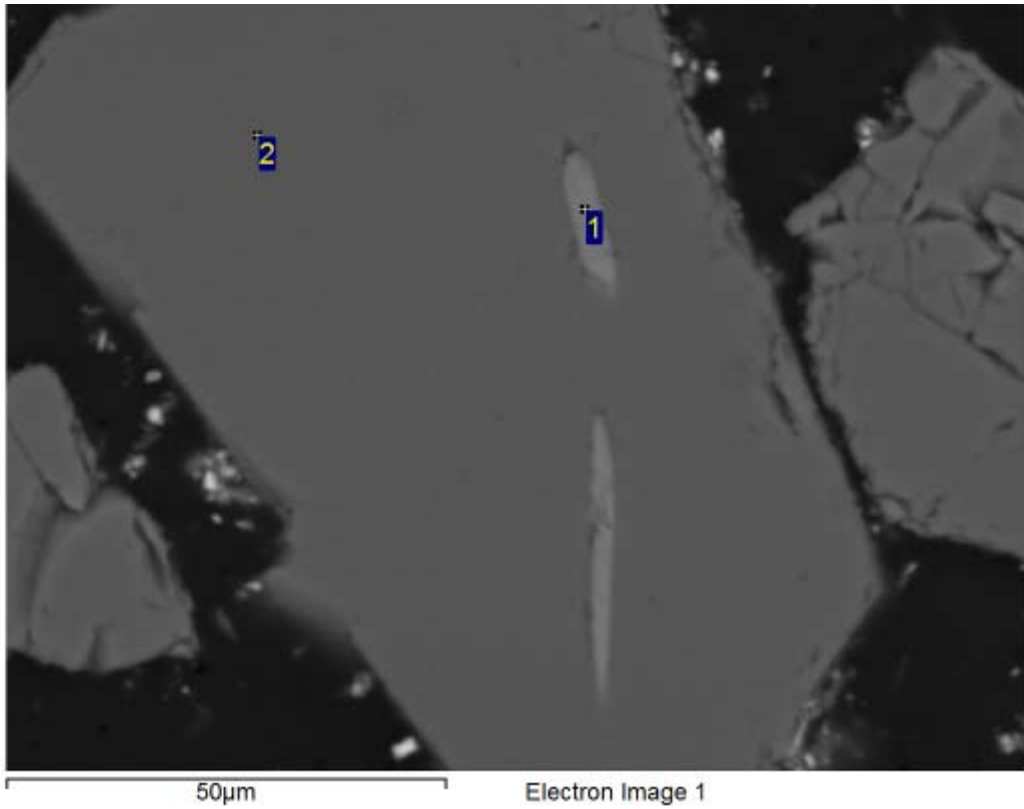
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Fe	Total	Mineral ID
1	52.3	0.5	0.8	15.2	20.8		7.8	0.3	2.4	100.0	Mica
2	59.3			17.0	18.9		0.3		4.5	100.0	Mica
3	45.0			3.1	0.5	1.1			50.3	100.0	Fe Oxide
4	36.2								63.8	100.0	Fe Oxide
5	56.1				43.6				0.3	100.0	Quartz

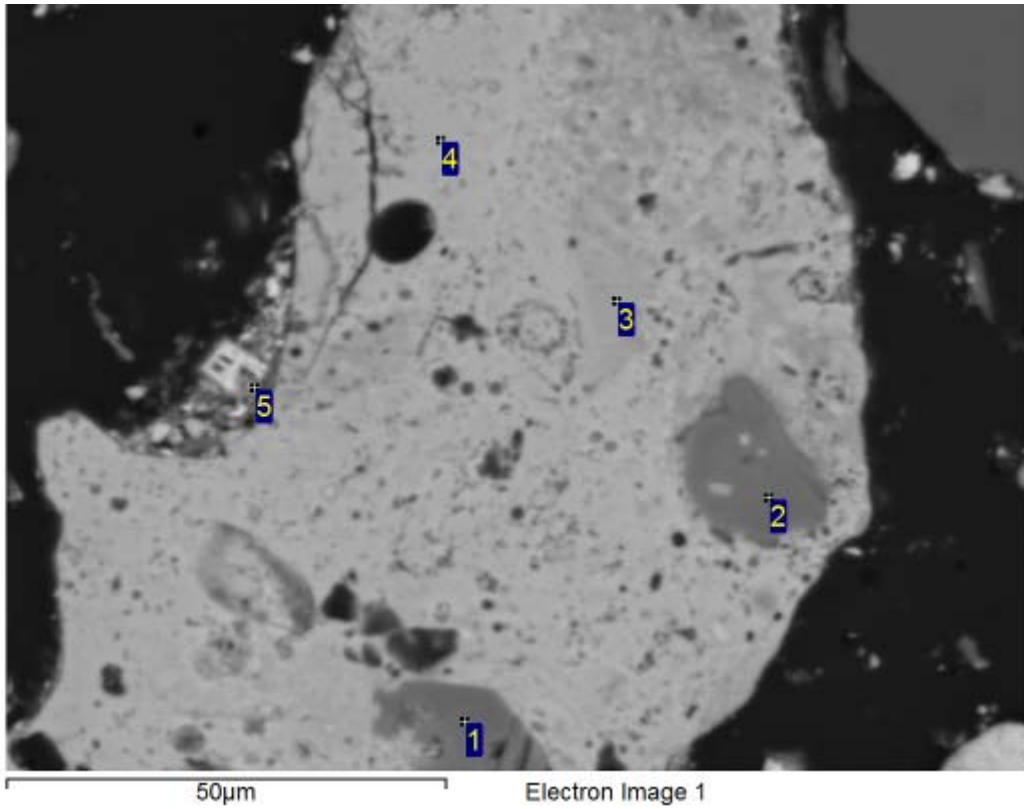
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Si	Fe	Total	Mineral ID
1	49.4	4.4	5.2	27.1	13.9	100.0	Pyroxene
2	56.5			43.3	0.2	100.0	Quartz

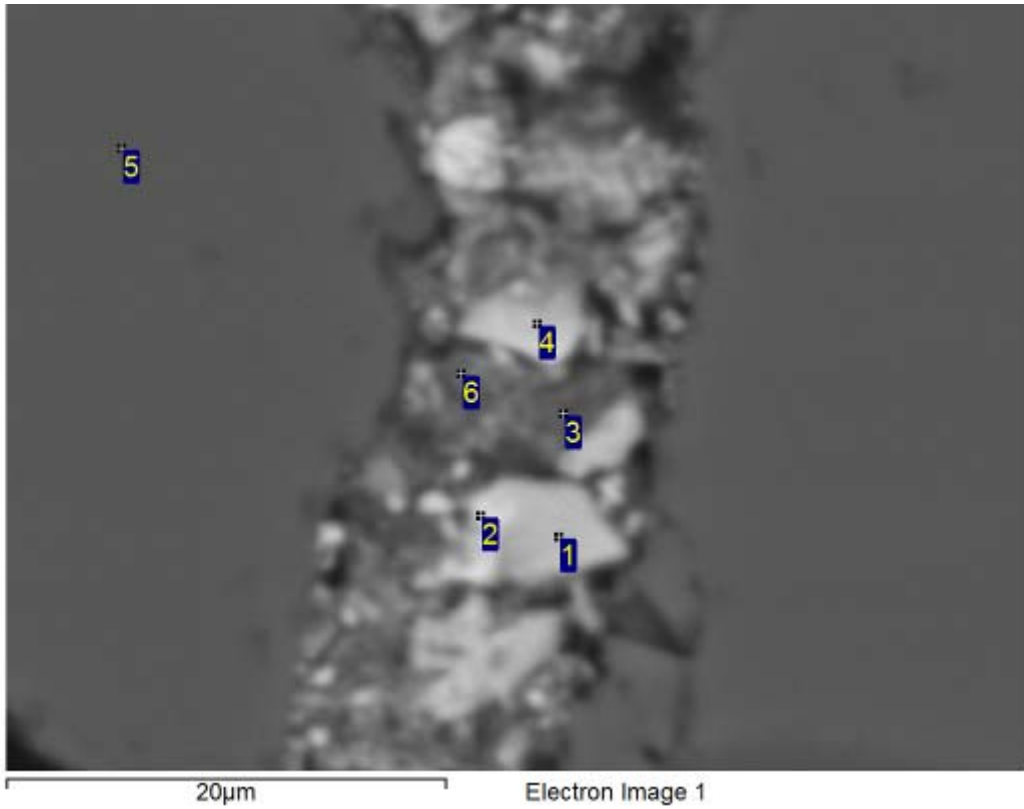
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	Cl	Ca	Ti	Fe	Total	Mineral ID
1	54.4	2.1	3.2	12.4	15.9				1.0	11.0	100.0	Nontronite
2	54.4	2.1	3.1	12.6	15.9				1.0	10.8	100.0	Nontronite
3	43.7			1.2	0.4	0.3		0.3		54.2	100.0	Fe Oxide
4	45.7			0.9	0.2			0.3		52.9	100.0	Fe Oxide
5	33.9			2.4	3.0		0.3			60.5	100.0	Fe Oxide

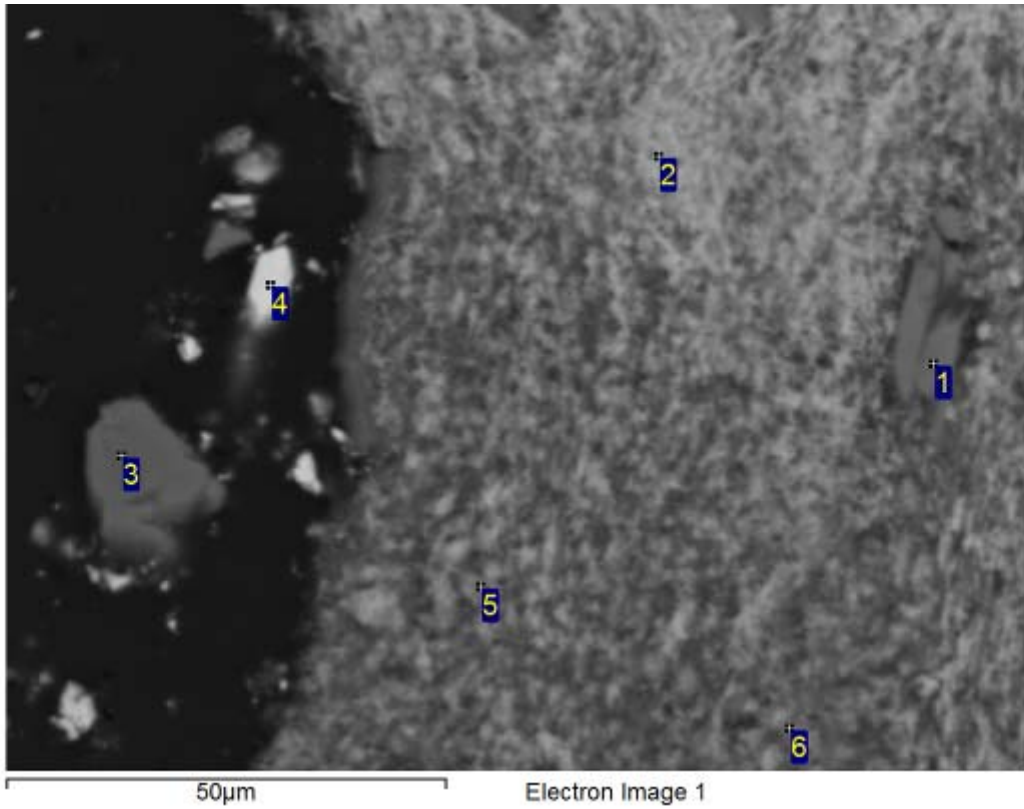
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Cl	Fe	Total	Mineral ID
1	45.4	0.5	0.4	0.7		52.9	100.0	Fe Oxide
2	39.0	0.5	0.6			59.9	100.0	Fe Oxide
3	43.8	7.7	11.4		0.3	36.8	100.0	Nontronite/Fe Oxide
4	33.4	0.9	0.9			64.7	100.0	Fe Oxide
5	56.3		43.4			0.4	100.0	Quartz
6	36.6	7.6	9.5		0.3	46.0	100.0	Fe Oxide

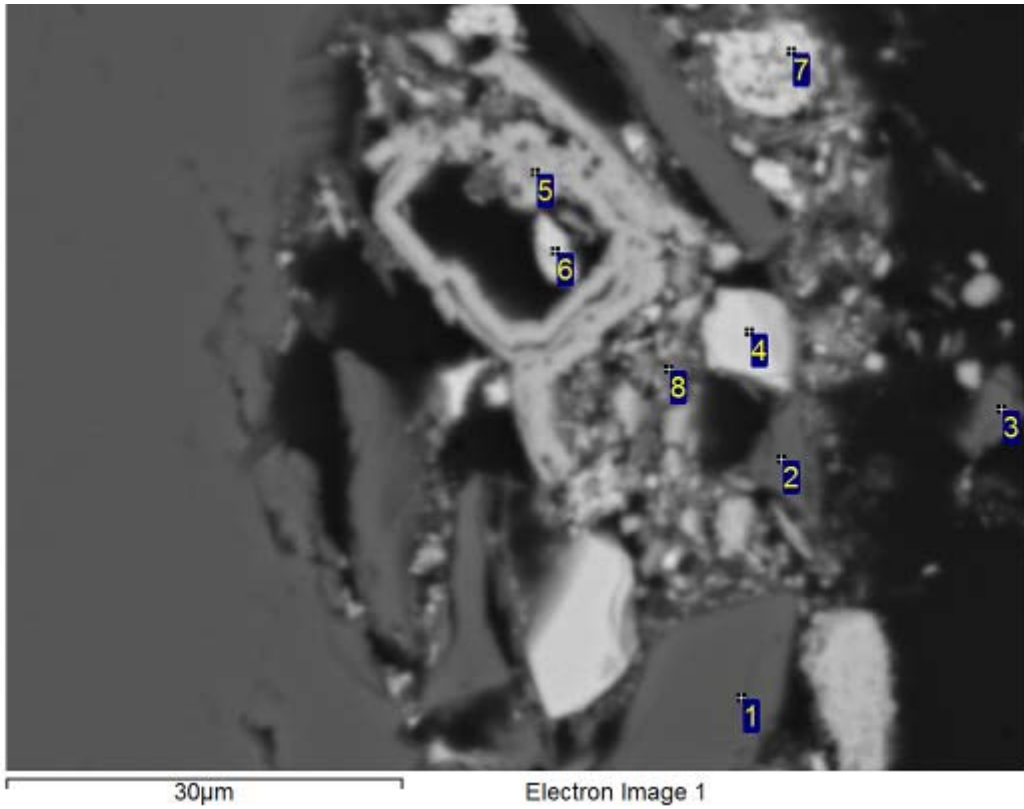
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ti	Fe	Cu	Total	Mineral ID
1	53.7	0.3	1.1	14.8	21.0	7.3	0.3	1.6		100.0	Mica
2	47.5			6.7	6.1		0.9	38.3	0.6	100.0	Fe Oxide (?)
3	56.3				43.4			0.3		100.0	Quartz
4	35.3							64.7		100.0	Fe Oxide
5	45.6			12.1	11.4		2.1	28.8		100.0	Nontronite
6	49.6			13.2	13.4		3.0	20.9		100.0	Nontronite

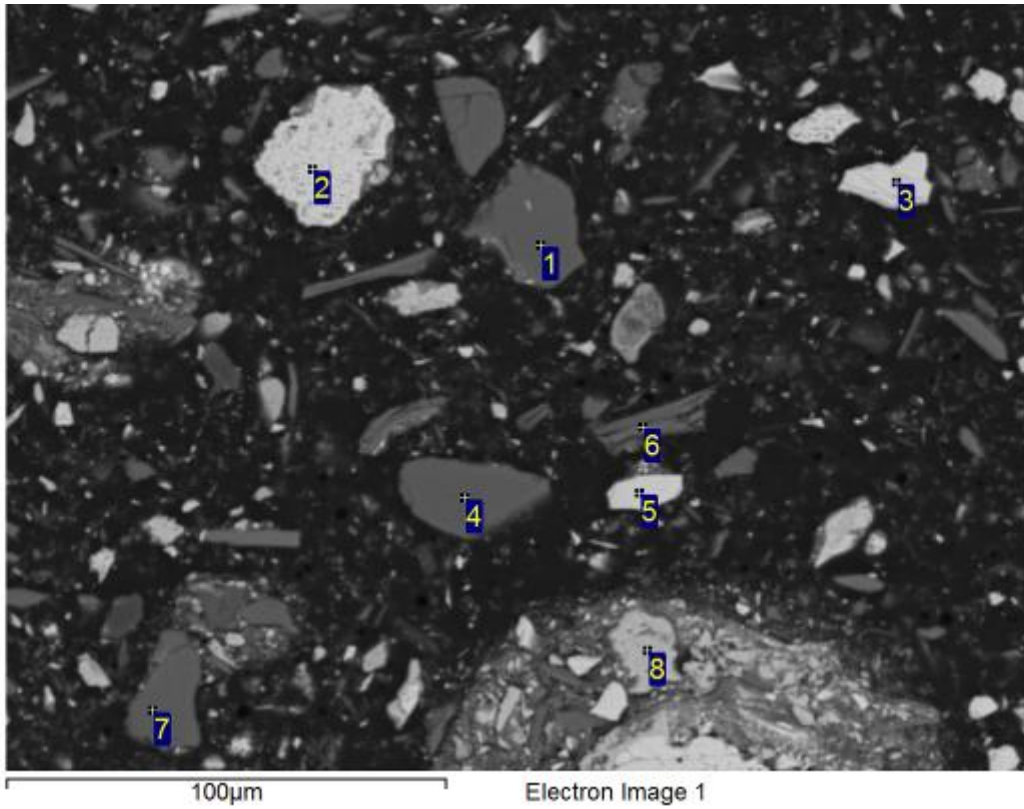
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Cl	Fe	Total	Mineral ID
1	56.2		43.4			0.4	100.0	Quartz
2	58.4		38.8			2.9	100.0	Quartz
3	58.5		40.4			1.1	100.0	Quartz
4	36.8					63.2	100.0	Fe Oxide
5	42.1	1.8	0.7	0.5		54.9	100.0	Fe Oxide
6	35.7					64.3	100.0	Fe Oxide
7	36.6		0.4			63.0	100.0	Fe Oxide
8	35.7	4.6	3.2	0.4	0.3	55.7	100.0	Fe Oxide

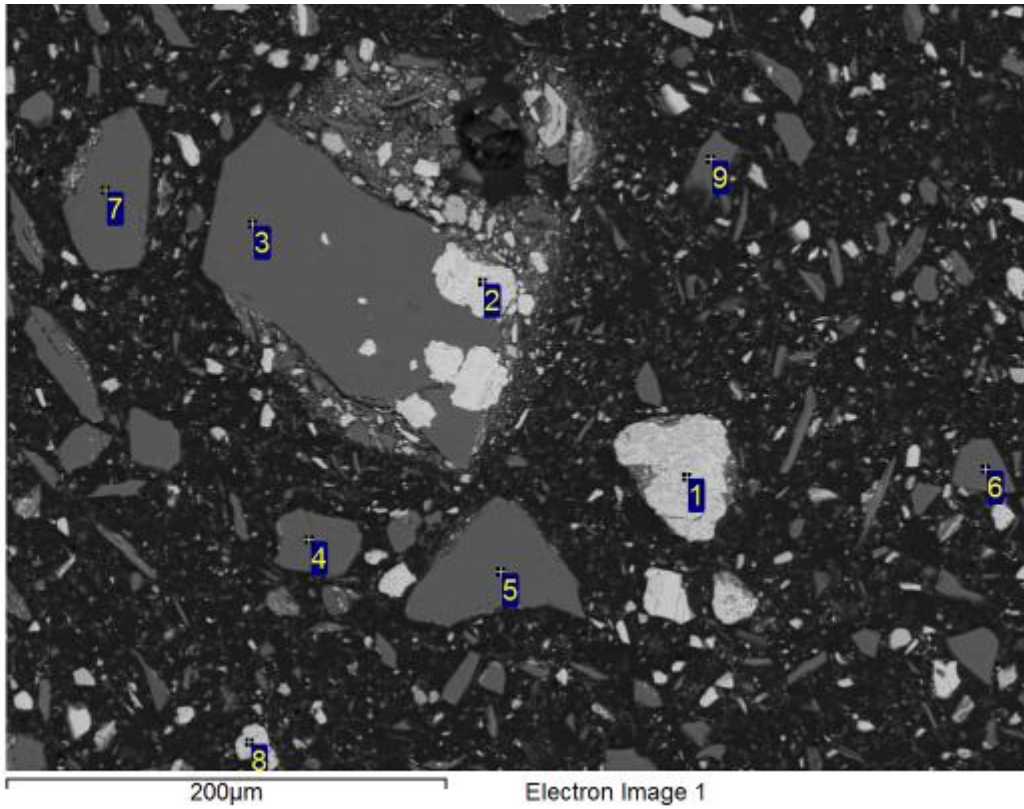
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Mn	Fe	Total	Mineral ID
1	56.0			43.4			0.6	100.0	Quartz
2	33.6			0.2			66.1	100.0	Fe Oxide
3	37.0						63.0	100.0	Fe Oxide
4	56.2			43.1			0.7	100.0	Quartz
5	36.6						63.4	100.0	Fe Oxide
6	54.8		16.4	19.3	2.9		6.6	100.0	Mica
7	56.9			42.4			0.6	100.0	Quartz
8	43.7	0.3	0.8	0.9		0.5	53.8	100.0	Fe Oxide

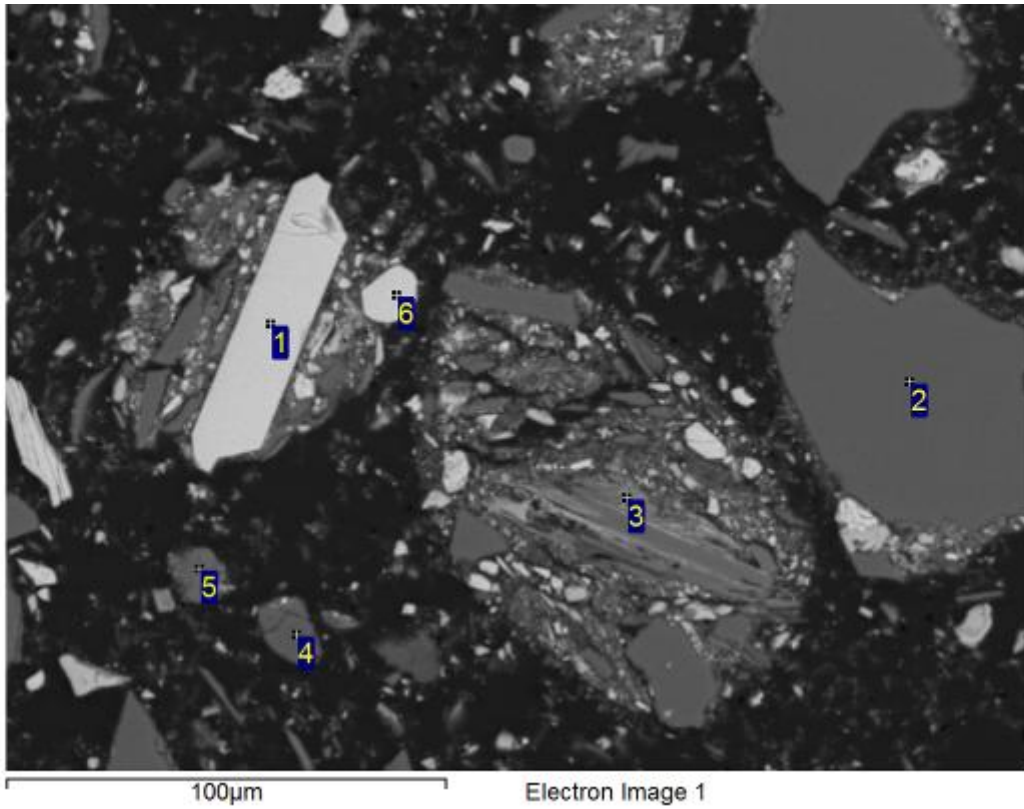
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	40.2	0.3	59.4	100.0	Fe Oxide
2	35.6		64.4	100.0	Fe Oxide
3	56.9	42.8	0.3	100.0	Quartz
4	56.6	42.9	0.5	100.0	Quartz
5	56.1	43.5	0.4	100.0	Quartz
6	56.1	43.4	0.5	100.0	Quartz
7	56.9	42.7	0.4	100.0	Quartz
8	36.9		63.1	100.0	Fe Oxide
9	56.9	42.6	0.5	100.0	Quartz

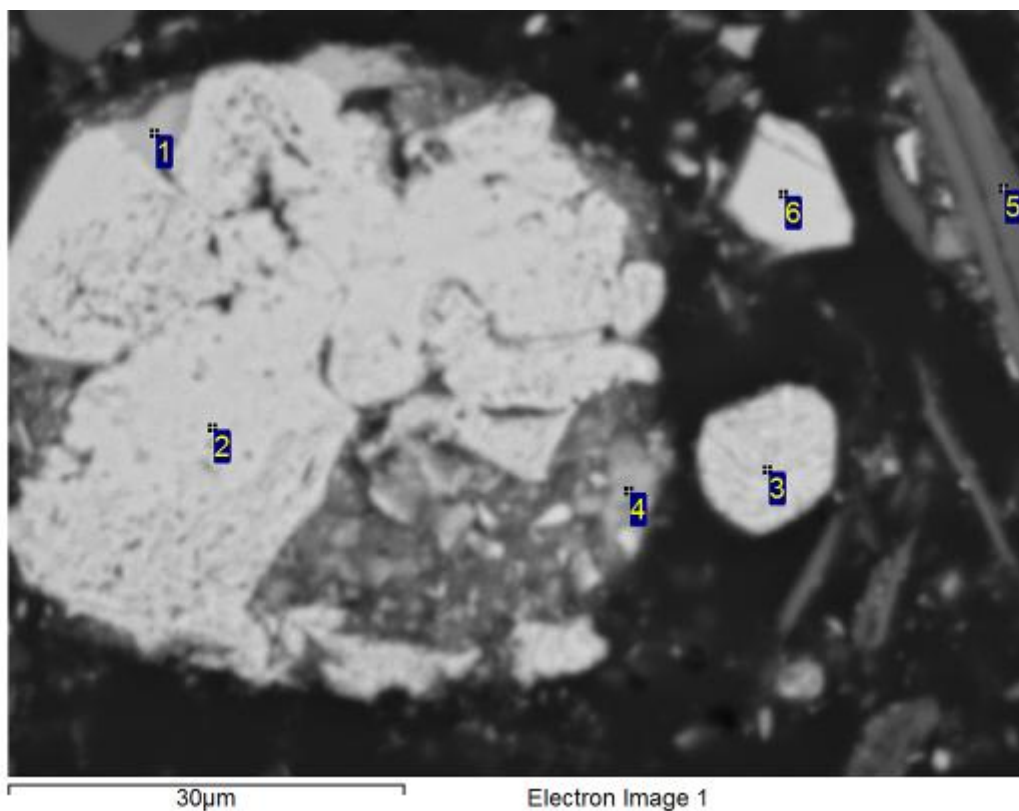
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	K	Ca	Ti	Fe	Total	Mineral ID
1	36.9									63.1	100.0	Fe Oxide
2	56.5				43.1					0.4	100.0	Quartz
3	37.0			7.1	3.0	1.0	0.8	0.3		50.9	100.0	Fe Oxide/Kaolinite
4	56.5				43.0					0.5	100.0	Quartz
5	54.6	0.5	0.5	15.5	18.7		6.2		0.2	3.8	100.0	Mica
6	36.4									63.6	100.0	Fe Oxide

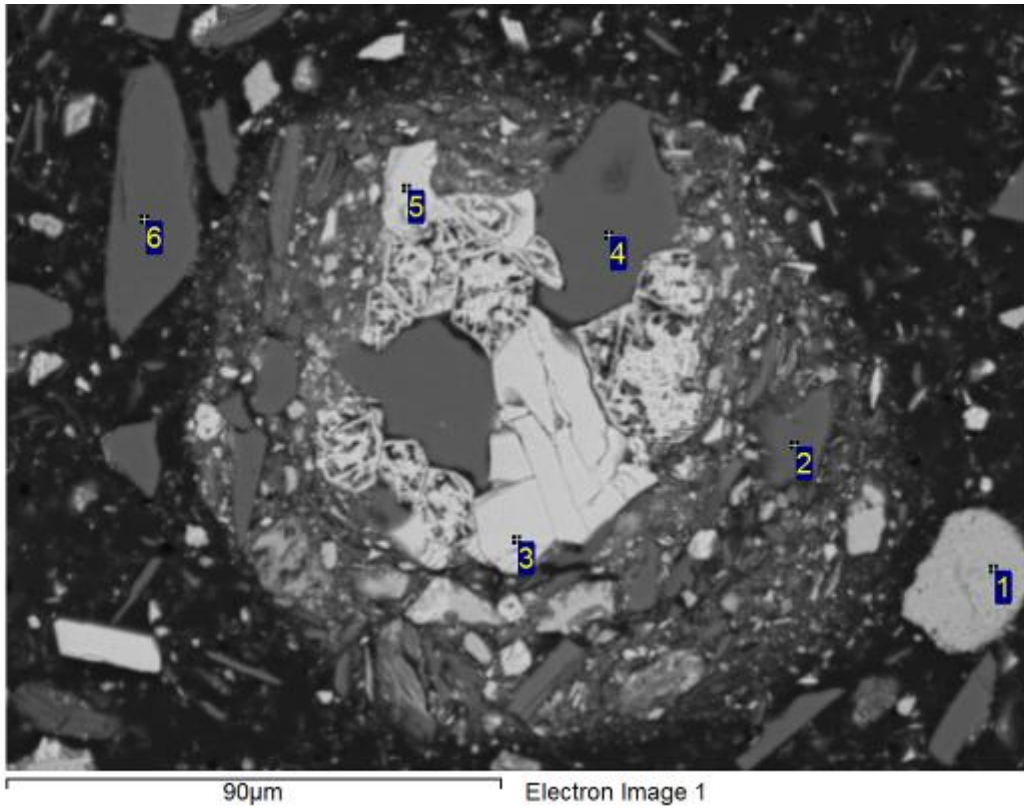
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Mn	Fe	Ba	Total	Mineral ID
1	45.5			0.3	1.0			53.2		100.0	Fe Oxide
2	35.8							64.2		100.0	Fe Oxide
3	36.5							63.5		100.0	Fe Oxide
4	40.3			1.4	1.1		0.3	56.8		100.0	Fe Oxide
5	53.5	0.6	0.4	16.2	20.1	5.8		2.9	0.5	100.0	Mica
6	36.9							63.1		100.0	Fe Oxide

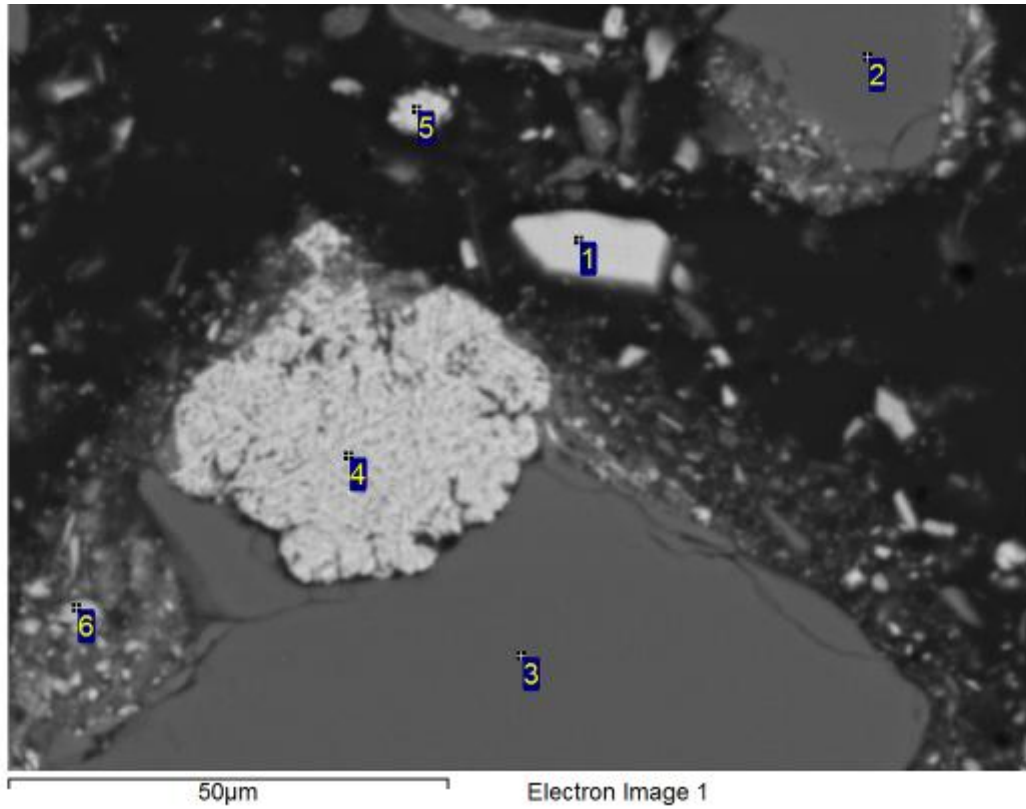
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	43.6	0.9	55.5	100.0	Fe Oxide
2	56.6	42.8	0.6	100.0	Quartz
3	34.6		65.4	100.0	Fe Oxide
4	56.3	43.0	0.7	100.0	Quartz
5	37.4		62.6	100.0	Fe Oxide
6	57.2	42.2	0.5	100.0	Quartz

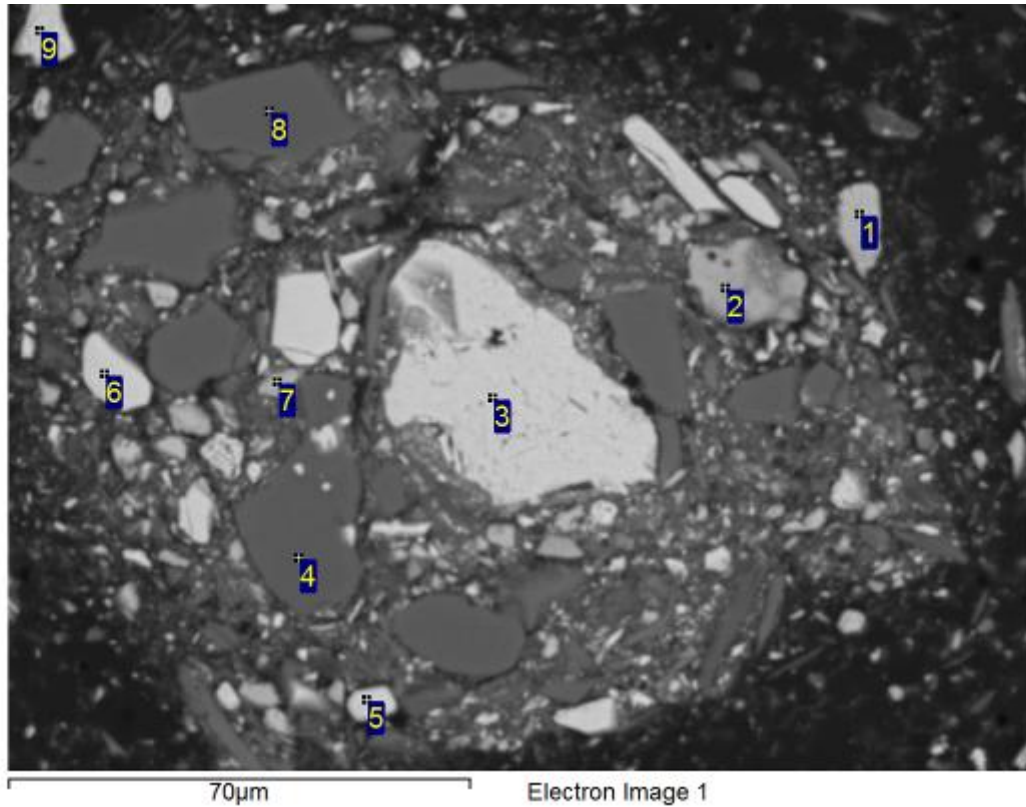
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	38.0			62.0	100.0	Fe Oxide
2	56.7		42.8	0.5	100.0	Quartz
3	57.3		42.3	0.4	100.0	Quartz
4	36.9			63.1	100.0	Fe Oxide
5	35.4	0.3		64.3	100.0	Fe Oxide
6	46.7	1.7	2.4	49.2	100.0	Fe Oxide

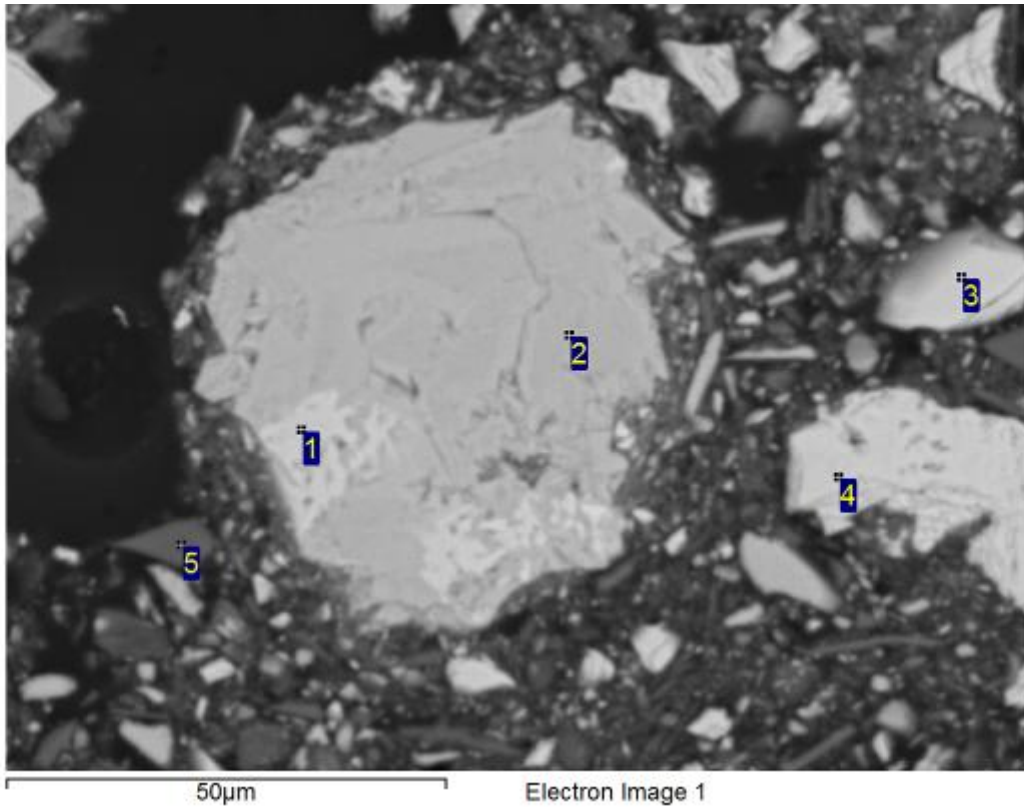
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Mn	Fe	Total	Mineral ID
1	45.1		0.8			54.1	100.0	Fe Oxide
2	45.6	1.8	1.7	0.3	0.4	50.3	100.0	Fe Oxide
3	37.8					62.2	100.0	Fe Oxide
4	56.3		42.9			0.8	100.0	Quartz
5	38.4					61.6	100.0	Fe Oxide
6	37.3					62.7	100.0	Fe Oxide
7	43.9	0.8	1.2	0.3		53.9	100.0	Fe Oxide
8	57.5		42.1			0.4	100.0	Quartz
9	37.3					62.7	100.0	Fe Oxide

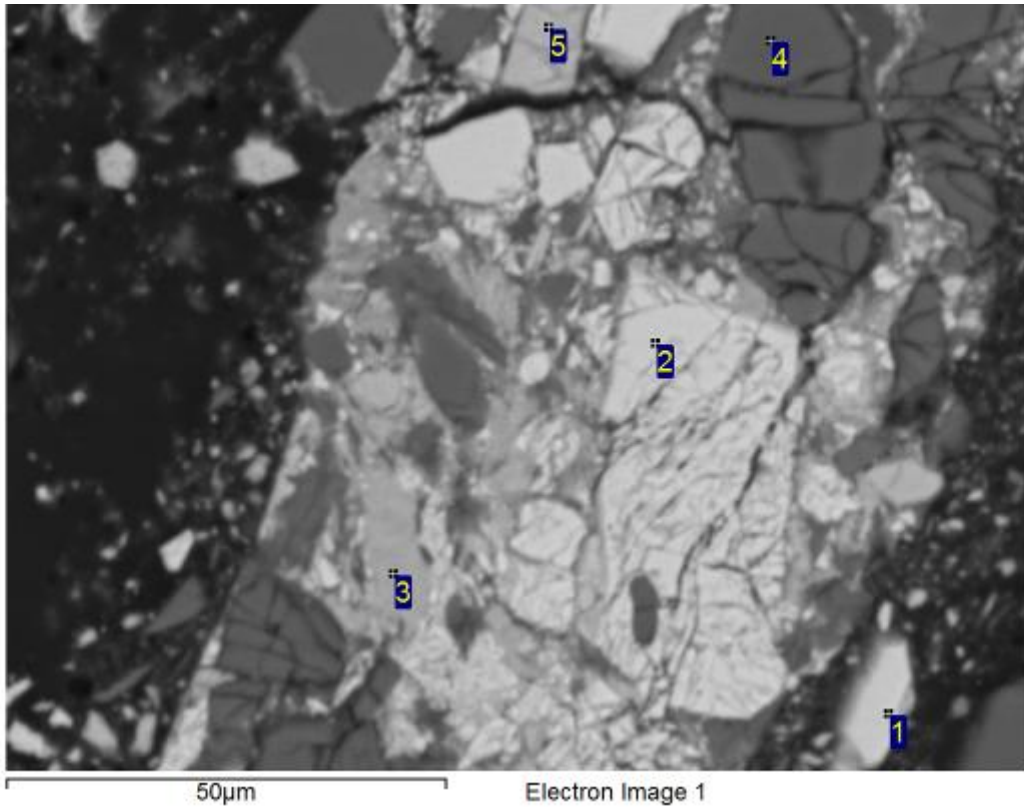
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	38.1		61.9	100.0	Fe Oxide
2	44.2	0.8	55.0	100.0	Fe Oxide
3	40.3		59.7	100.0	Fe Oxide
4	37.2		62.8	100.0	Fe Oxide
5	57.1	42.1	0.8	100.0	Quartz

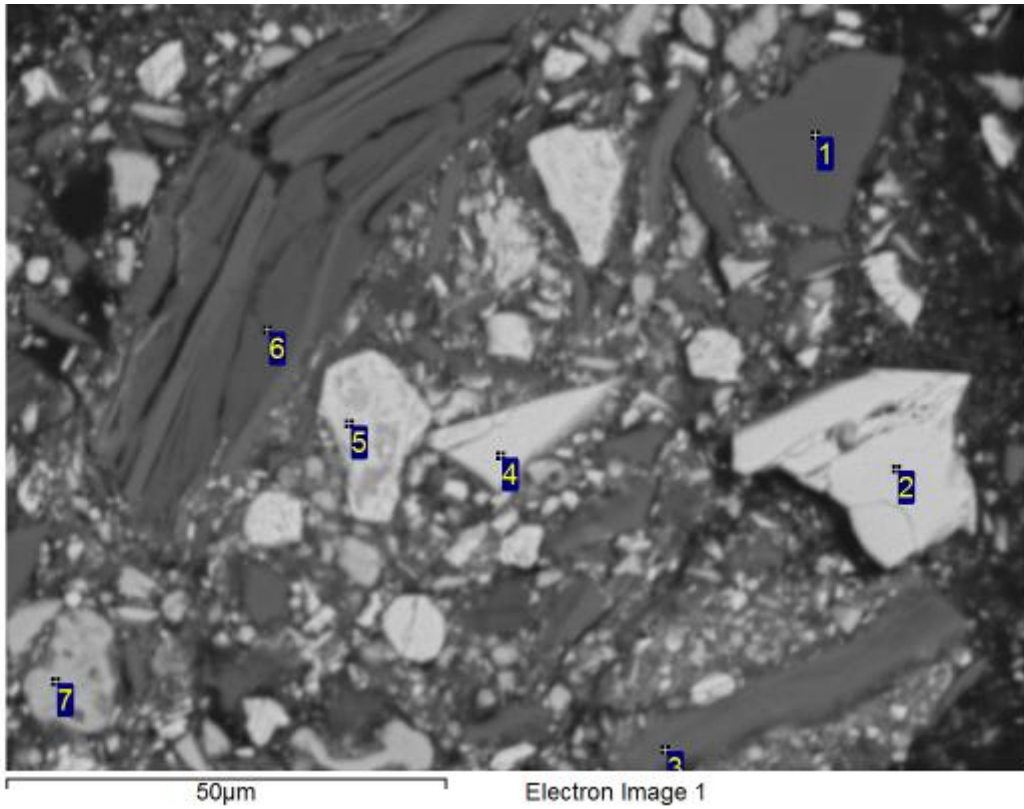
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Mn	Fe	Total	Mineral ID
1	37.5					62.5	100.0	Fe Oxide
2	36.9					63.1	100.0	Fe Oxide
3	44.1	1.1	1.3	0.3	0.3	53.0	100.0	Fe Oxide
4	57.0		41.6			1.3	100.0	Quartz
5	43.9	0.2	0.5	0.4		55.0	100.0	Fe Oxide

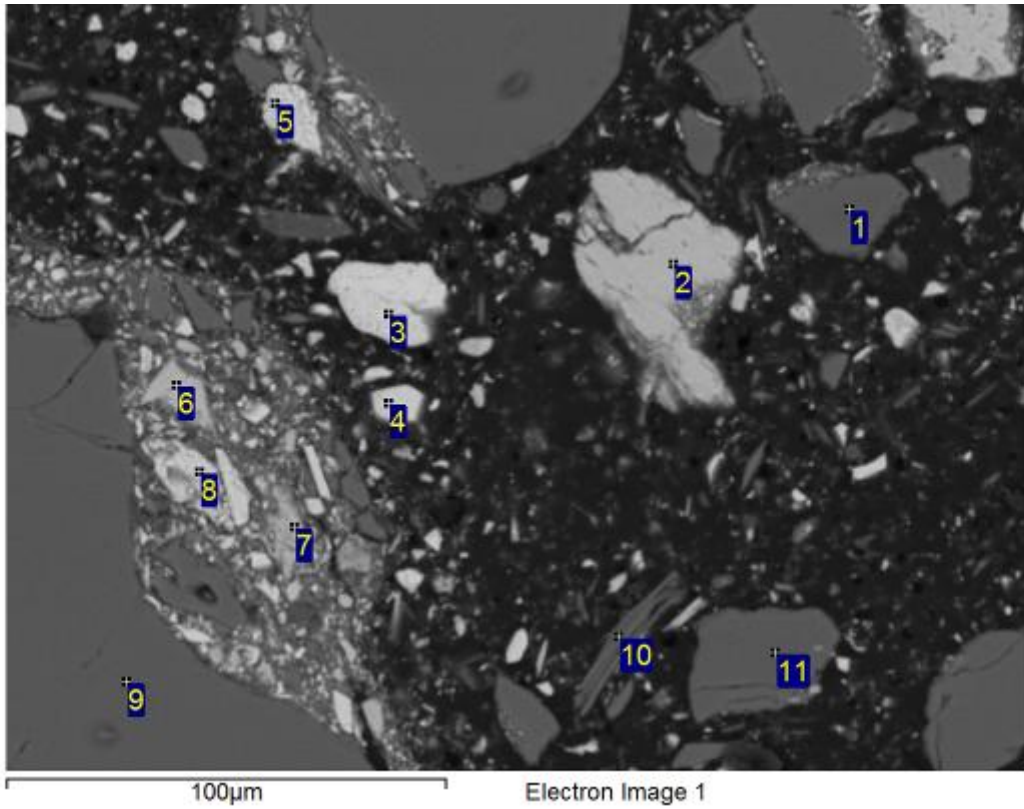
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	57.1				42.3			0.5	100.0	Quartz
2	37.0							63.0	100.0	Fe Oxide
3	53.3	0.4	0.8	15.0	19.9	6.7	0.3	3.5	100.0	Mica
4	36.7							63.3	100.0	Fe Oxide
5	39.6				0.3			60.0	100.0	Fe Oxide
6	59.4			18.0	20.4	0.2		2.1	100.0	Kaolinite
7	43.3			0.6	1.2			54.8	100.0	Fe Oxide

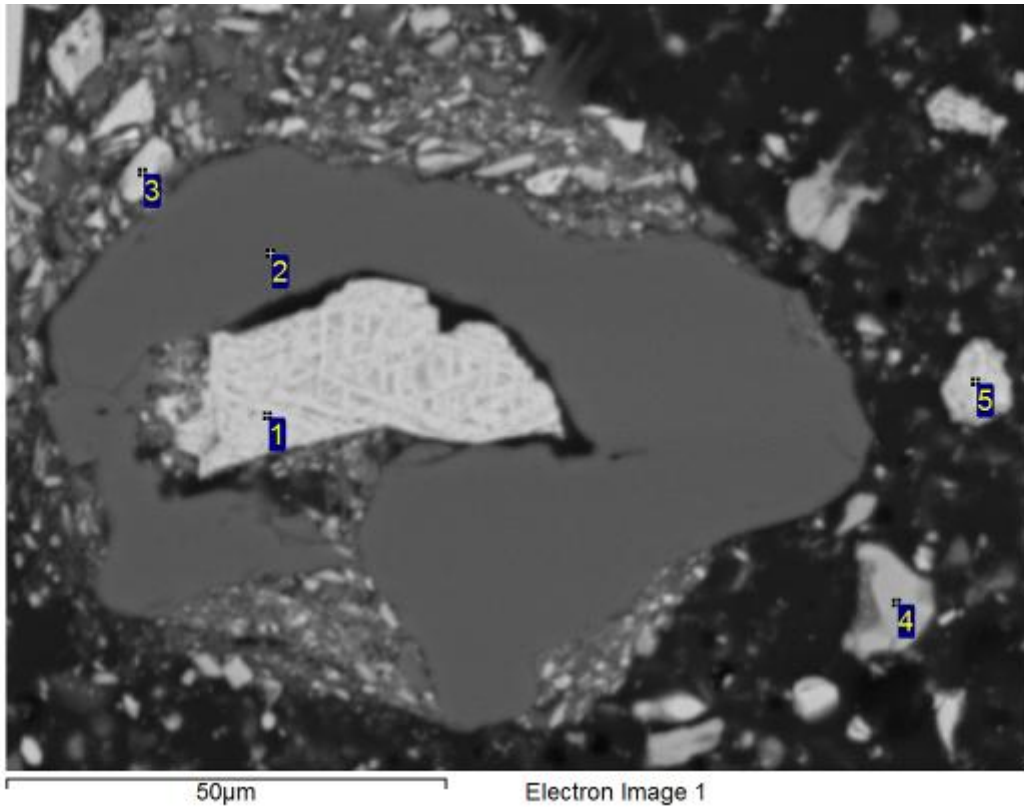
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	56.3			43.1				0.6	100.0	Quartz
2	45.4		0.7	0.9			0.3	52.7	100.0	Fe Oxide
3	34.8							65.2	100.0	Fe Oxide
4	37.9							62.1	100.0	Fe Oxide
5	35.2							64.8	100.0	Fe Oxide
6	43.6			1.0				55.4	100.0	Fe Oxide
7	44.5		0.6	1.0	0.5			53.4	100.0	Fe Oxide
8	37.2							62.8	100.0	Fe Oxide
9	56.8			42.9				0.4	100.0	Quartz
10	54.6	0.3	18.9	23.0		1.7		1.5	100.0	Kaolinite
11	56.5			42.8				0.6	100.0	Quartz

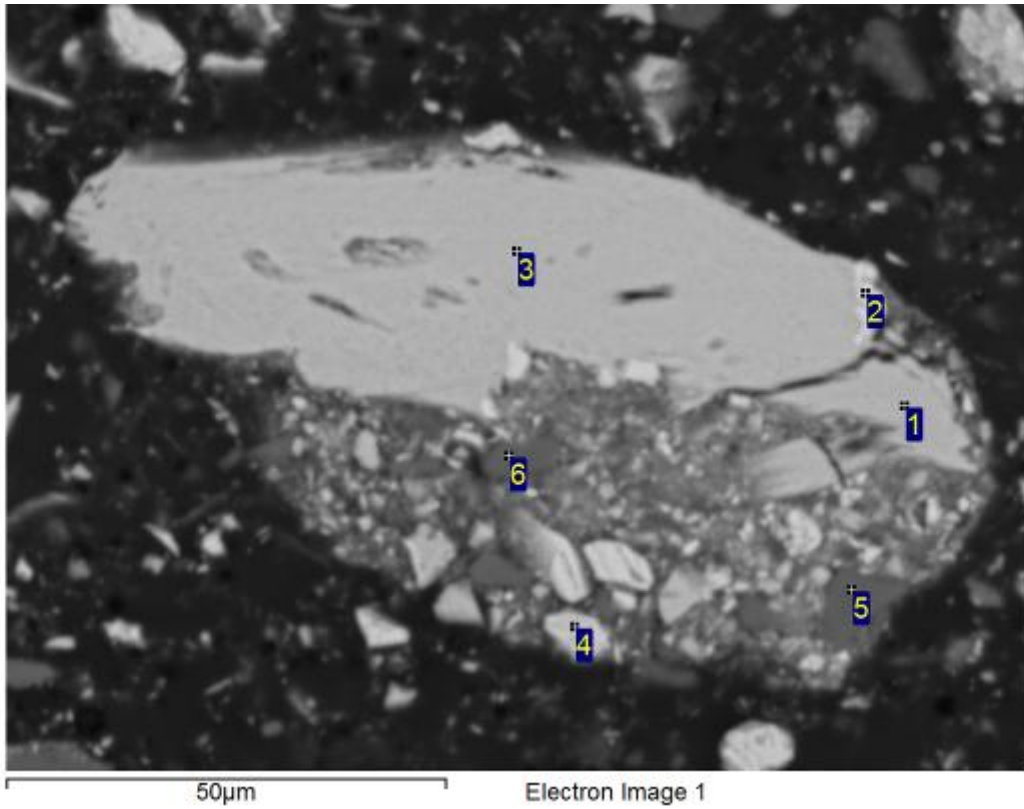
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Mn	Fe	Total	Mineral ID
1	37.5		0.5		62.1	100.0	Fe Oxide
2	56.2		43.1		0.6	100.0	Quartz
3	39.3				60.7	100.0	Fe Oxide
4	45.3	0.3	1.4	0.4	52.6	100.0	Fe Oxide
5	38.2				61.8	100.0	Fe Oxide

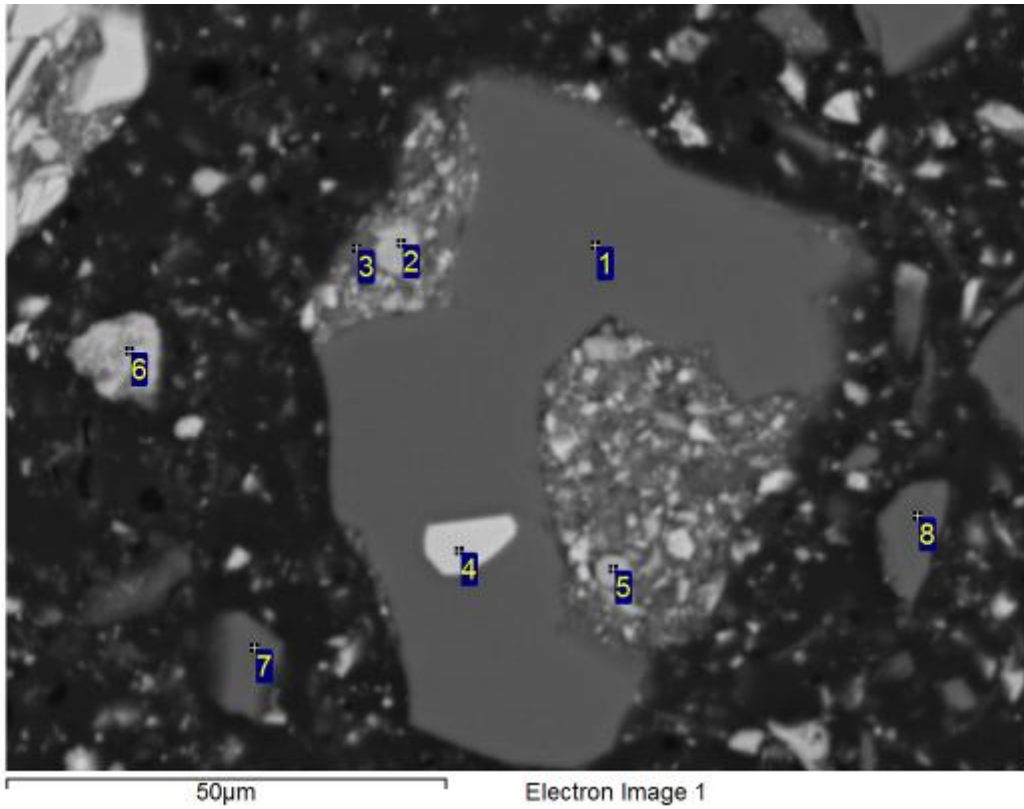
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	45.2		0.6	54.2	100.0	Fe Oxide
2	39.3			60.7	100.0	Fe Oxide
3	44.7		0.7	54.6	100.0	Fe Oxide
4	36.4			63.6	100.0	Fe Oxide
5	58.7		40.3	1.0	100.0	Quartz
6	54.6	0.3	32.3	12.8	100.0	Quartz/Fe Oxide

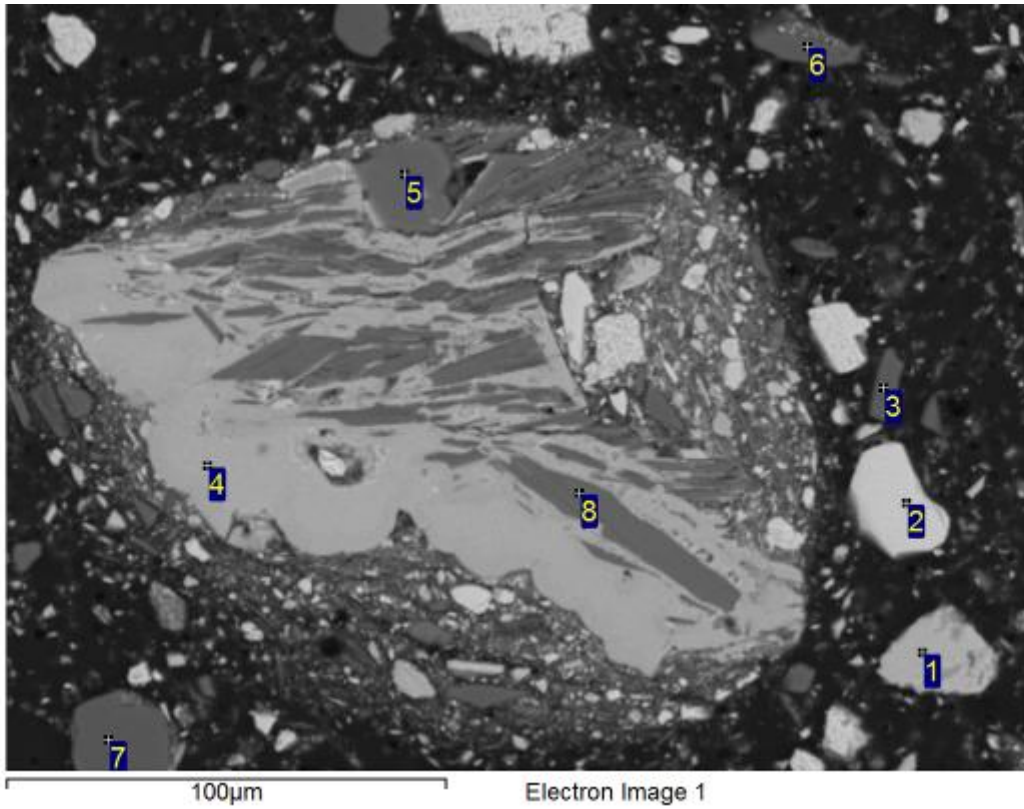
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Fe	Total	Mineral ID
1	56.8		42.8		0.5	100.0	Quartz
2	45.5		1.1		53.4	100.0	Fe Oxide
3	57.2		41.7		1.0	100.0	Quartz
4	37.0				63.0	100.0	Fe Oxide
5	45.6	1.8	2.1		50.6	100.0	Fe Oxide
6	46.8	0.4	0.3	0.3	52.1	100.0	Fe Oxide
7	57.7		41.6		0.8	100.0	Quartz
8	57.1		42.3		0.5	100.0	Quartz

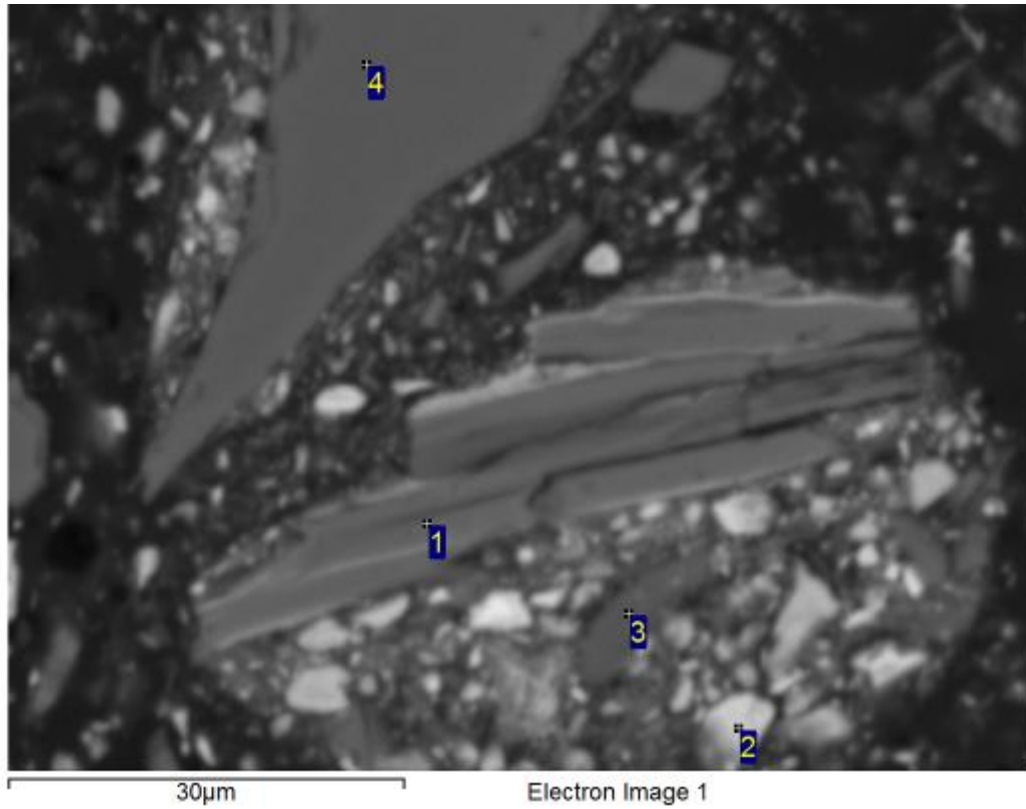
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Al	Si	P	K	Fe	Total	Mineral ID
1	45.4			1.4	0.5		52.7	100.0	Fe Oxide
2	36.5						63.5	100.0	Fe Oxide
3	58.1			41.3			0.6	100.0	Quartz
4	47.4		2.3	1.6			48.7	100.0	Fe Oxide
5	53.1	1.1	17.1	20.0		6.6	2.2	100.0	Mica
6	57.2			42.2			0.6	100.0	Quartz
7	56.9			42.5			0.6	100.0	Quartz
8	53.4	1.1	16.9	20.0		6.3	2.4	100.0	Mica

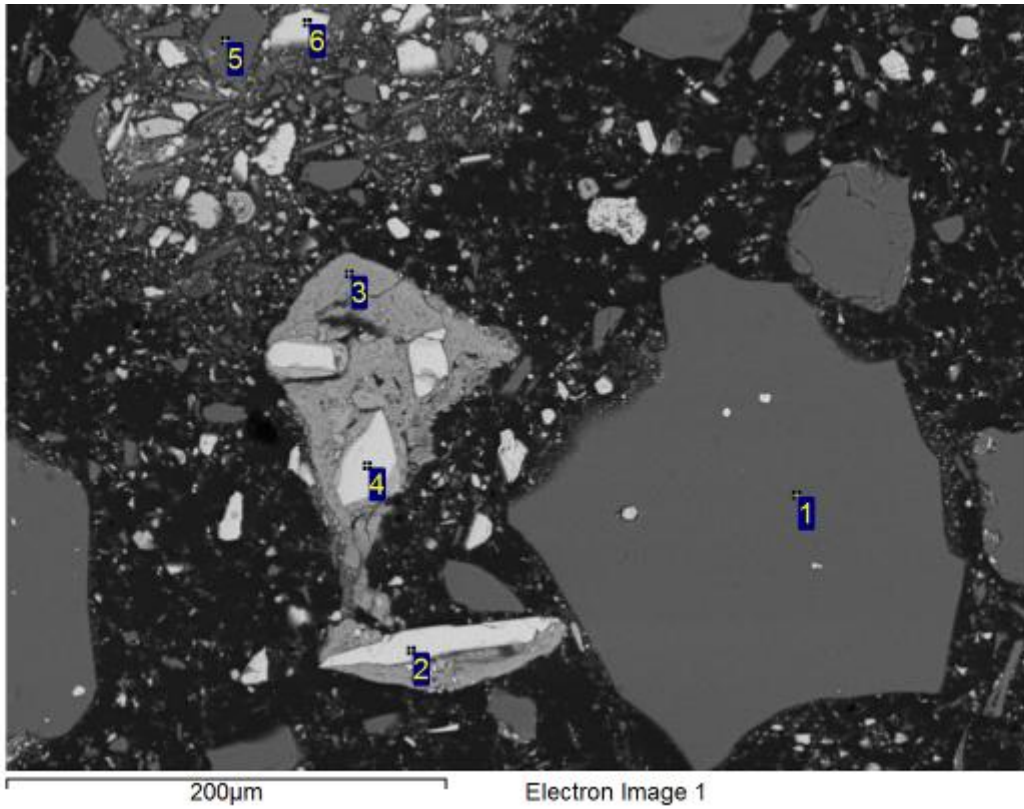
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	52.6	0.4	0.7	15.3	20.2	7.2	0.2	3.3	100.0	Mica
2	37.2							62.8	100.0	Fe Oxide
3	56.7			18.0	21.1			4.2	100.0	Kaolinite
4	57.3				42.2			0.5	100.0	Quartz

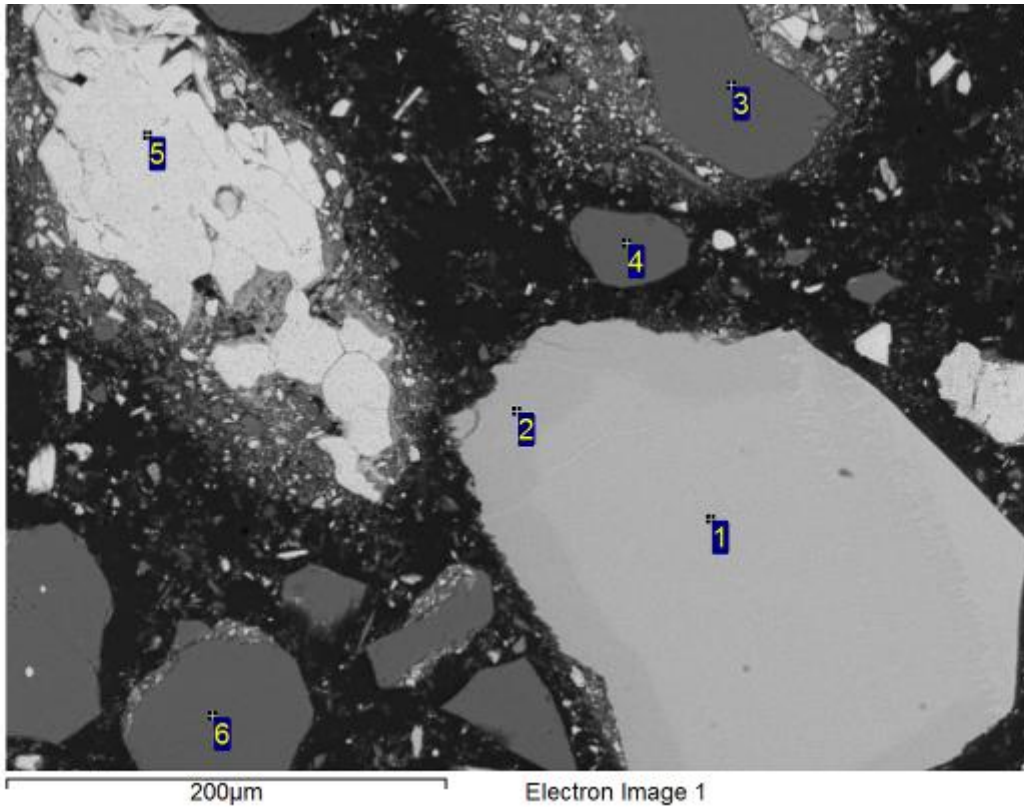
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Ti	Fe	Total	Mineral ID
1	56.6		43.4				100.0	Quartz
2	35.7					64.3	100.0	Fe Oxide
3	38.8	4.2		0.6	0.3	56.0	100.0	Fe oxide
4	37.1					62.9	100.0	Fe Oxide
5	56.7		42.7			0.6	100.0	Quartz
6	36.4					63.6	100.0	Fe Oxide

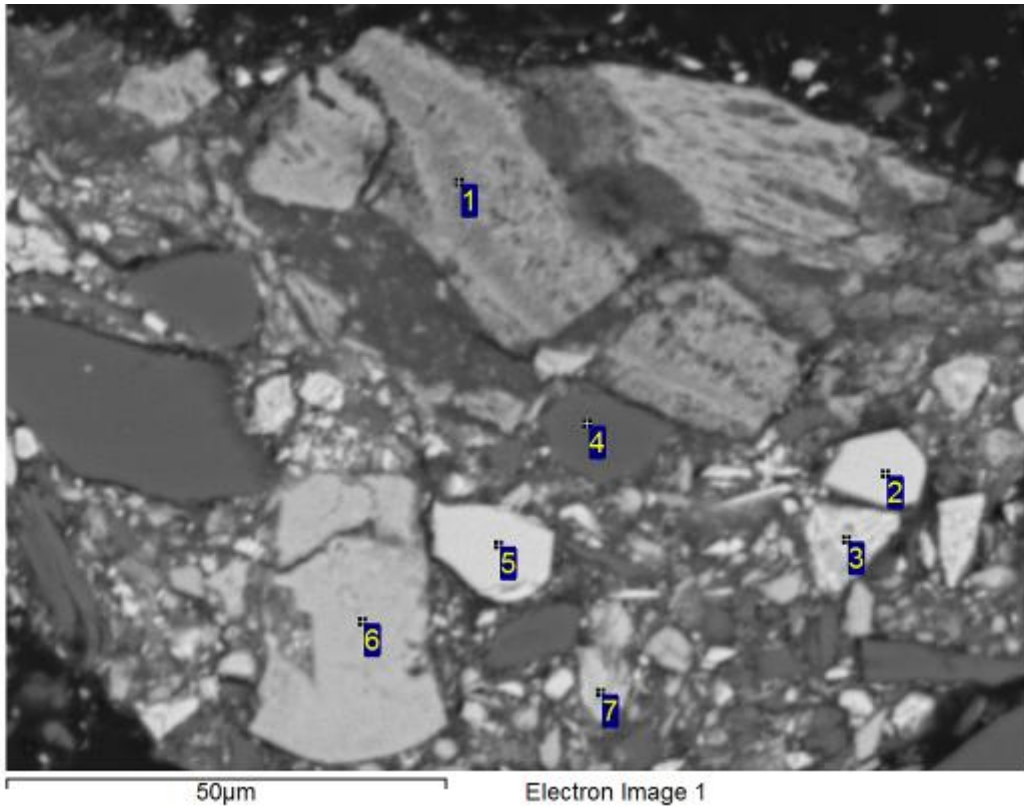
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	43.1	0.7	0.9	55.3	100.0	Fe Oxide
2	40.7	0.7	0.9	57.7	100.0	Fe Oxide
3	56.7		43.3		100.0	Quartz
4	56.5		43.0	0.5	100.0	Quartz
5	36.0			64.0	100.0	Fe Oxide
6	56.6		43.0	0.4	100.0	Quartz

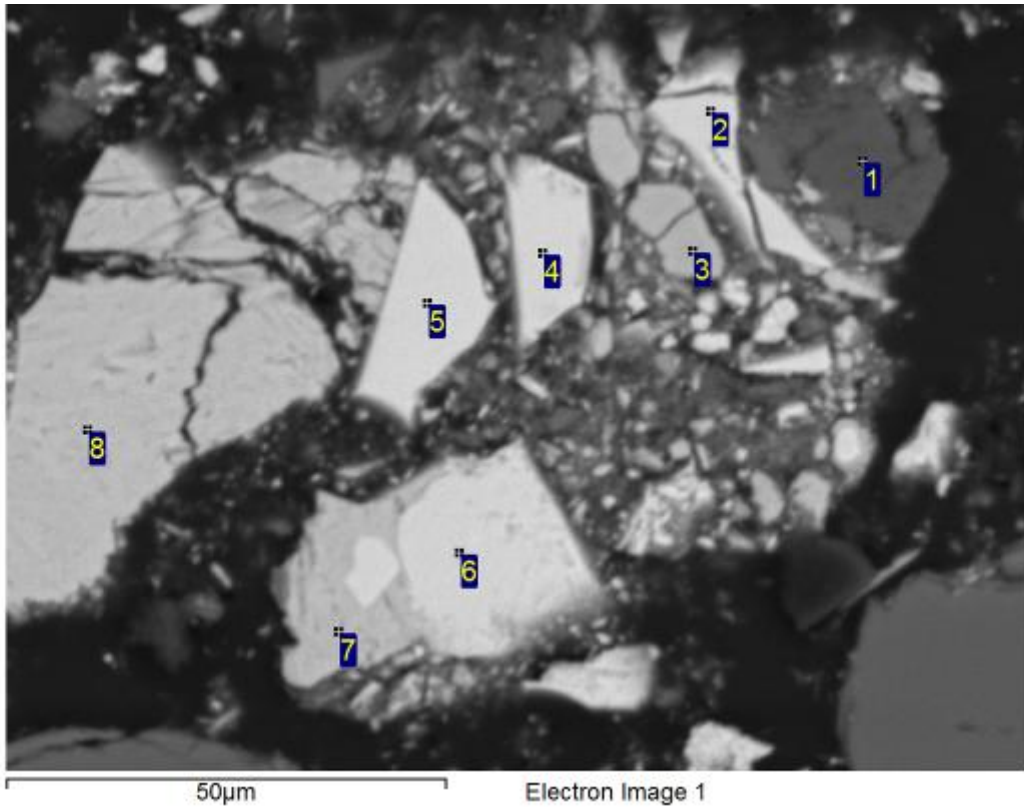
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Fe	Total	Mineral ID
1	50.8	10.4	11.7		27.1	100.0	Kaolinite/Fe Oxide
2	37.1				62.9	100.0	Fe Oxide
3	41.4		0.3		58.2	100.0	Fe Oxide
4	57.9		41.3		0.8	100.0	Quartz
5	37.0				63.0	100.0	Fe Oxide
6	45.6	0.3	1.7		52.5	100.0	Fe Oxide
7	40.4	1.9	1.1	0.6	56.1	100.0	Fe Oxide

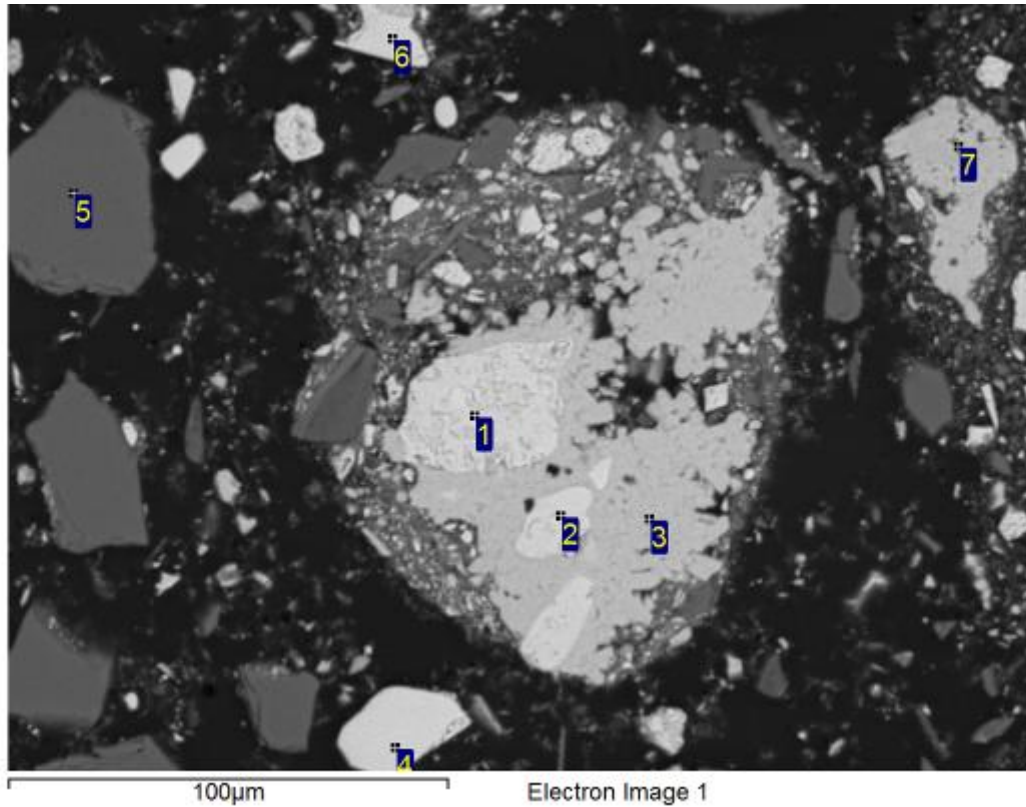
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	Mn	Fe	Total	Mineral ID
1	59.6		19.2	20.5		0.7	100.0	Kaolinite
2	37.3					62.7	100.0	Fe Oxide
3	43.3	0.3	1.1	1.3	0.7	53.2	100.0	Fe Oxide
4	36.4					63.6	100.0	Fe Oxide
5	36.7					63.3	100.0	Fe Oxide
6	36.5					63.5	100.0	Fe Oxide
7	43.3			1.3		55.4	100.0	Fe Oxide
8	45.2			1.2		53.6	100.0	Fe Oxide

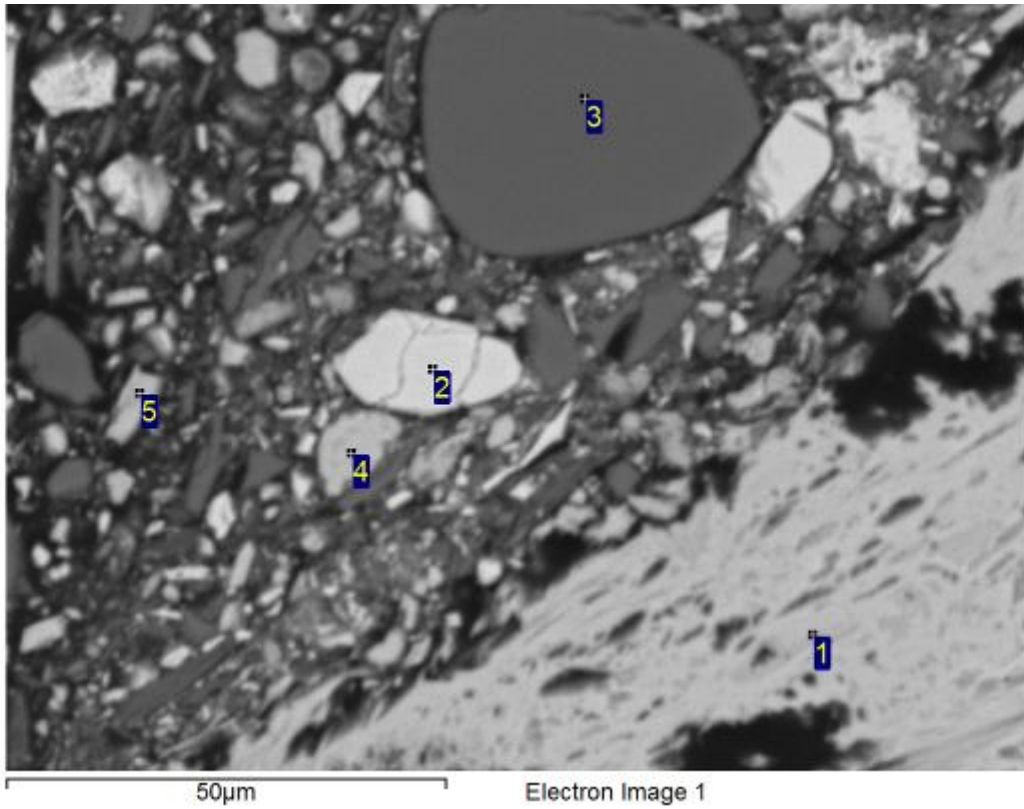
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	36.9			63.1	100.0	Fe Oxide
2	35.4			64.6	100.0	Fe Oxide
3	42.1		0.6	57.3	100.0	Fe Oxide
4	35.7			64.3	100.0	Fe Oxide
5	56.5		43.2	0.4	100.0	Quartz
6	35.7			64.3	100.0	Fe Oxide
7	36.0	0.5	0.8	62.7	100.0	Fe Oxide

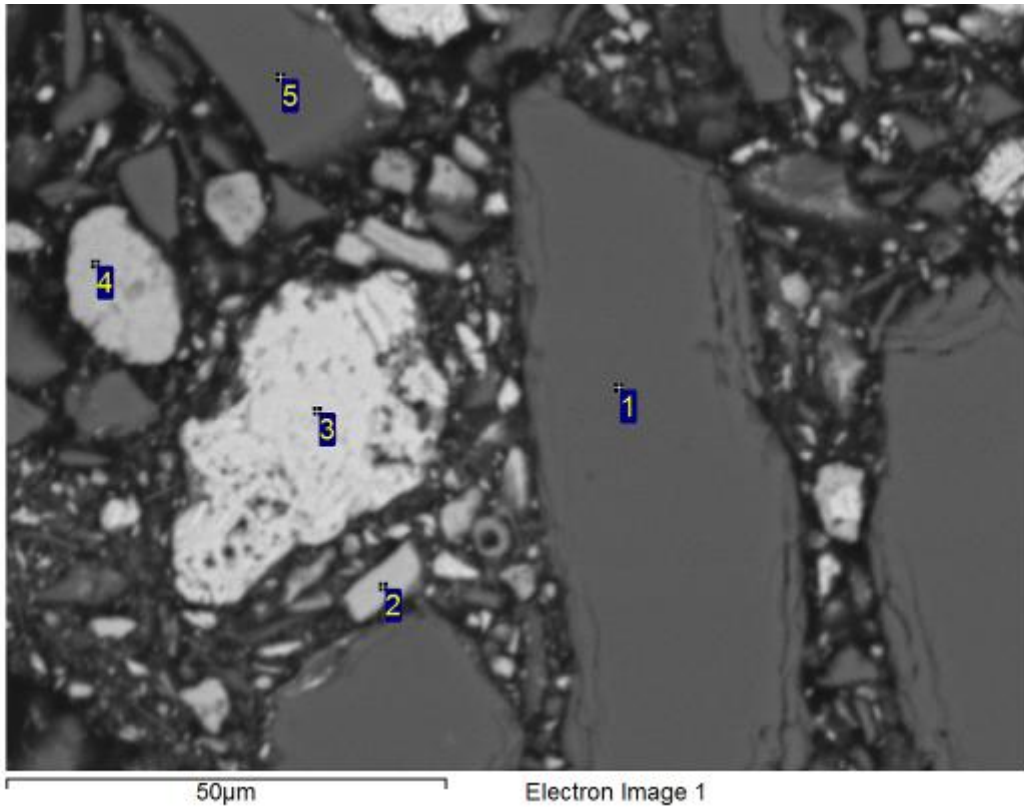
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Fe	Total	Mineral ID
1	44.2	0.5	1.1		54.2	100.0	Fe Oxide
2	36.4				63.6	100.0	Fe Oxide
3	56.9		42.5		0.6	100.0	Quartz
4	43.8		0.6	0.5	55.1	100.0	Fe Oxide
5	44.9		1.8		53.3	100.0	Fe Oxide

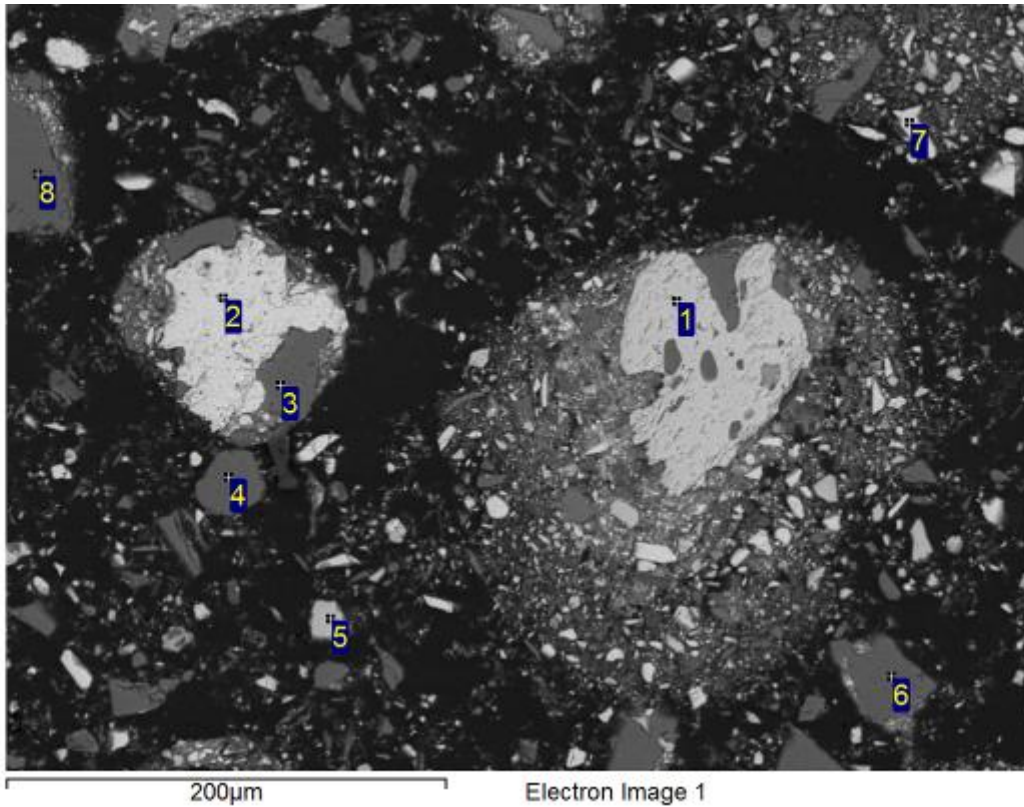
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Fe	Total	Mineral ID
1	56.6		42.8		0.6	100.0	Quartz
2	46.7		1.6	0.5	51.2	100.0	Fe Oxide
3	37.1				62.9	100.0	Fe Oxide
4	45.0	0.3	1.2	1.2	52.2	100.0	Fe Oxide
5	56.4		43.0		0.5	100.0	Quartz

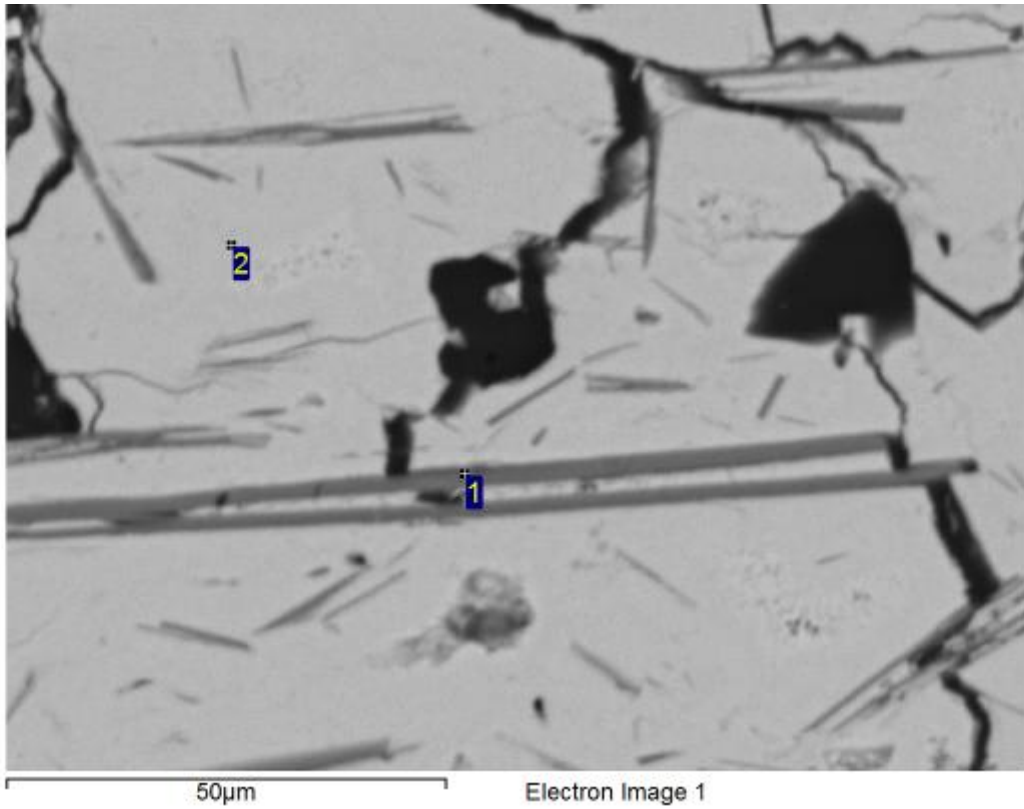
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Ti	Mn	Fe	Total	Mineral ID
1	41.5		28.5	1.1	29.0	100.0	Ilmenite
2	37.8				62.2	100.0	Fe Oxide
3	56.4	42.0			1.6	100.0	Quartz
4	56.4	43.2			0.4	100.0	Quartz
5	44.5	1.9			53.6	100.0	Fe Oxide
6	56.3	43.2			0.5	100.0	Quartz
7	37.4				62.6	100.0	Fe Oxide
8	56.4	43.2			0.4	100.0	Quartz

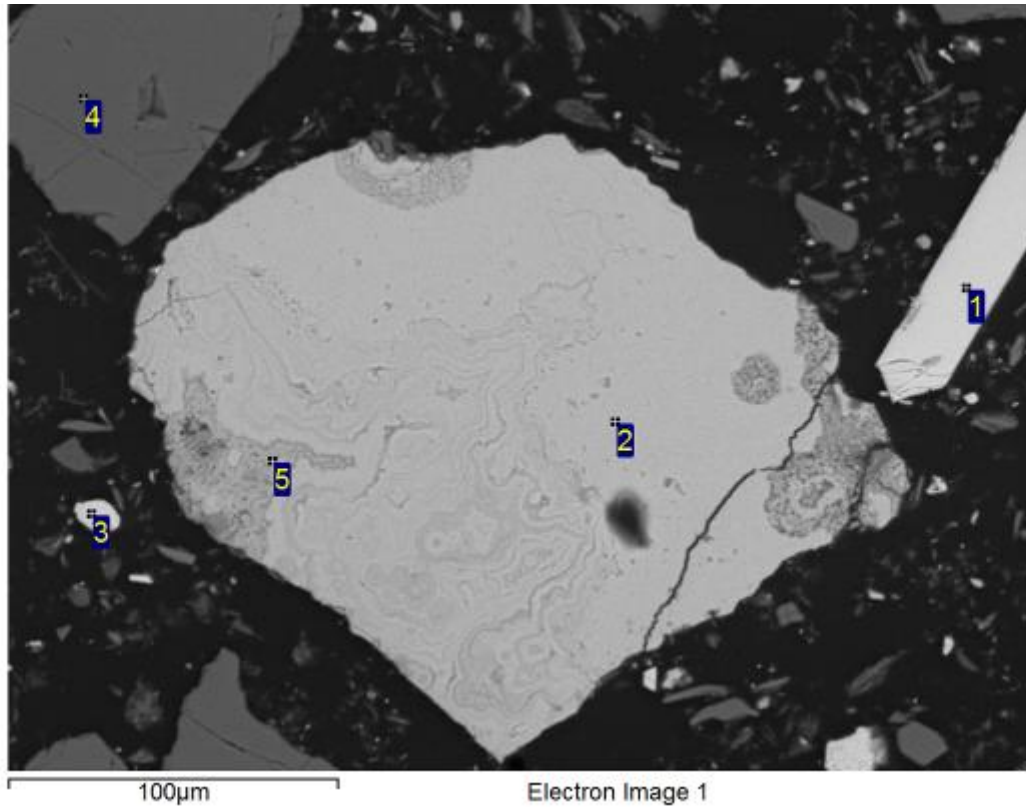
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Al	Si	P	K	Fe	Total	Mineral ID
1	43.5	0.4	12.0	13.5		4.0	26.6	100.0	Mica/Fe Oxide
2	45.6		0.5	0.9	0.3		52.8	100.0	Fe Oxide

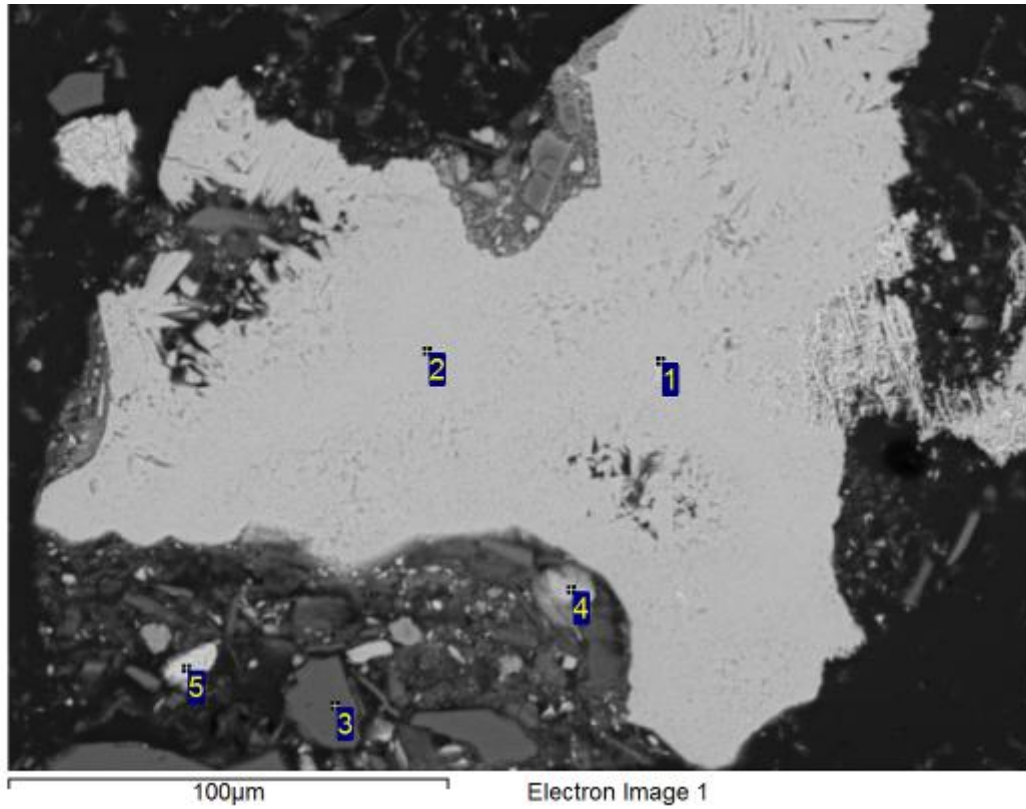
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Fe	Total	Mineral ID
1	35.9				64.1	100.0	Fe Oxide
2	45.9	1.1	1.2		51.8	100.0	Fe Oxide
3	37.0		0.4		62.6	100.0	Fe Oxide
4	56.6		43.4			100.0	Quartz
5	43.9	1.4	1.3	0.5	52.9	100.0	Fe Oxide

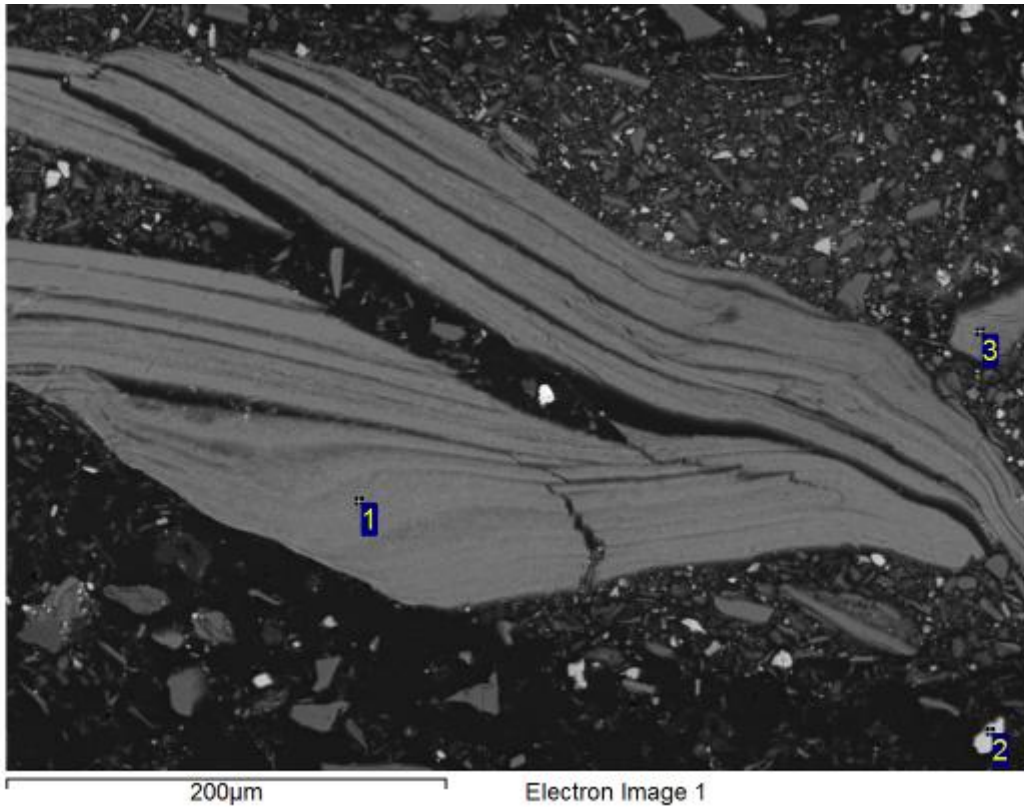
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Ti	Fe	Total	Mineral ID
1	38.3					61.7	100.0	Fe Oxide
2	44.4		0.4	0.4		54.8	100.0	Fe Oxide
3	56.5		42.8			0.7	100.0	Quartz
4	37.9	1.3	1.7		0.3	58.8	100.0	Fe Oxide
5	37.1					62.9	100.0	Fe Oxide

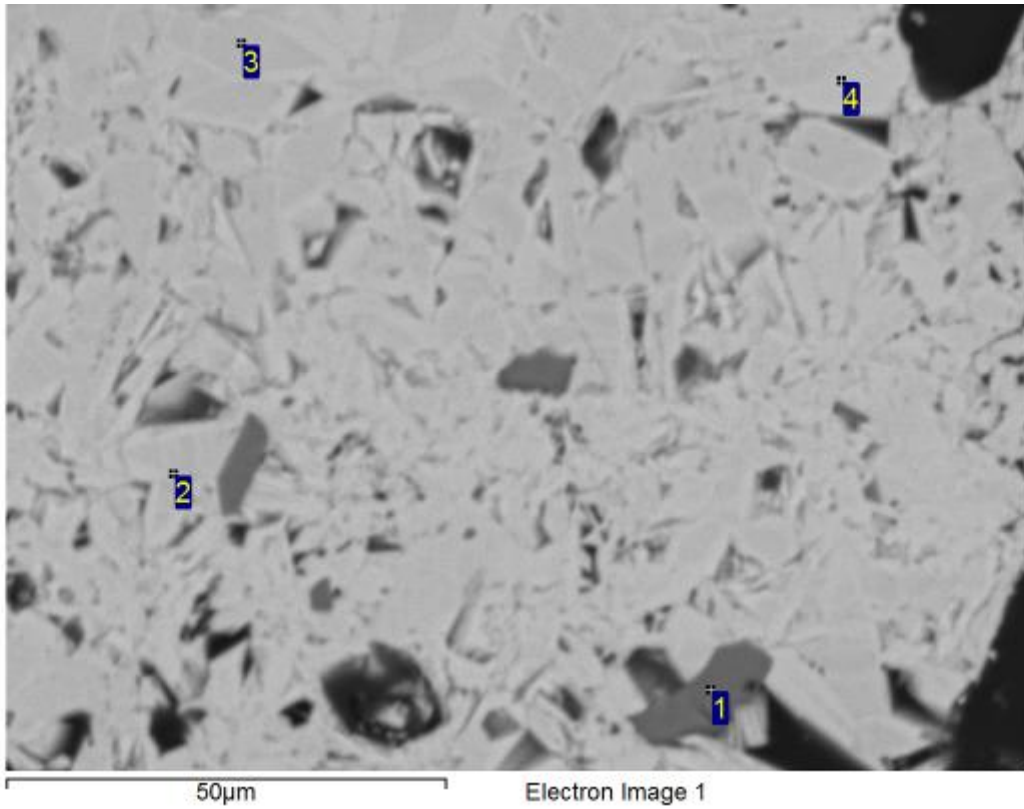
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	51.0	4.7	9.4	16.0	5.0	0.8	12.9	100.0	Mica
2	32.2						67.8	100.0	Fe Oxide
3	50.2	4.2	9.5	14.9	4.1	0.7	16.4	100.0	Mica

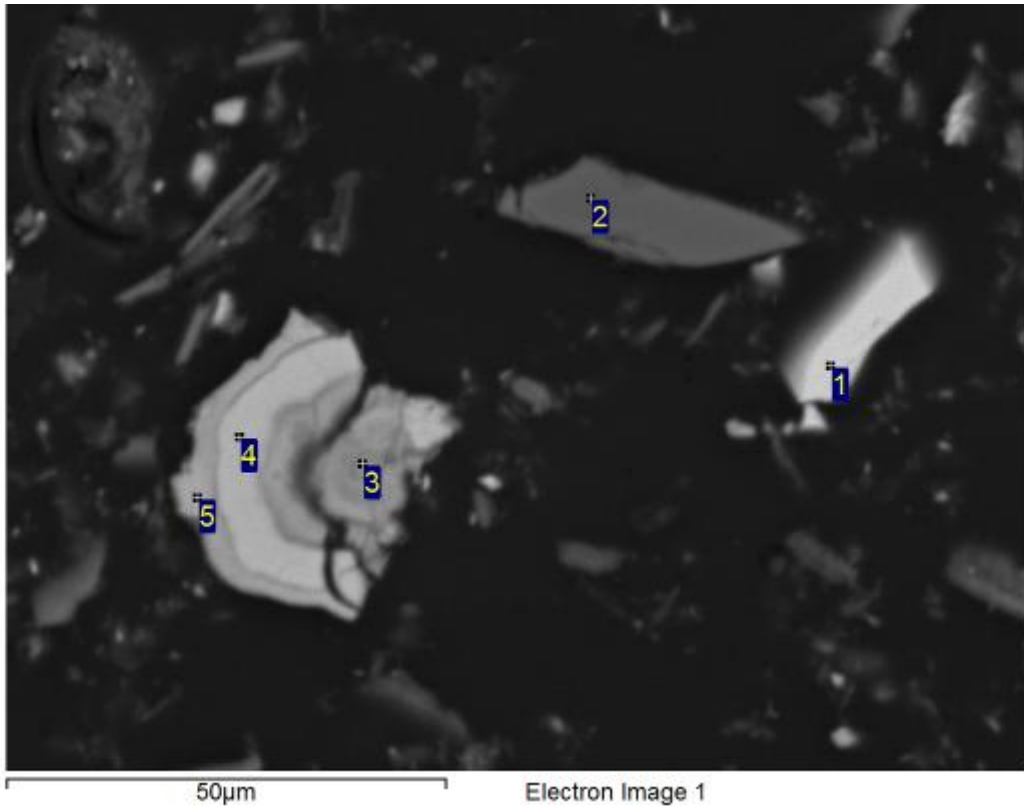
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ti	Fe	Total	Mineral ID
1	52.9	1.4	13.3	19.9		8.2	0.3	4.0	100.0	Mica
2	45.5		0.3	1.8	0.7			51.7	100.0	Fe Oxide
3	46.3			2.1	0.7			50.9	100.0	Fe Oxide
4	44.6			1.2	0.5			53.7	100.0	Fe Oxide

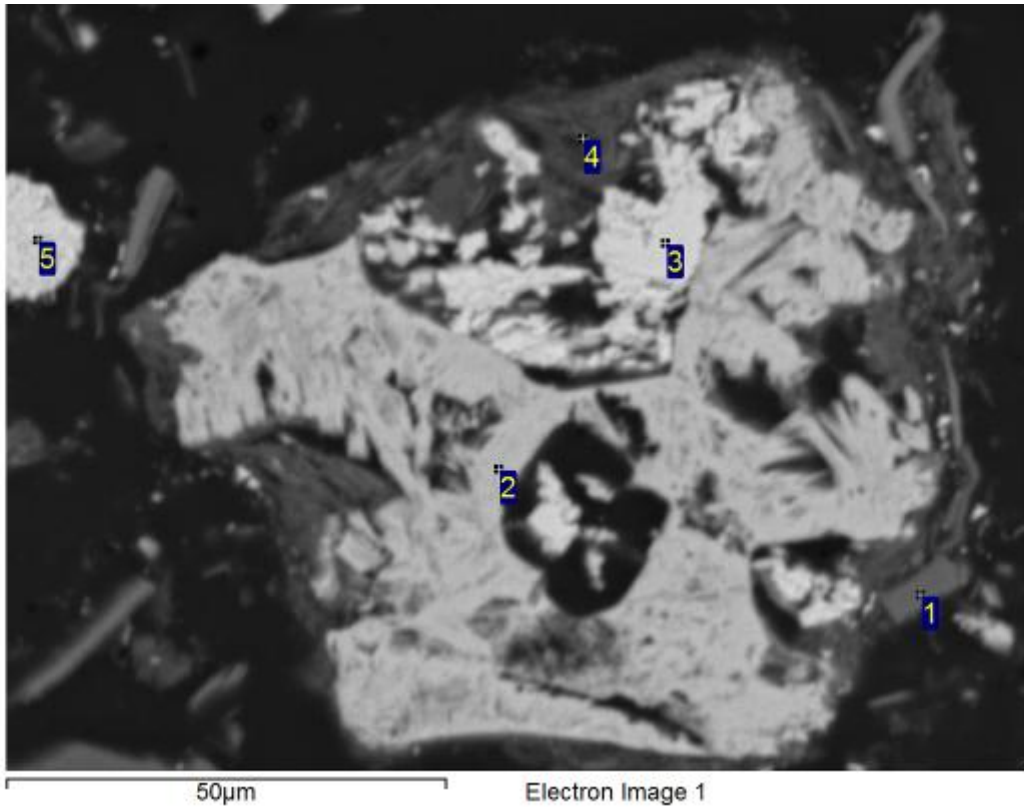
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Fe	Total	Mineral ID
1	37.6				62.4	100.0	Fe Oxide
2	57.3		42.4		0.3	100.0	Quartz
3	21.8	1.9	1.0	0.8	74.5	100.0	Fe Oxide
4	46.7	1.0	1.5	0.5	50.4	100.0	Fe Oxide
5	43.5	1.6	1.1	0.6	53.2	100.0	Fe Oxide

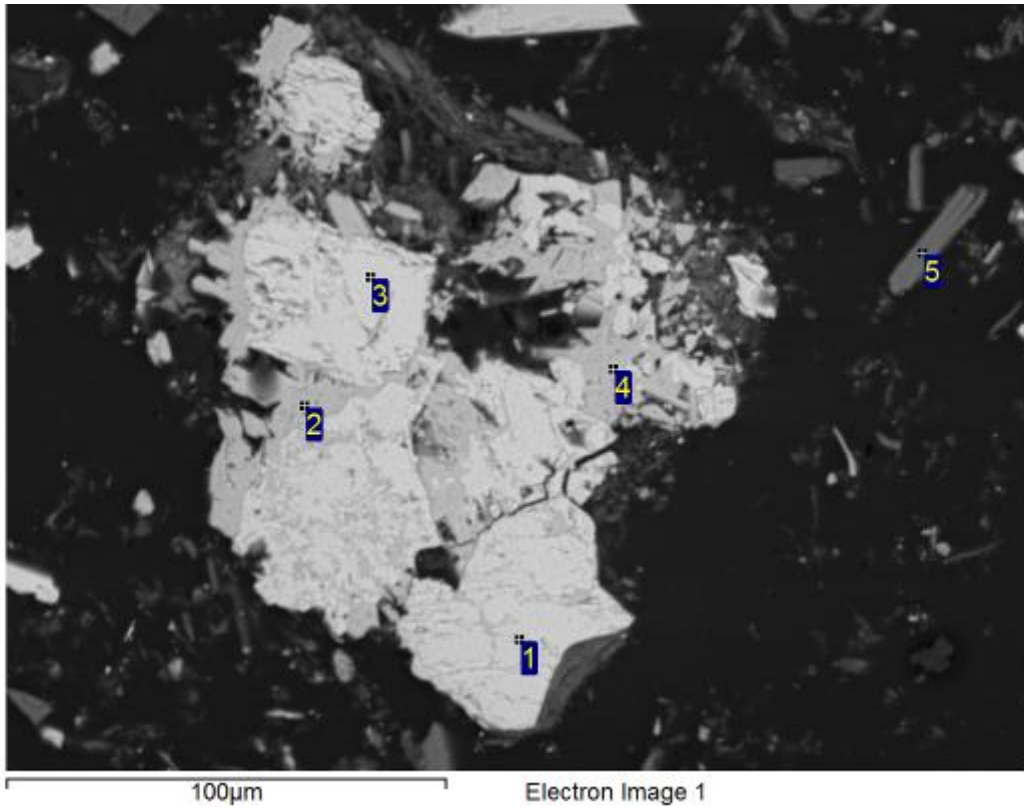
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Cl	K	Ti	Mn	Fe	Total	Mineral ID
1	58.2		41.2					0.6	100.0	Quartz
2	45.6		1.4				0.3	52.7	100.0	Fe Oxide
3	37.8							62.2	100.0	Fe Oxide
4	52.7	20.2	15.0	0.5	1.3	0.5		9.8	100.0	Clay
5	33.9							66.1	100.0	Fe Oxide

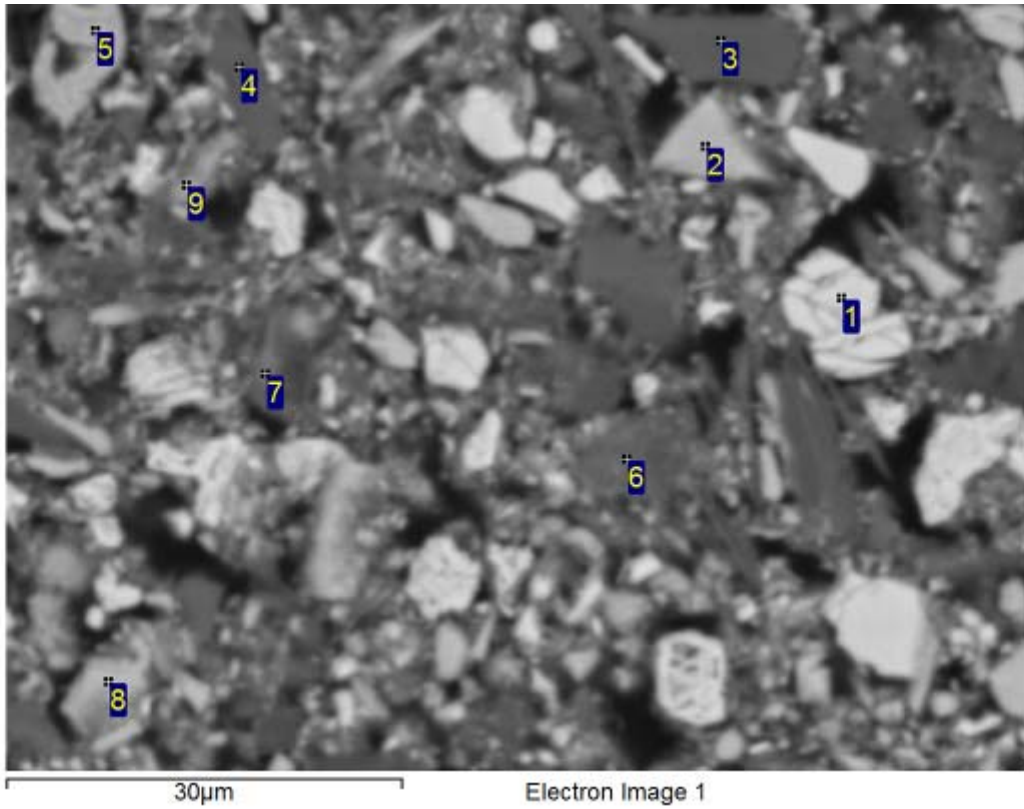
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Fe	Total	Mineral ID
1	36.8						63.2	100.0	Fe Oxide
2	44.5				0.3		55.2	100.0	Fe Oxide
3	37.6						62.4	100.0	Fe Oxide
4	40.0				0.5		59.5	100.0	Fe Oxide
5	51.8	0.8	0.4	16.3	21.2	7.3	2.2	100.0	Mica

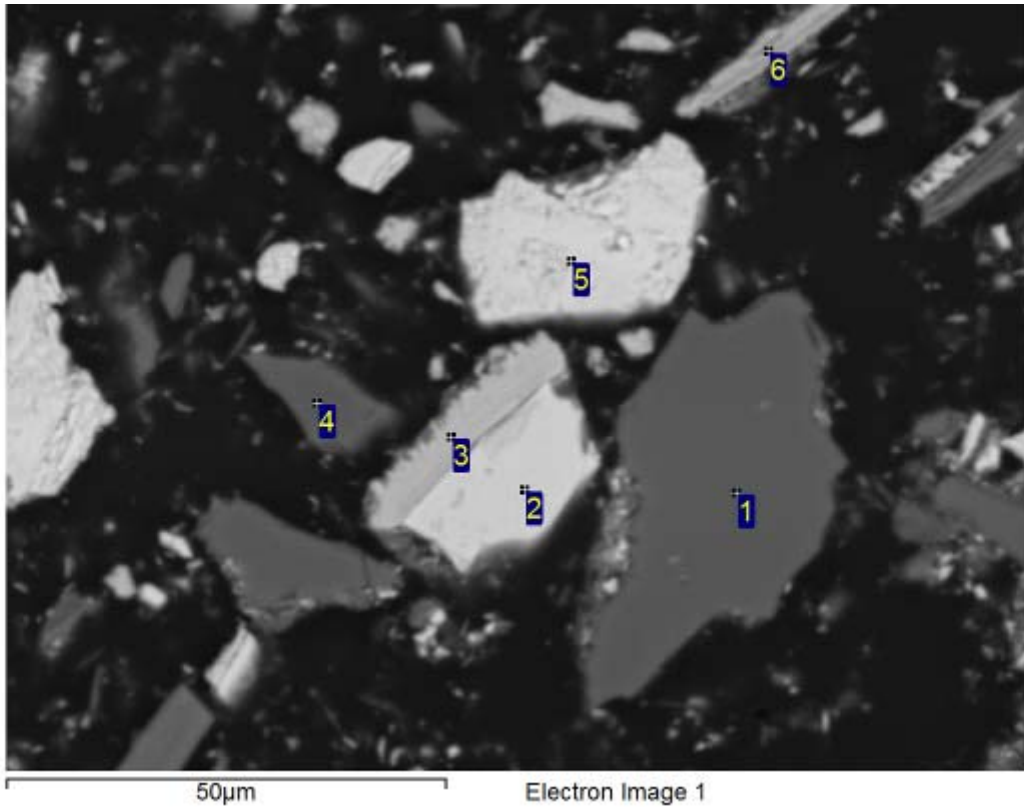
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	37.3								62.7	100.0	Fe Oxide
2	45.4			1.4	1.0				52.2	100.0	Fe Oxide
3	56.9			42.2					0.9	100.0	Quartz
4	56.6			41.2					2.2	100.0	Quartz
5	43.0		1.2	1.0	0.5			0.3	54.0	100.0	Fe Oxide
6	50.0		14.1	15.4		2.3	0.5		17.7	100.0	Mica
7	47.0	0.3	12.9	14.8		4.2			20.9	100.0	Mica
8	44.6	0.3	0.9	1.3	0.5			0.3	52.0	100.0	Fe Oxide
9	42.0		4.1	1.9				0.4	51.7	100.0	Fe Oxide

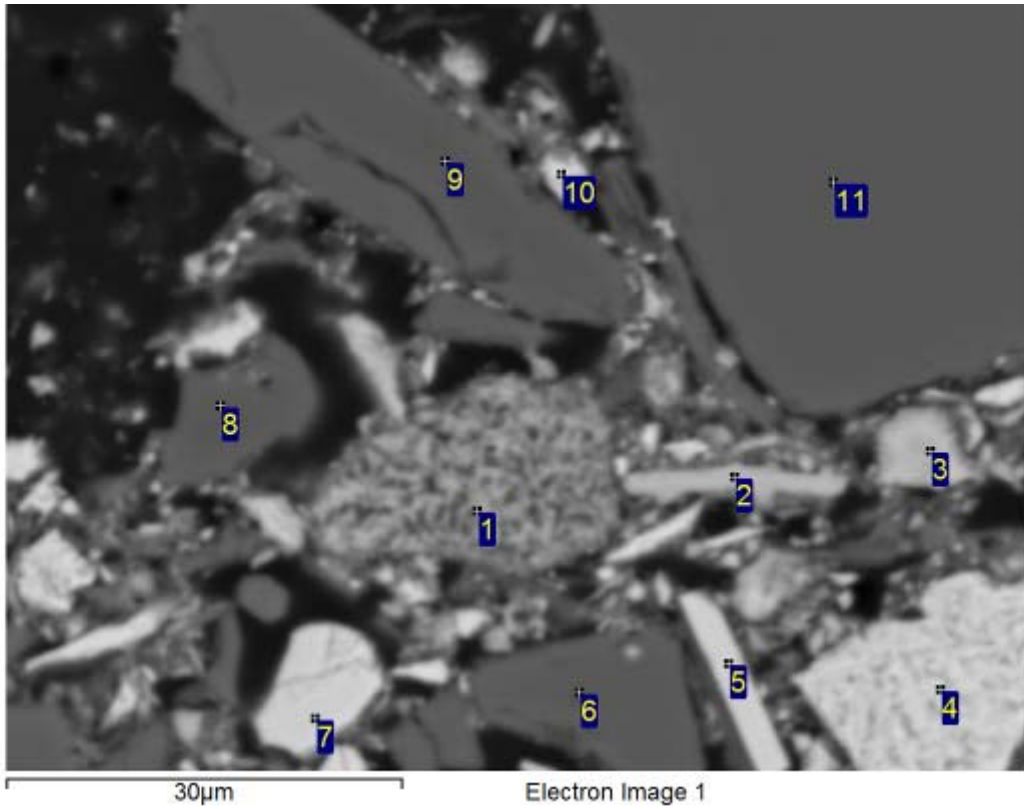
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Mn	Fe	Total	Mineral ID
1	55.9		43.6			0.6	100.0	Quartz
2	36.8					63.2	100.0	Fe Oxide
3	45.4		0.8			53.8	100.0	Fe Oxide
4	56.4		42.9			0.7	100.0	Quartz
5	36.1					63.9	100.0	Fe Oxide
6	39.3	2.1	0.7	0.7	0.6	56.6	100.0	Fe Oxide

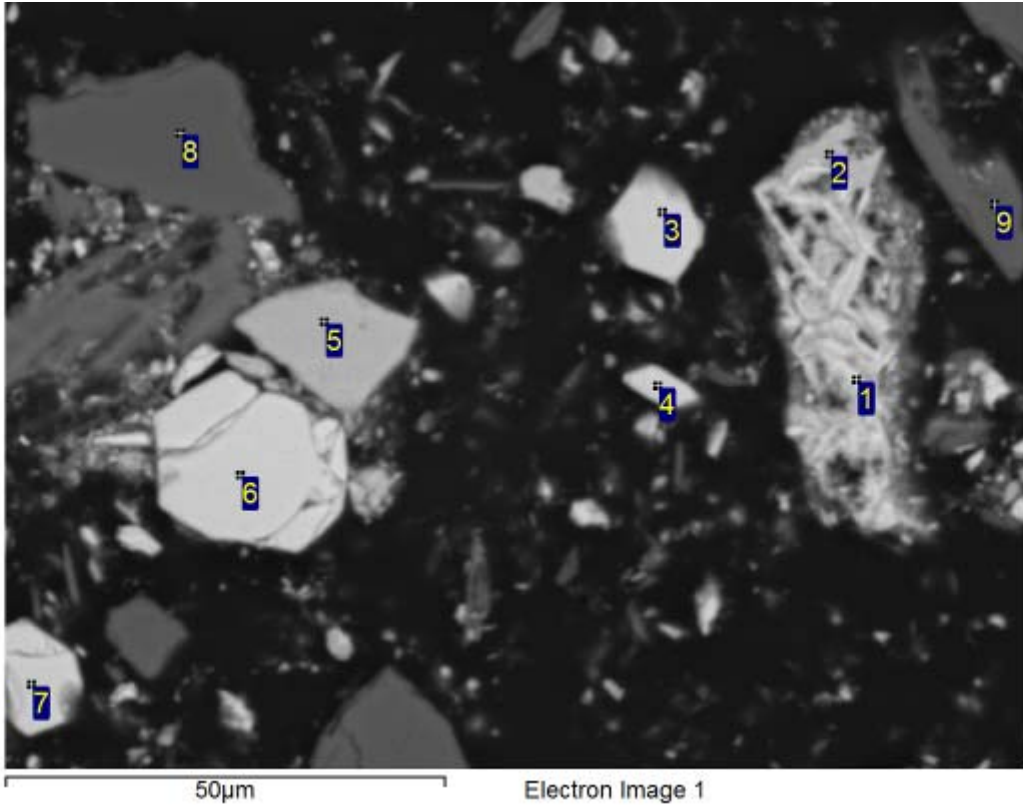
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Cl	Mn	Fe	Total	Mineral ID
1	32.2	1.1	0.7	0.5	0.4		65.1	100.0	Fe Oxide
2	45.6	1.8	1.7	0.4		0.5	50.0	100.0	Fe Oxide
3	41.9	0.7	0.7				56.7	100.0	Fe Oxide
4	35.4						64.6	100.0	Fe Oxide
5	38.5	1.7	1.6				58.3	100.0	Fe Oxide
6	55.3		43.8				0.9	100.0	Quartz
7	36.6						63.4	100.0	Fe Oxide
8	56.6	0.2	40.8				2.4	100.0	Quartz
9	55.6		43.8				0.6	100.0	Quartz
10	40.7	0.4	2.6				56.3	100.0	Fe Oxide
11	56.0		43.4				0.5	100.0	Quartz

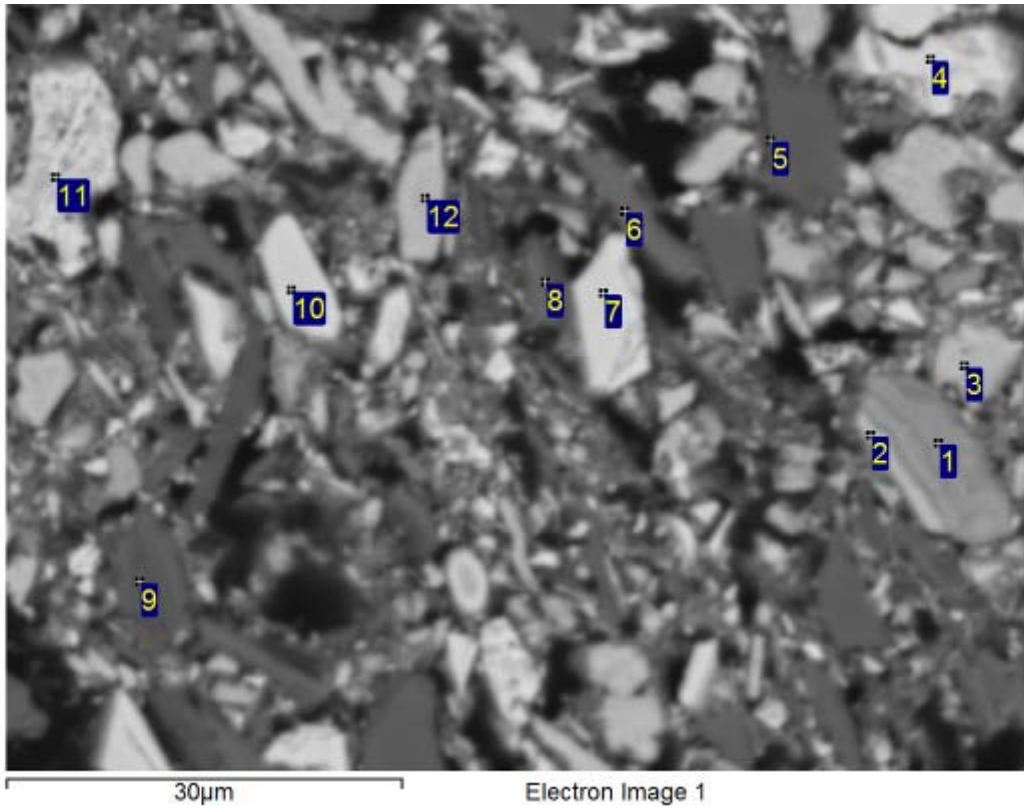
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Mn	Fe	Total	Mineral ID
1	37.6					62.4	100.0	Fe Oxide
2	44.2	0.4	1.1	0.3		54.0	100.0	Fe Oxide
3	37.1					62.9	100.0	Fe Oxide
4	36.2					63.8	100.0	Fe Oxide
5	46.5	0.7	1.7	0.4	0.5	50.2	100.0	Fe Oxide
6	36.6					63.4	100.0	Fe Oxide
7	36.3					63.7	100.0	Fe Oxide
8	56.3		43.1			0.6	100.0	Quartz
9	57.8		41.5			0.8	100.0	Quartz

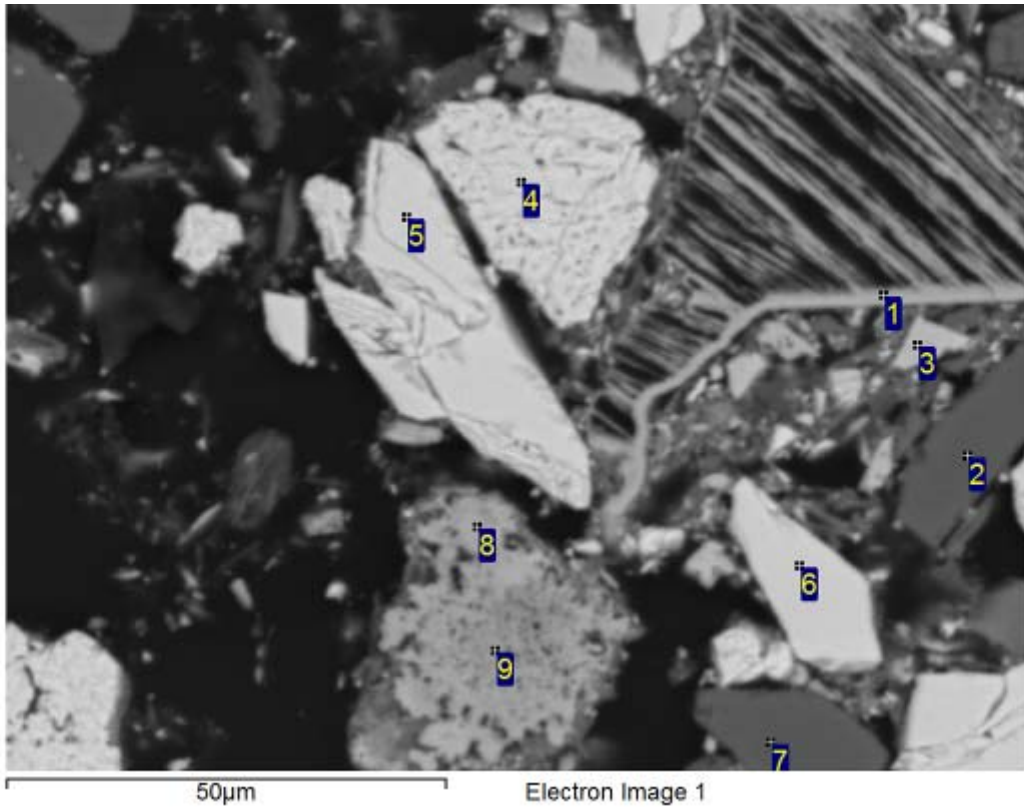
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	Cl	K	Ti	Mn	Fe	Total	Mineral ID
1	38.8			1.3	0.4	0.8	0.3			0.4	58.0	100.0	Fe Oxide
2	40.5			2.4	1.1	0.9	0.2				54.9	100.0	Fe Oxide
3	43.7			0.6	1.8						54.0	100.0	Fe Oxide
4	38.0										62.0	100.0	Fe Oxide
5	50.8			1.8	37.4						10.0	100.0	Quartz/Fe Oxide
6	48.7	0.4	0.4	14.9	17.9			6.0	0.2		11.5	100.0	Mica
7	37.4										62.6	100.0	Fe Oxide
8	53.2	0.4	0.5	15.8	20.1			5.2			4.8	100.0	Mica
9	56.2	0.3		18.4	21.2			2.5			1.4	100.0	Mica
10	37.0										63.0	100.0	Fe Oxide
11	34.0										66.0	100.0	Fe Oxide
12	45.4			0.6	1.6						52.4	100.0	Fe Oxide

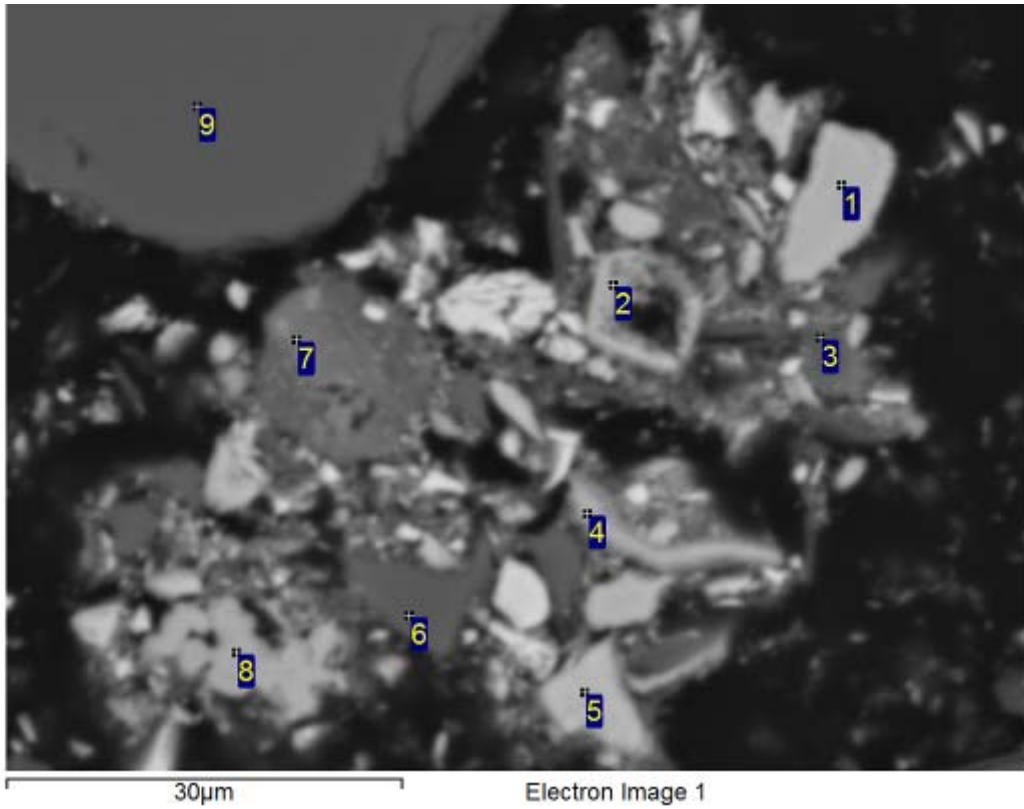
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Fe	Total	Mineral ID
1	47.2	6.6	0.4	1.3	44.4	100.0	Fe Oxide
2	56.6		42.6		0.7	100.0	Quartz
3	46.3	0.4	0.9	0.9	51.5	100.0	Fe Oxide
4	37.1		0.5		62.4	100.0	Fe Oxide
5	36.9				63.1	100.0	Fe Oxide
6	37.5				62.5	100.0	Fe Oxide
7	56.5		42.9		0.6	100.0	Quartz
8	43.5	1.0	1.1	0.6	53.8	100.0	Fe Oxide
9	41.4	1.1	1.1	0.6	55.8	100.0	Fe Oxide

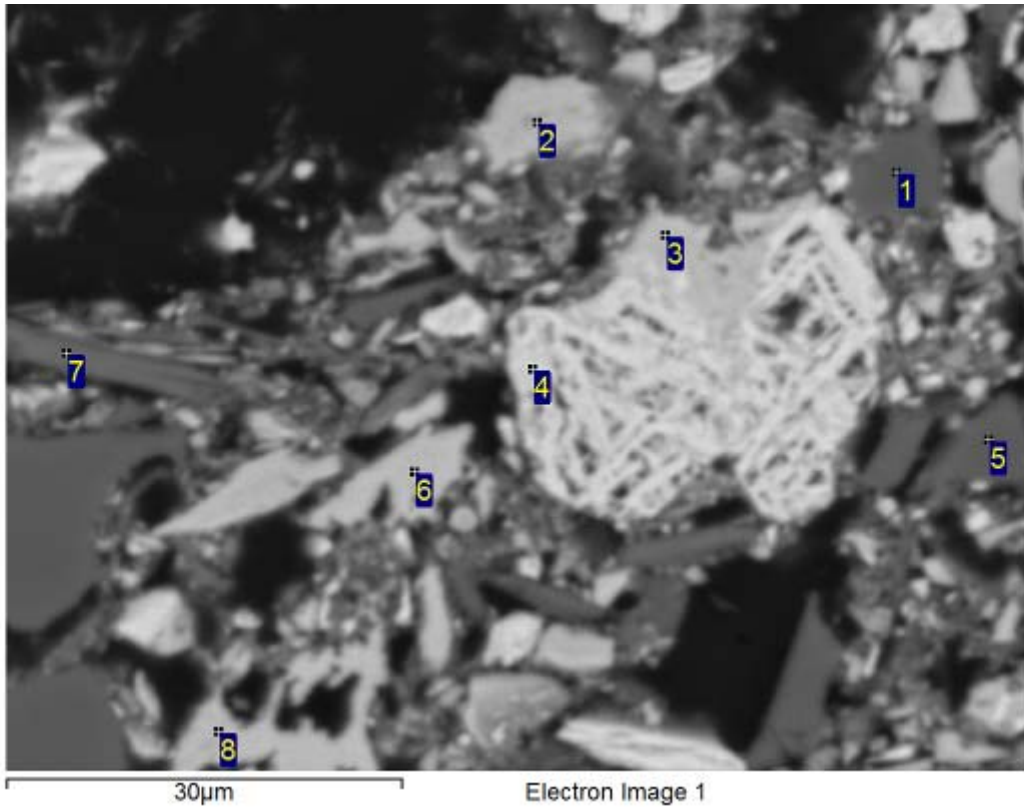
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	Cl	K	Ti	Mn	Fe	Total	Mineral ID
1	46.7		1.0	1.1					0.4	50.8	100.0	Fe Oxide
2	44.0		1.4	1.4					0.8	52.3	100.0	Fe Oxide
3	33.2		4.9	3.8	0.4	0.7			0.4	56.4	100.0	Fe Oxide
4	45.4		2.0	6.0	0.6	0.3				45.8	100.0	Fe Oxide
5	45.0		0.3	0.6	1.2					52.9	100.0	Fe Oxide
6	56.4			42.4						1.2	100.0	Quartz
7	40.4		10.0	7.0	0.5	0.2	0.9	0.3	0.4	40.4	100.0	Fe Oxide
8	48.5	0.4	2.3	1.5	0.4				0.3	46.5	100.0	Fe Oxide
9	55.6			43.9						0.5	100.0	Quartz

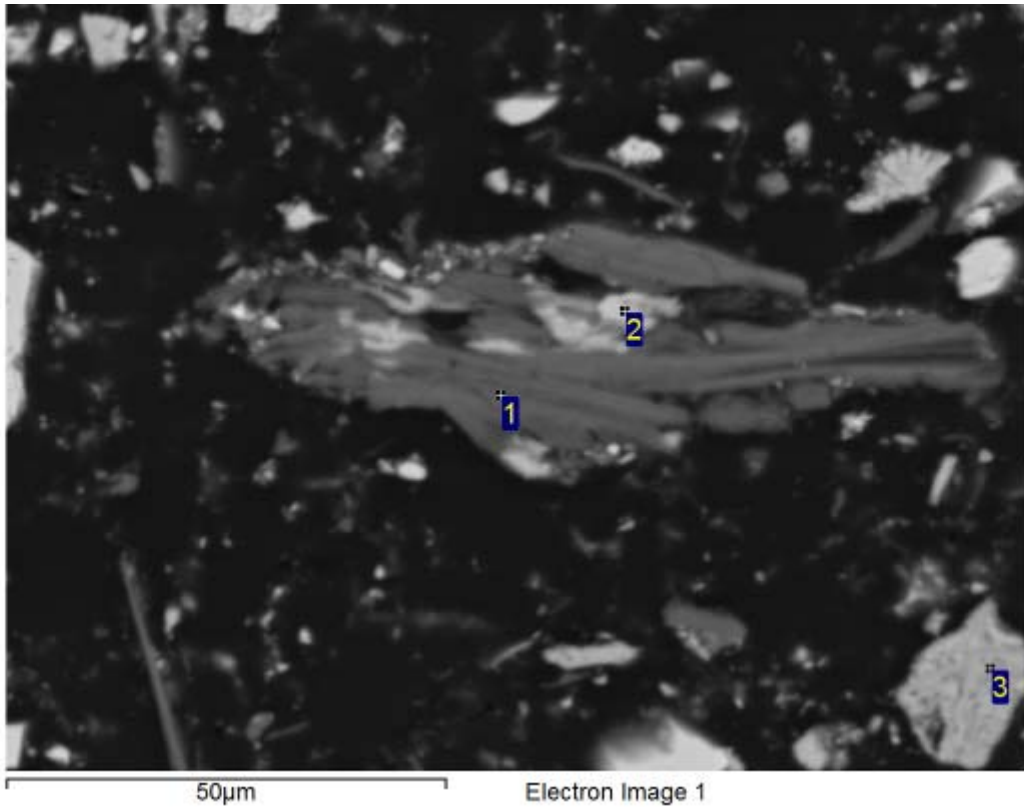
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Fe	Total	Mineral ID
1	57.0				39.6		3.4	100.0	Quartz
2	44.2			0.2	1.7		53.9	100.0	Fe Oxide
3	43.6			0.3	0.4		55.7	100.0	Fe Oxide
4	37.5						62.5	100.0	Fe Oxide
5	57.0				41.7		1.3	100.0	Quartz
6	44.1				0.4		55.5	100.0	Fe Oxide
7	54.3	0.4	0.6	15.1	19.5	6.3	3.9	100.0	Mica
8	44.4				0.6		55.1	100.0	Fe Oxide

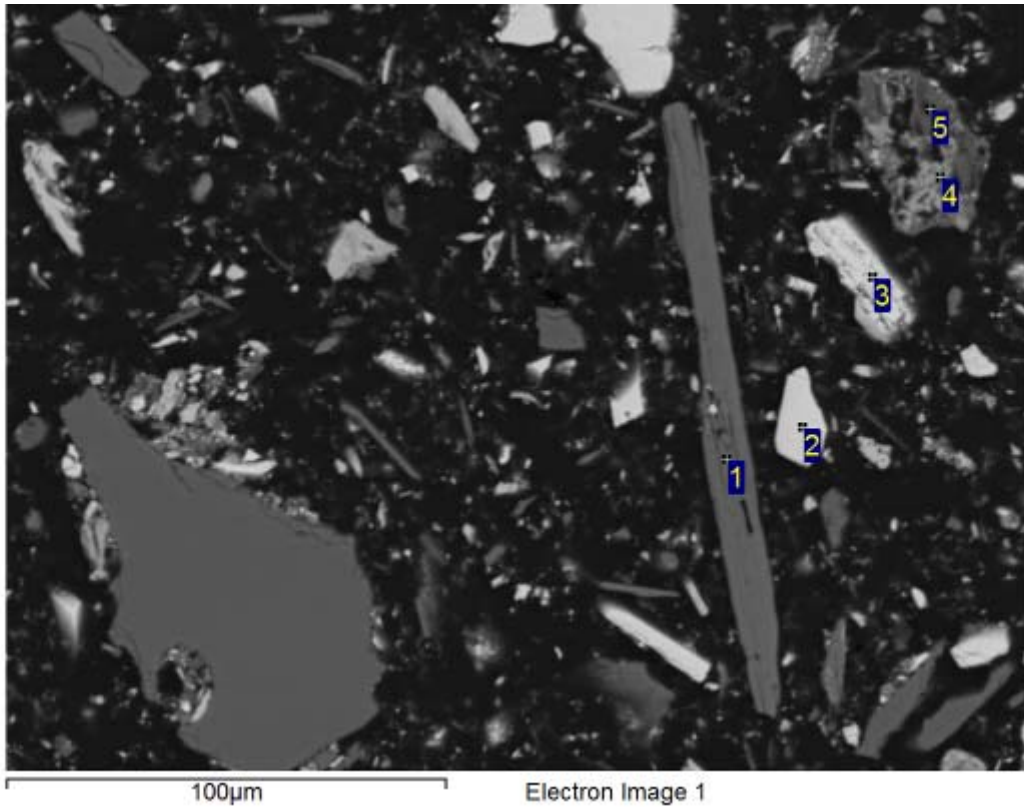
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	K	Mn	Fe	Total	Mineral ID
1	55.1	0.2	0.5	16.7	20.4	4.9		2.2	100.0	Mica
2	40.0			1.9	2.4			55.7	100.0	Fe Oxide
3	42.6			1.0	2.0		0.4	54.0	100.0	Fe Oxide

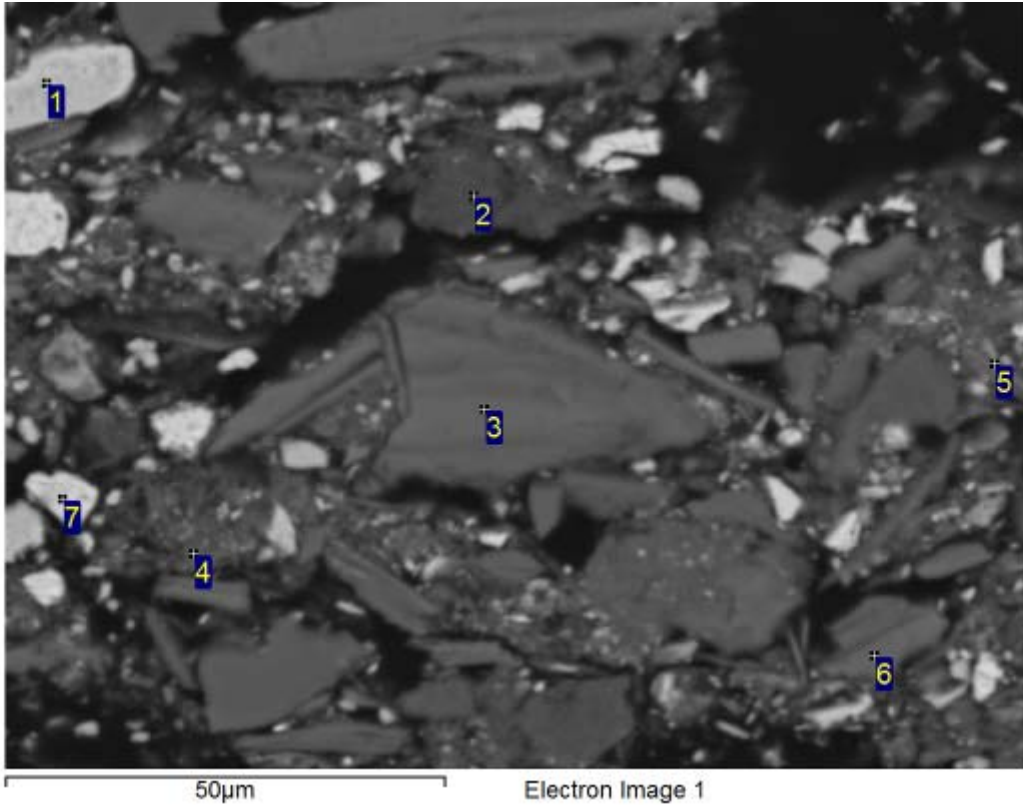
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	Cl	K	Ti	Fe	Total	Mineral ID
1	53.2	0.5	0.6	16.3	20.8		6.9		1.6	100.0	Mica
2	36.9								63.1	100.0	Fe Oxide
3	37.3								62.7	100.0	Fe Oxide
4	45.7			1.9	2.0	0.3		44.3	5.8	100.0	Rutile
5	47.2			20.4	23.9	0.5		4.1	4.0	100.0	Kaolinite

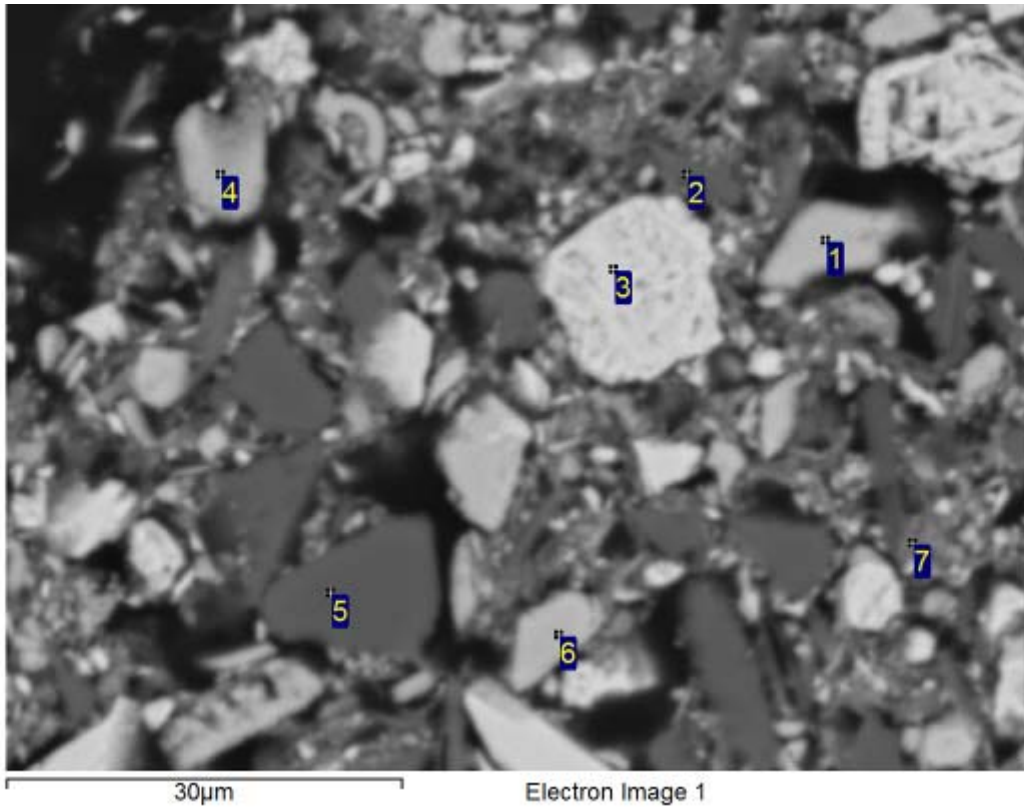
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	Cl	K	Ti	Mn	Fe	Total	Mineral ID
1	40.2			0.5	0.4					58.8	100.0	Fe Oxide
2	57.4			19.3	22.0					1.2	100.0	Kaolinite
3	52.8	0.6		17.4	19.9		7.4			1.9	100.0	Mica
4	50.8			13.9	15.2	0.3	1.8		0.3	17.8	100.0	Nontronite
5	52.4	0.2	0.9	13.6	19.3	0.2	6.3	0.3	0.5	6.3	100.0	Mica
6	53.9	0.4	0.7	15.6	19.8		6.9	0.3		2.3	100.0	Mica
7	38.6									61.4	100.0	Fe Oxide

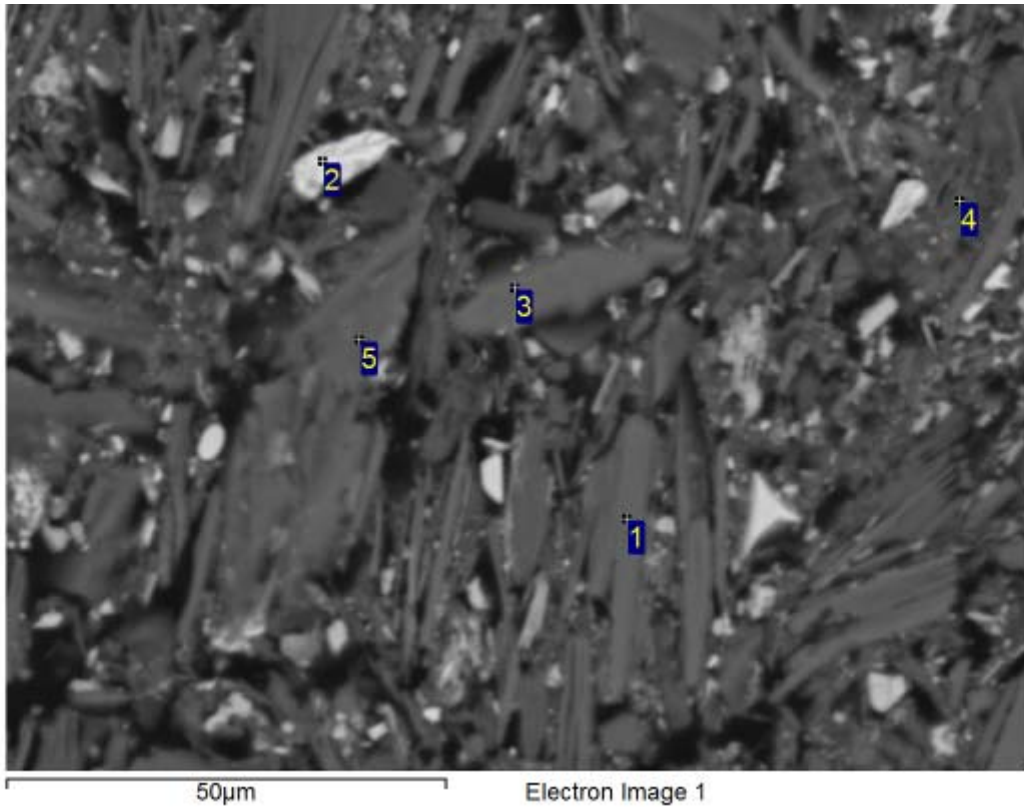
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Cl	Mn	Fe	Total	Mineral ID
1	45.0	0.3	1.8				52.9	100.0	Fe Oxide
2	54.5	0.6	37.6				7.3	100.0	Quartz
3	37.0		0.2				62.8	100.0	Fe Oxide
4	46.3	1.7	0.6	1.0		1.2	49.3	100.0	Fe Oxide
5	56.3		42.8				0.9	100.0	Quartz
6	44.9	0.2	0.3	0.6			53.9	100.0	Fe Oxide
7	40.6	9.9	7.6		0.3		41.6	100.0	Fe Oxide

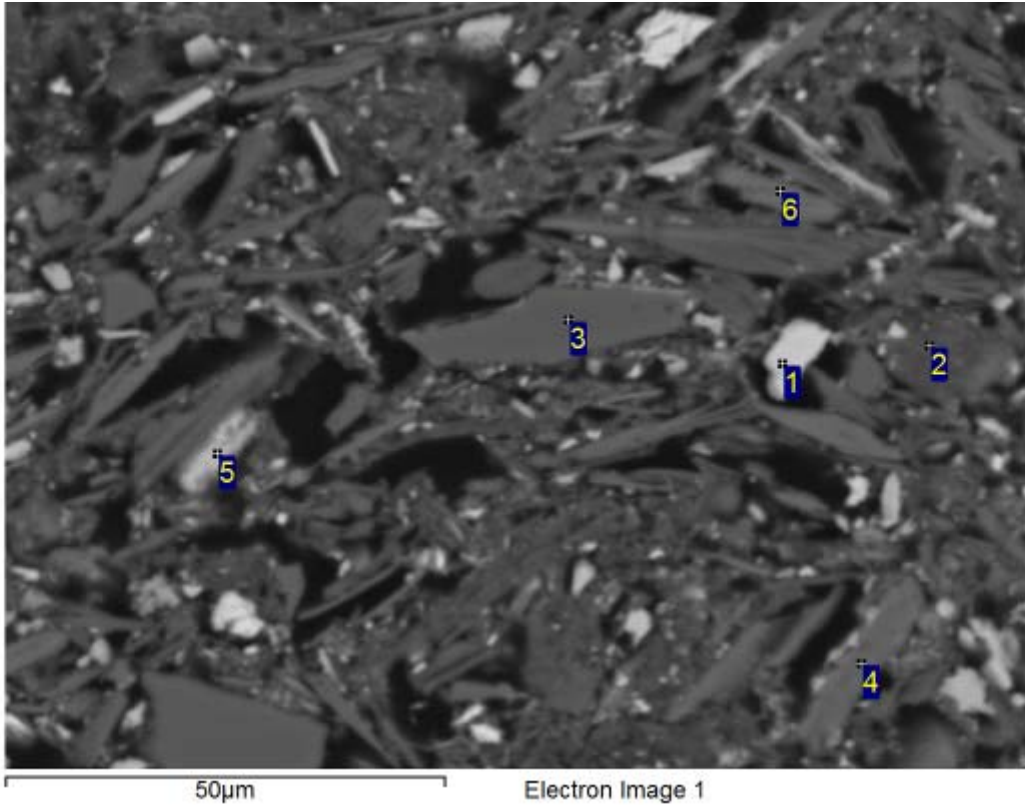
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	Cl	K	Ti	Mn	Fe	Total	Mineral ID
1	53.6	0.5	0.5	16.1	20.3		7.1	0.2		1.7	100.0	Mica
2	33.1									66.9	100.0	Fe Oxide
3	50.9	0.8	0.4	16.8	21.3		7.3			2.4	100.0	Mica
4	50.6	0.4		17.0	16.3	0.5	1.7		0.9	12.6	100.0	Nontronite
5	56.7	0.3	0.4	15.7	19.3		4.7	0.2		2.7	100.0	Mica

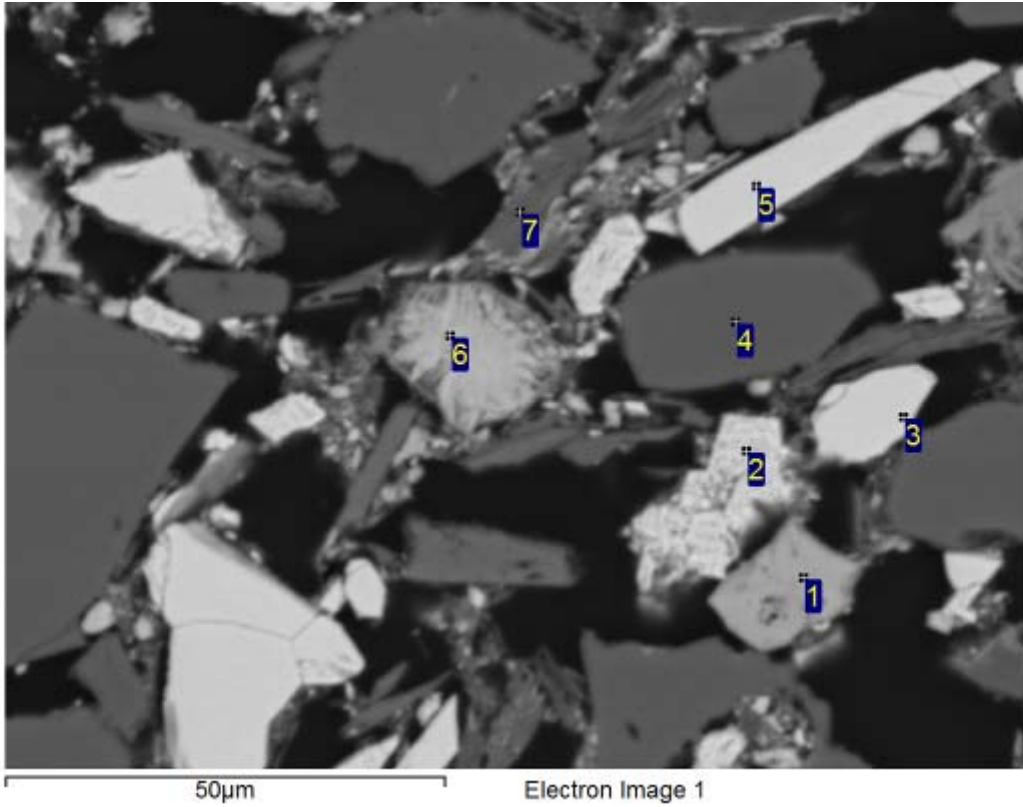
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	Cl	K	Ti	Fe	Total	Mineral ID
1	39.5			0.7	0.3	0.7				58.7	100.0	Fe Oxide
2	47.1			16.8	16.1		0.4	3.8	0.3	15.5	100.0	Nontronite
3	55.5				43.9					0.6	100.0	Quartz
4	53.0	0.4	0.5	15.4	20.4			7.6	0.3	2.4	100.0	Mica
5	39.6			3.0	3.6		0.2			53.5	100.0	Fe Oxide
6	52.6	0.3	0.7	15.8	20.4			7.3	0.3	2.6	100.0	Mica

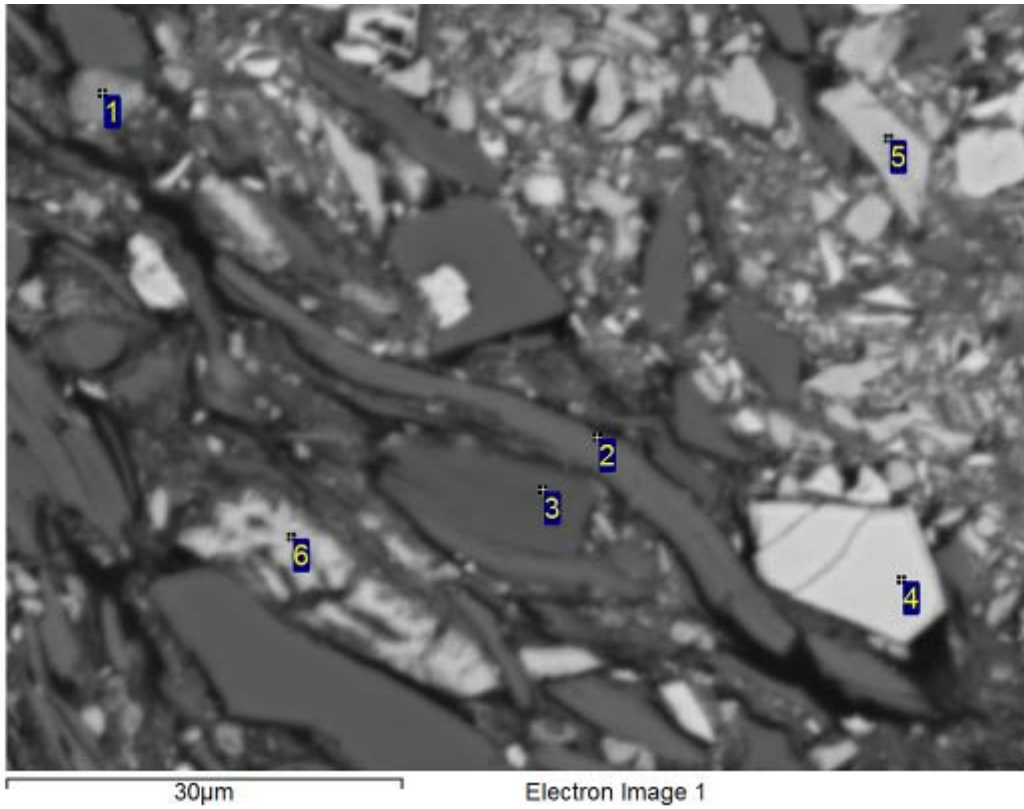
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	K	Mn	Fe	Total	Mineral ID
1	44.7	2.1	0.3	0.4		0.3	52.3	100.0	Fe Oxide
2	33.8						66.2	100.0	Fe Oxide
3	36.1						63.9	100.0	Fe Oxide
4	55.8		43.5				0.7	100.0	Quartz
5	36.6						63.4	100.0	Fe Oxide
6	41.7	0.8	0.6	0.6			56.3	100.0	Fe Oxide
7	55.3	16.7	20.1		1.6		6.2	100.0	Mica

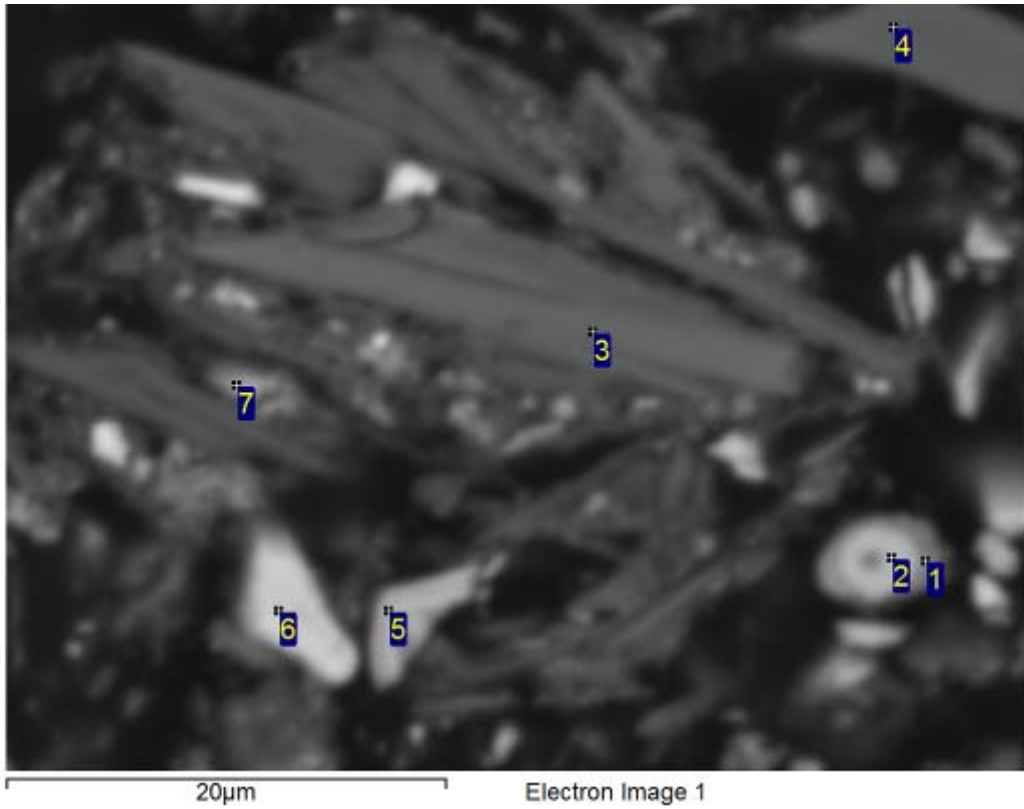
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	Cl	K	Ti	Mn	Fe	Total	Mineral ID
1	38.7			2.2	4.9	0.4					53.7	100.0	Fe Oxide
2	53.5	0.4	0.5	15.4	19.8		0.2	5.9	0.2		4.1	100.0	Mica
3	59.4			17.9	20.1			0.2	0.2		2.4	100.0	Kaolinite
4	35.7										64.3	100.0	Fe Oxide
5	40.8				0.3						58.9	100.0	Fe Oxide
6	41.5			2.7	2.3				0.5	0.5	52.5	100.0	Fe Oxide

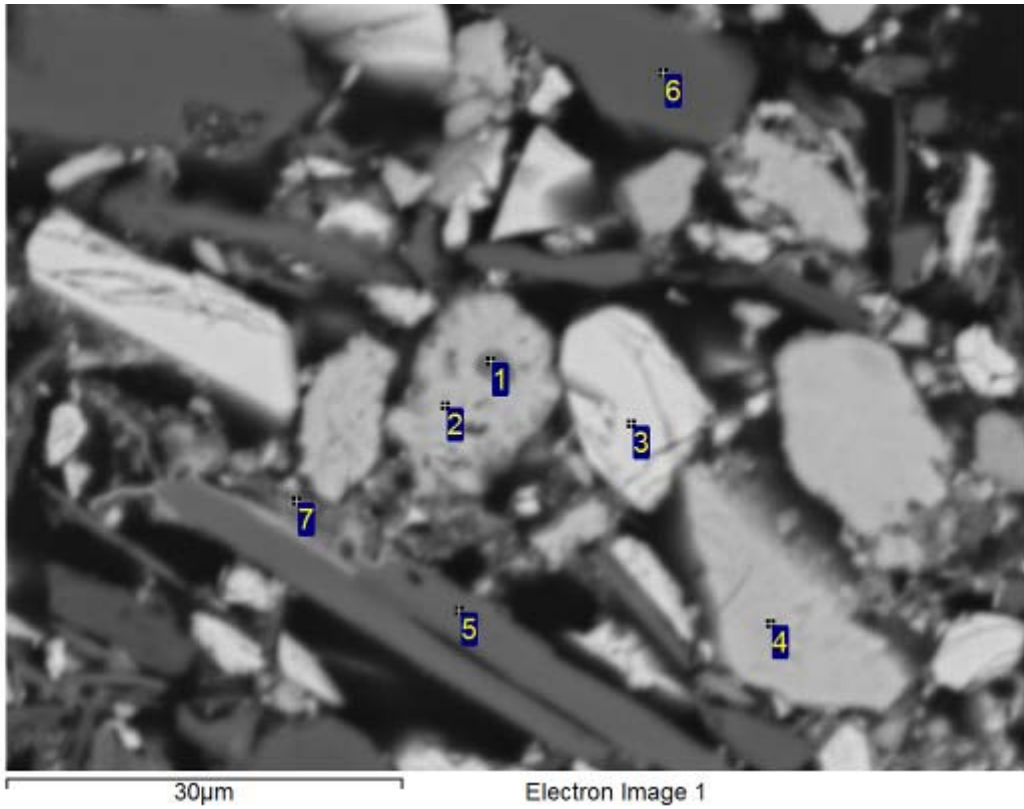
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	Cl	K	Ti	Mn	Fe	Total	Mineral ID
1	42.9			3.9	1.1	0.4	0.3			0.4	51.0	100.0	Fe Oxide
2	45.9			2.7	1.4	0.5					49.6	100.0	Fe Oxide
3	53.2	0.5	0.6	16.4	20.3			7.1	0.2		1.7	100.0	Mica
4	56.0				43.2						0.8	100.0	Quartz
5	44.4			3.9	2.2						49.5	100.0	Fe Oxide
6	40.1			1.1	1.5						57.3	100.0	Fe Oxide
7	33.7			7.4	6.3		0.3	0.2			52.0	100.0	Fe Oxide

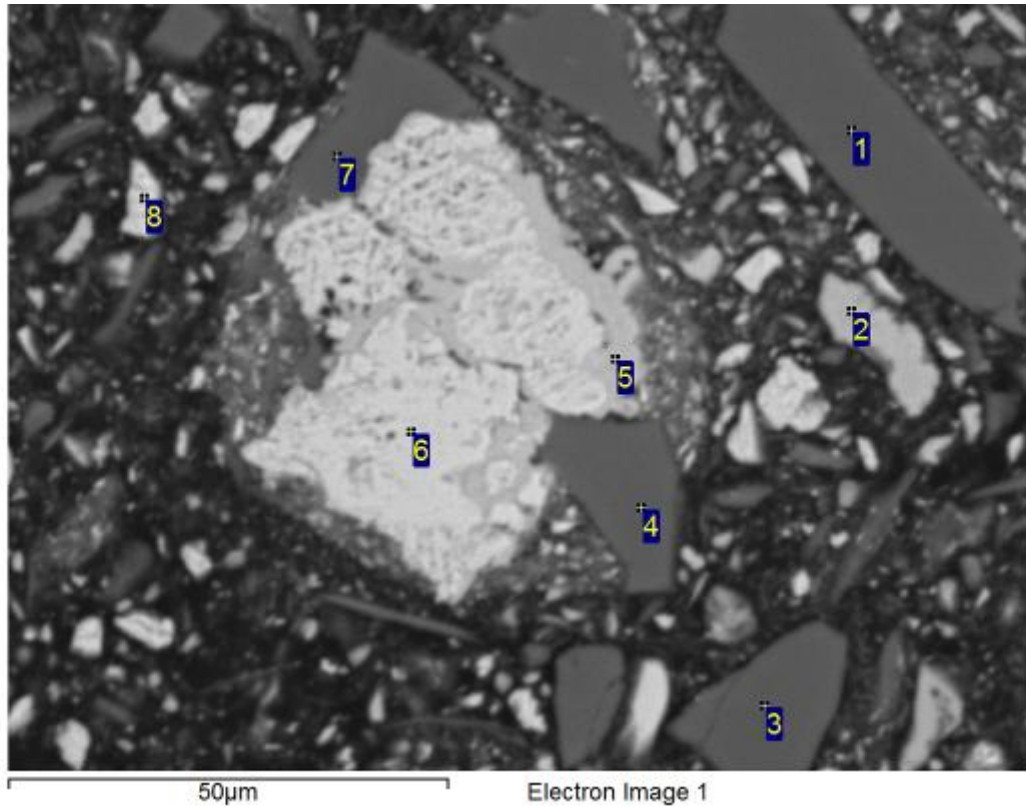
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	Cl	K	Ti	Fe	Total	Mineral ID
1	28.6			0.5	1.2					69.7	100.0	Fe Oxide
2	45.1			0.6	1.4					53.0	100.0	Fe Oxide
3	38.2									61.8	100.0	Fe Oxide
4	44.0			0.2	1.0					54.7	100.0	Fe Oxide
5	54.1	0.5	0.6	15.2	19.9			7.3	0.2	2.2	100.0	Mica
6	56.8				42.1					1.1	100.0	Quartz
7	40.5			7.9	7.1	0.4	0.3	1.7		42.2	100.0	Fe Oxide

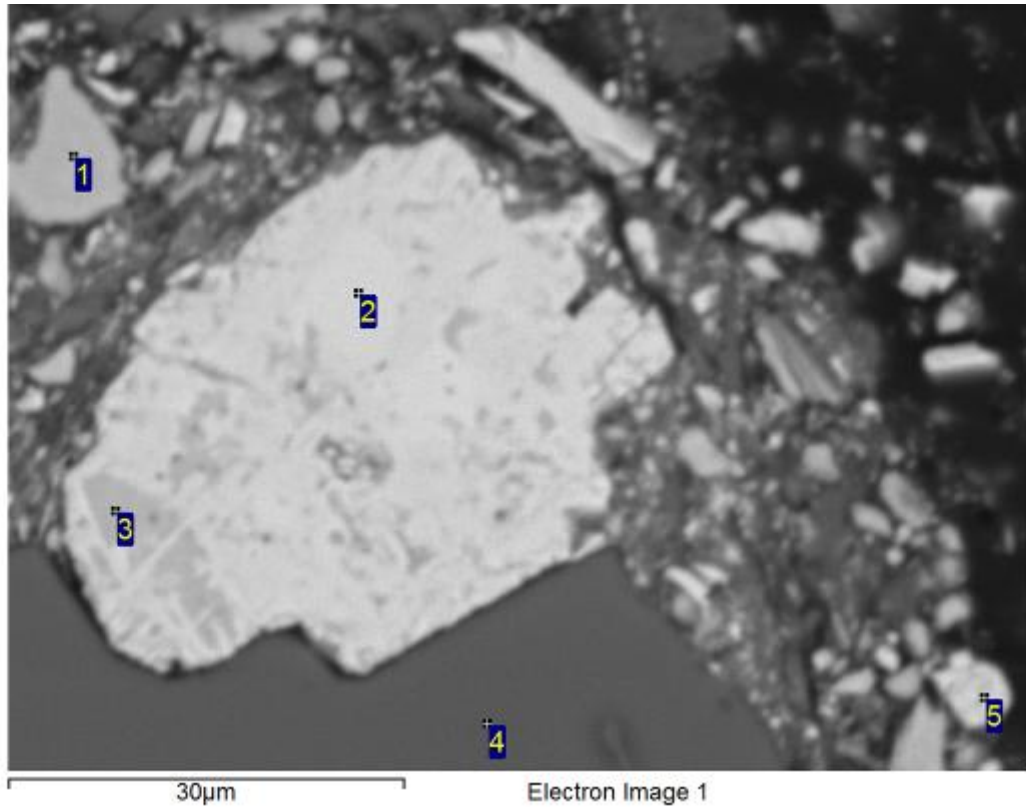
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Mn	Fe	Total	Mineral ID
1	56.2		43.2		0.5	100.0	Quartz
2	44.7	1.2	1.2	0.3	52.7	100.0	Fe Oxide
3	56.9		42.5		0.6	100.0	Quartz
4	55.9		43.4		0.7	100.0	Quartz
5	43.7	0.7	0.9		54.6	100.0	Fe Oxide
6	37.4				62.6	100.0	Fe Oxide
7	57.4		41.4		1.2	100.0	Quartz
8	35.7		0.4		64.0	100.0	Fe Oxide

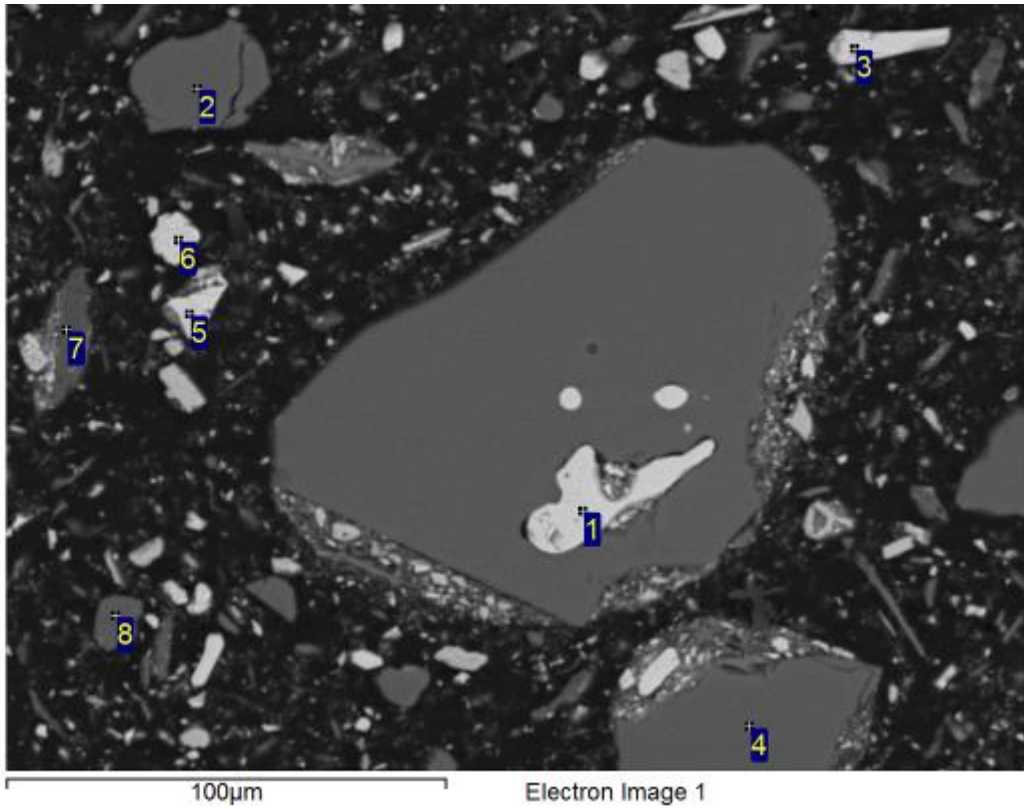
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	45.4	0.5	1.0	53.2	100.0	Fe Oxide
2	35.3		0.5	64.3	100.0	Fe Oxide
3	45.4		0.9	53.7	100.0	Fe Oxide
4	56.9		42.6	0.5	100.0	Quartz
5	35.4			64.6	100.0	Fe Oxide

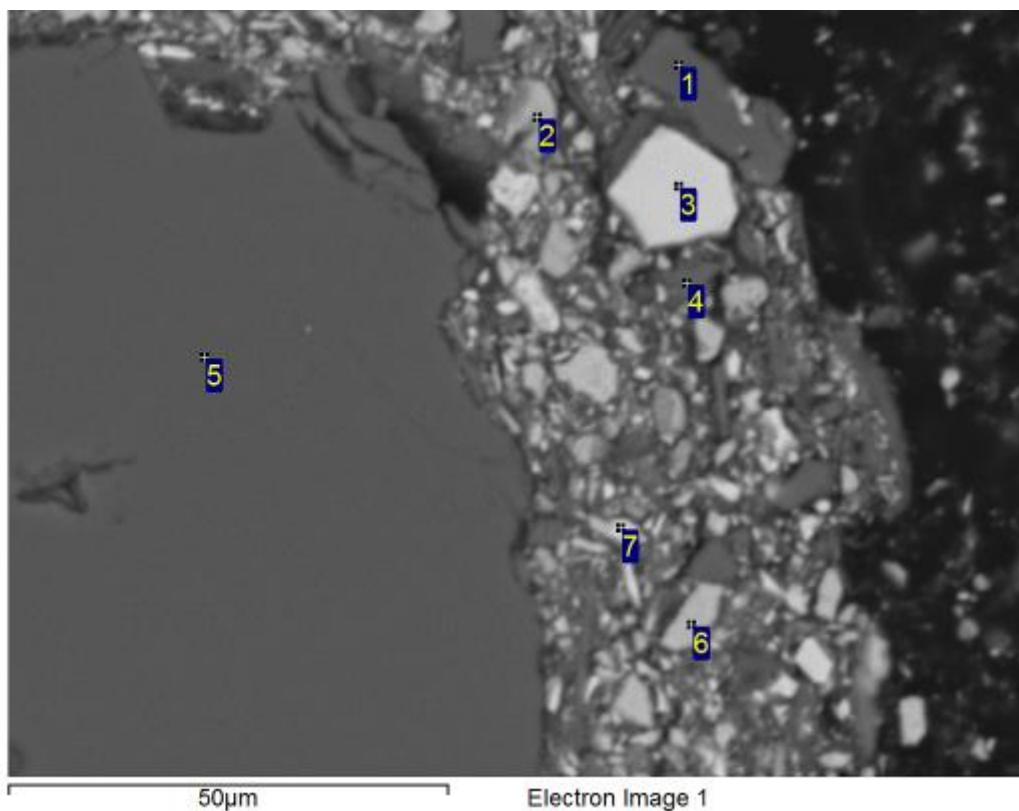
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Ti	Fe	Total	Mineral ID
1	34.5			1.8	63.7	100.0	Fe Oxide
2	56.0		43.4		0.6	100.0	Quartz
3	38.0				62.0	100.0	Fe Oxide
4	57.0		42.6		0.4	100.0	Quartz
5	37.0				63.0	100.0	Fe Oxide
6	35.7				64.3	100.0	Fe Oxide
7	59.5	18.8	20.5		1.1	100.0	Kaolinite
8	56.9		42.6		0.5	100.0	Quartz

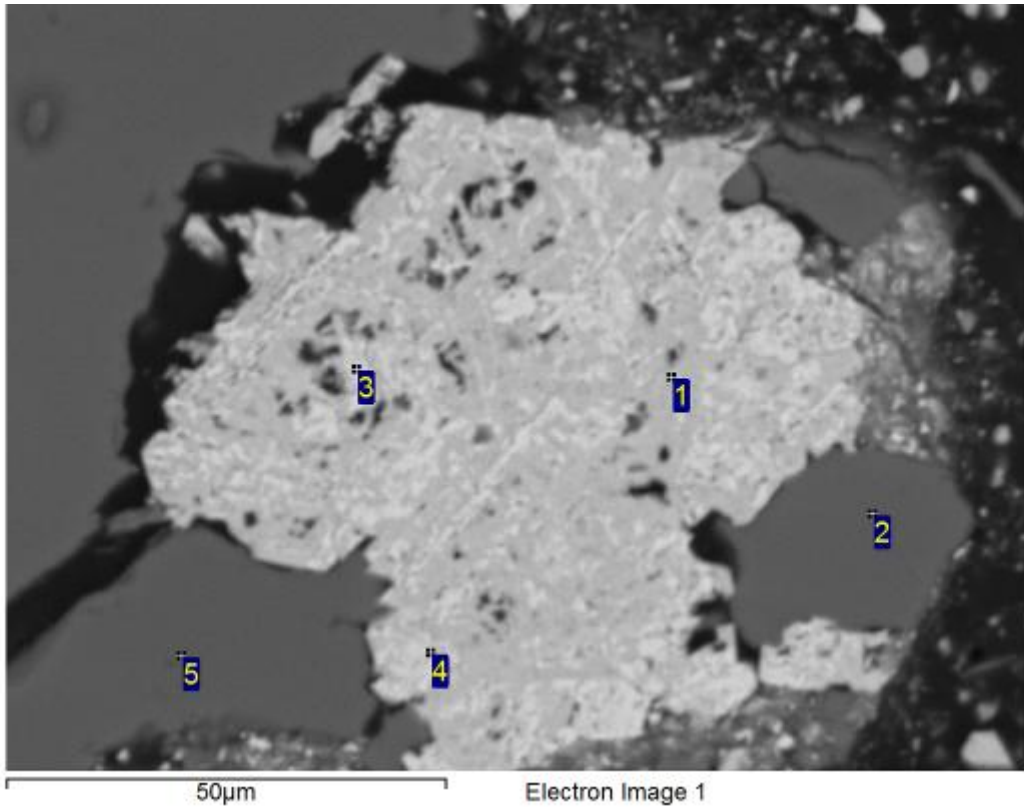
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Ti	Fe	Total	Mineral ID
1	57.6		41.9			0.5	100.0	Quartz
2	42.2	1.6	0.4	0.5		55.3	100.0	Fe Oxide
3	37.1				0.4	62.5	100.0	Fe Oxide
4	56.7		41.2			2.2	100.0	Quartz
5	56.3		43.3			0.4	100.0	Quartz
6	46.1	0.6	1.3	0.4		51.7	100.0	Fe Oxide
7	40.6	0.6	0.4			58.4	100.0	Fe Oxide

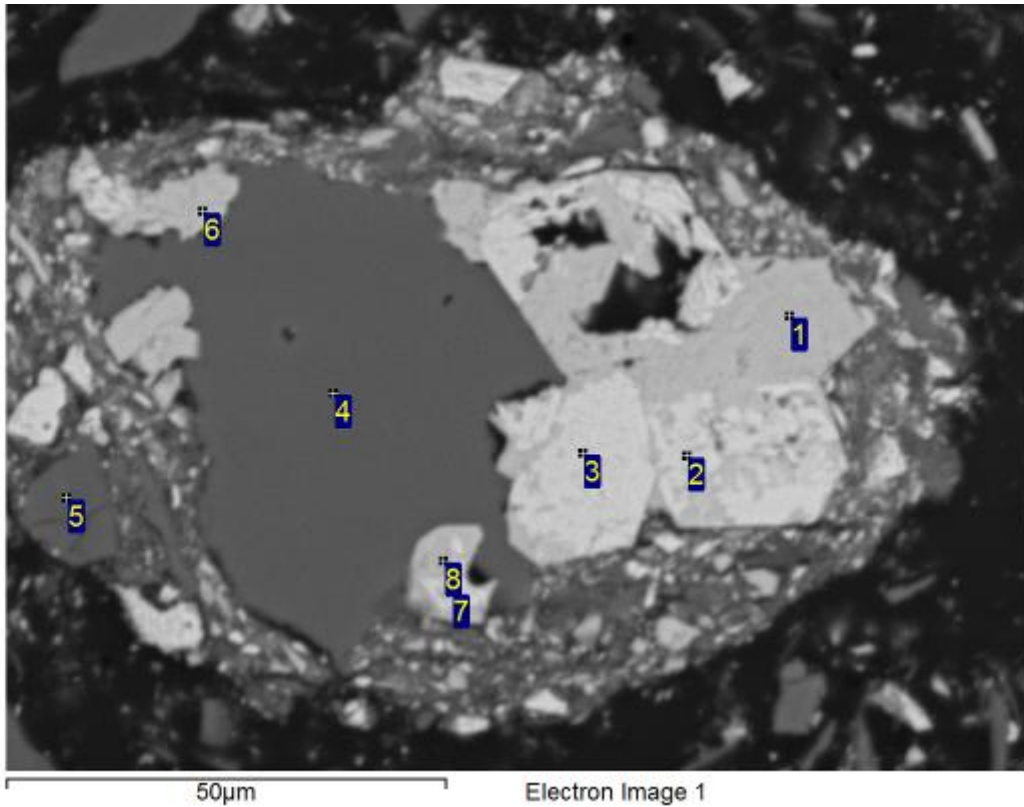
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	43.5	0.7	55.8	100.0	Fe Oxide
2	56.2	43.0	0.7	100.0	Quartz
3	37.6		62.4	100.0	Fe Oxide
4	38.1		61.9	100.0	Fe Oxide
5	55.7	43.9	0.4	100.0	Quartz

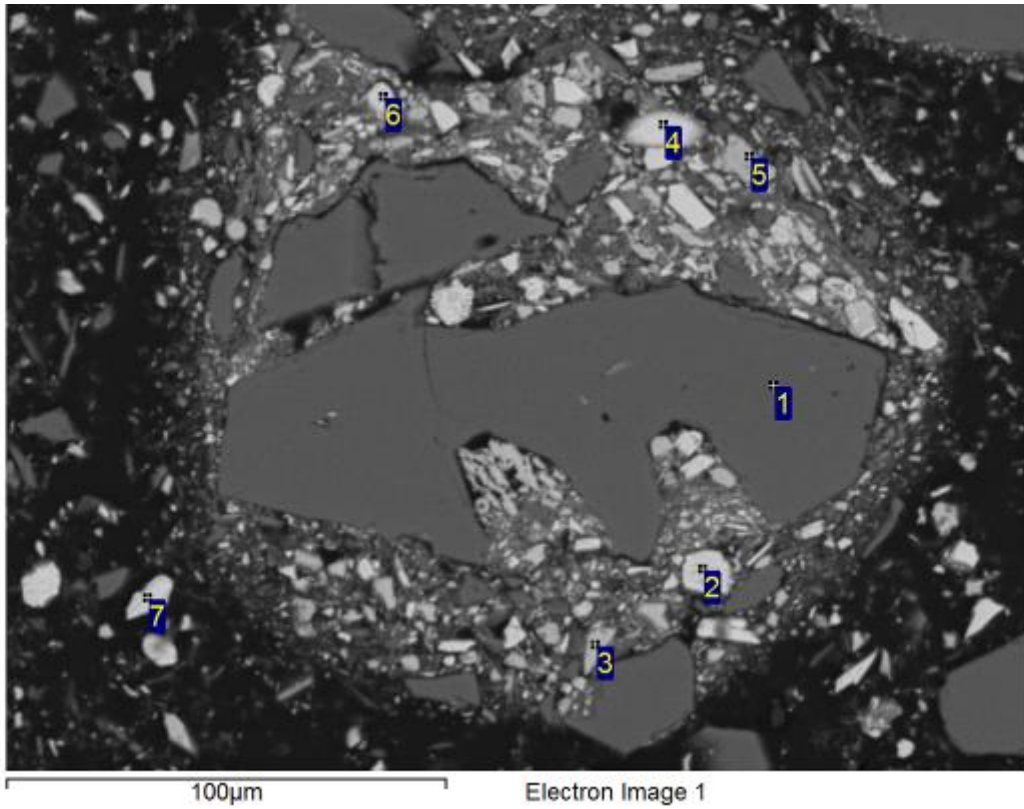
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	43.7	1.1	55.2	100.0	Fe Oxide
2	35.4	0.3	64.2	100.0	Fe Oxide
3	36.1	0.3	63.6	100.0	Fe Oxide
4	56.5	43.0	0.5	100.0	Quartz
5	56.5	41.1	2.4	100.0	Quartz
6	46.2	0.7	53.1	100.0	Fe Oxide
7	33.9		66.1	100.0	Fe Oxide
8	40.2		59.8	100.0	Fe Oxide

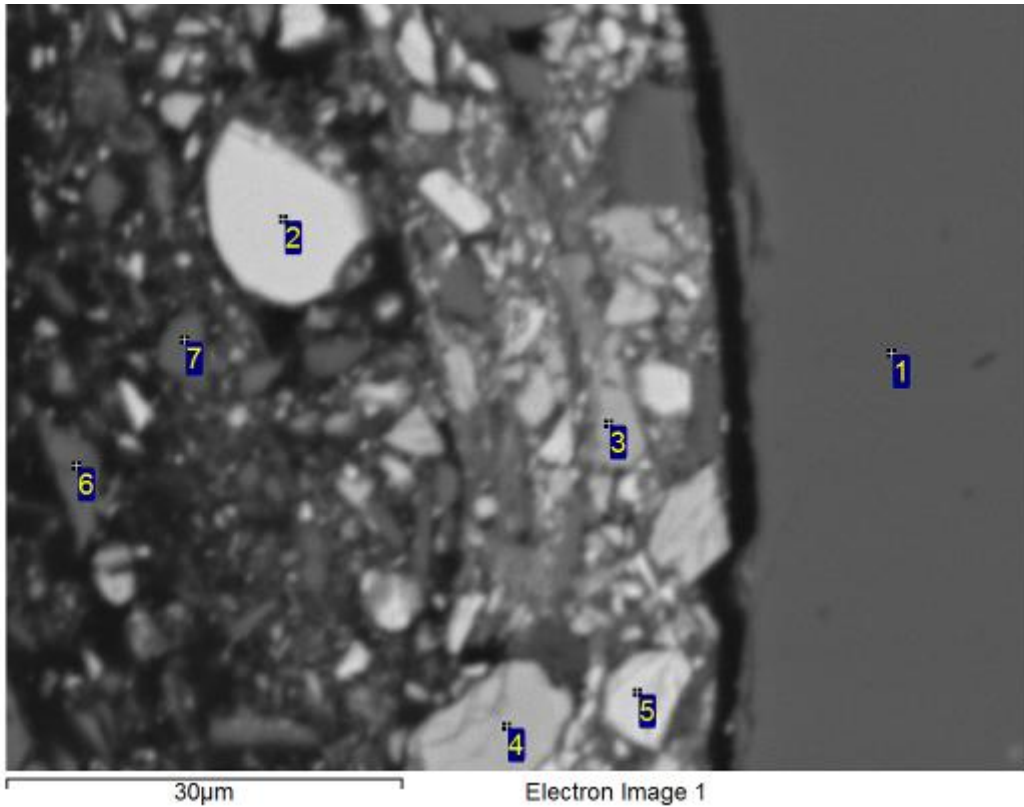
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Mn	Fe	Total	Mineral ID
1	56.6		42.9		0.5	100.0	Quartz
2	36.6		0.3		63.1	100.0	Fe Oxide
3	45.4	0.3	2.0		52.4	100.0	Fe Oxide
4	38.0				62.0	100.0	Fe Oxide
5	46.4	1.7	1.3	0.6	50.0	100.0	Fe Oxide
6	37.1				62.9	100.0	Fe Oxide
7	38.1				61.9	100.0	Fe Oxide

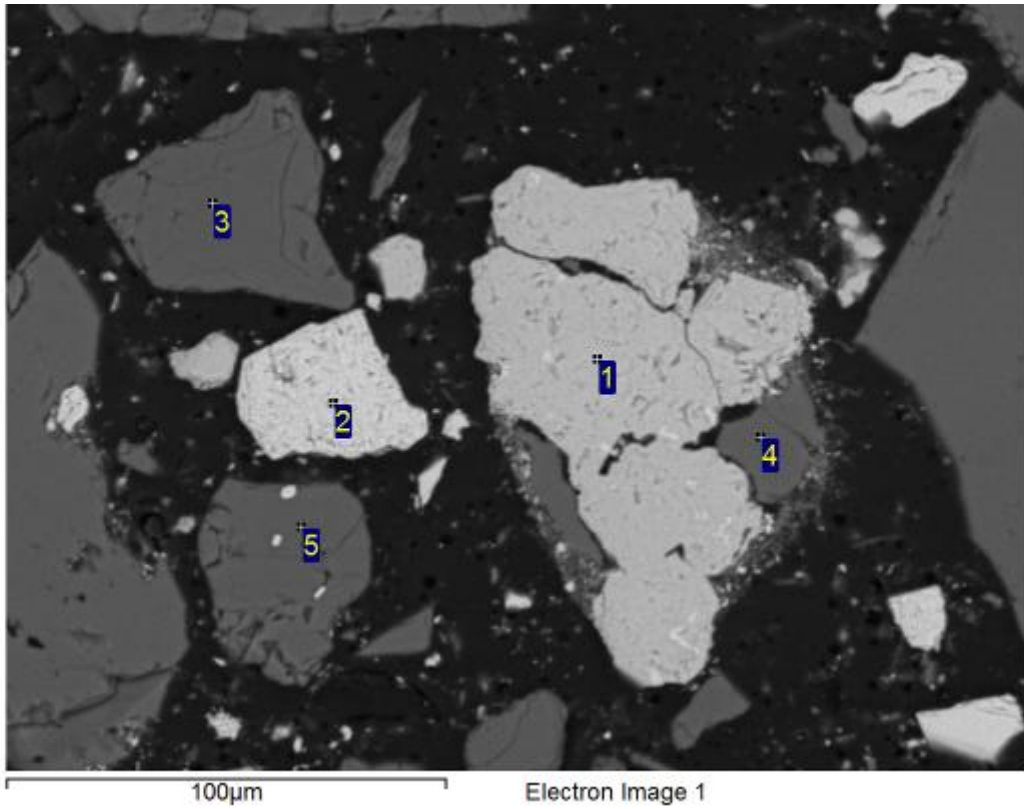
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Cl	Mn	Fe	Total	Mineral ID
1	56.9		42.7				0.4	100.0	Quartz
2	36.4	0.4					63.2	100.0	Fe Oxide
3	44.2	3.2	2.0	0.4		1.1	49.1	100.0	Fe Oxide
4	47.7	0.4	2.1				49.9	100.0	Fe Oxide
5	38.0	0.7					61.3	100.0	Fe Oxide
6	56.7		40.7		0.3		2.3	100.0	Quartz
7	57.2		40.9				1.9	100.0	Quartz

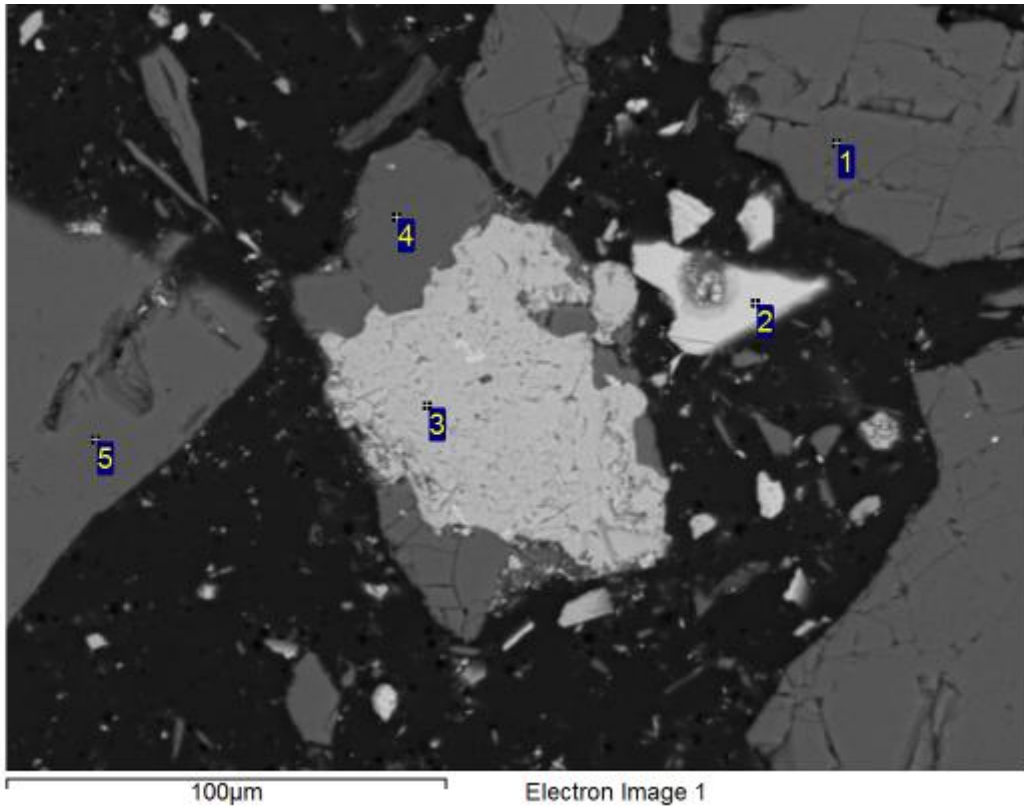
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	44.1	0.5	55.3	100.0	Fe Oxide
2	35.5	0.3	64.2	100.0	Fe Oxide
3	57.3	42.7		100.0	Quartz
4	57.6	42.0	0.4	100.0	Quartz
5	56.9	42.8	0.3	100.0	Quartz

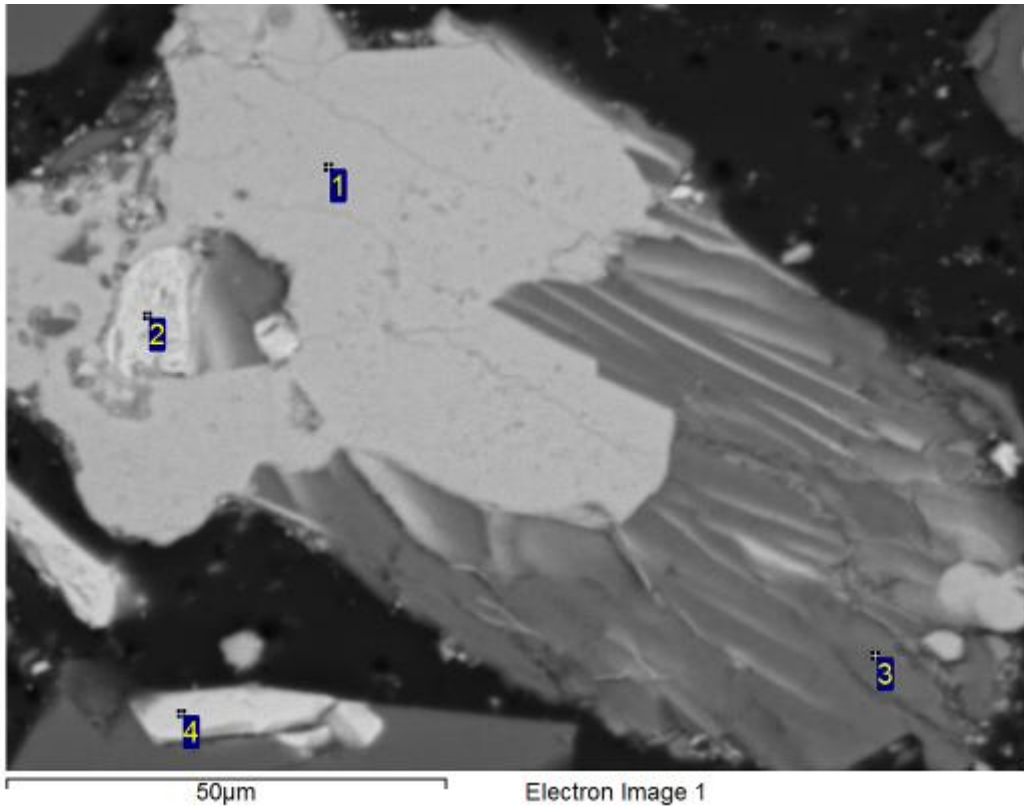
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	56.5	43.3	0.3	100.0	Quartz
2	36.6		63.4	100.0	Fe Oxide
3	44.4		55.6	100.0	Fe Oxide
4	57.1	42.6	0.3	100.0	Quartz
5	56.7	43.3		100.0	Quartz

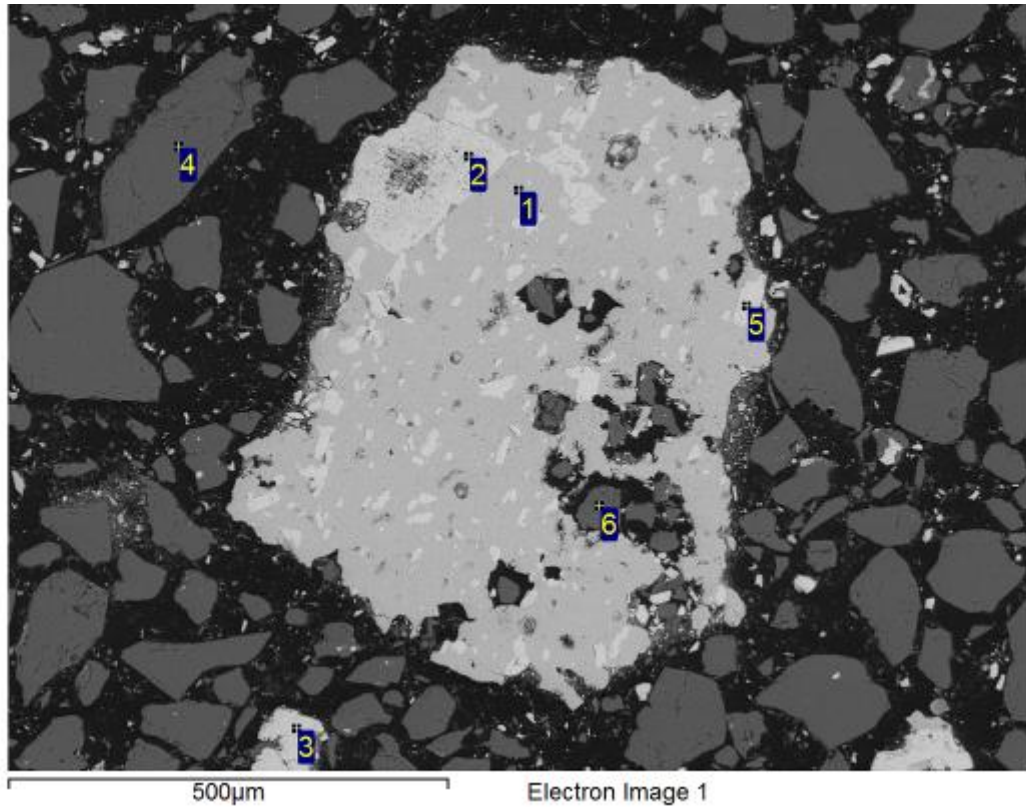
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	K	Fe	Total	Mineral ID
1	45.5			0.3	1.5	0.5		52.3	100.0	Fe Oxide
2	35.4							64.6	100.0	Fe Oxide
3	53.5	0.6	0.6	14.8	19.8		7.0	3.6	100.0	Mica
4	38.7							61.3	100.0	Fe Oxide

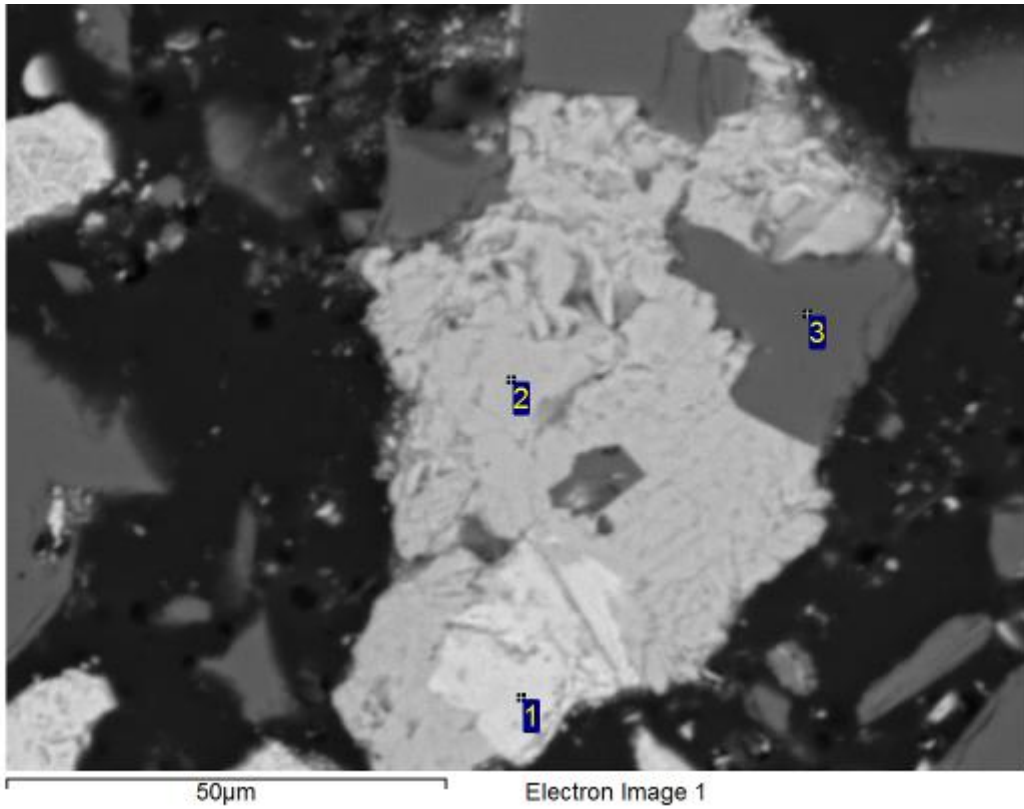
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	42.5	0.5	57.0	100.0	Fe Oxide
2	38.0		62.0	100.0	Fe Oxide
3	35.0		65.0	100.0	Fe Oxide
4	56.4	43.6		100.0	Quartz
5	37.2		62.8	100.0	Fe Oxide
6	57.4	42.1	0.6	100.0	Quartz

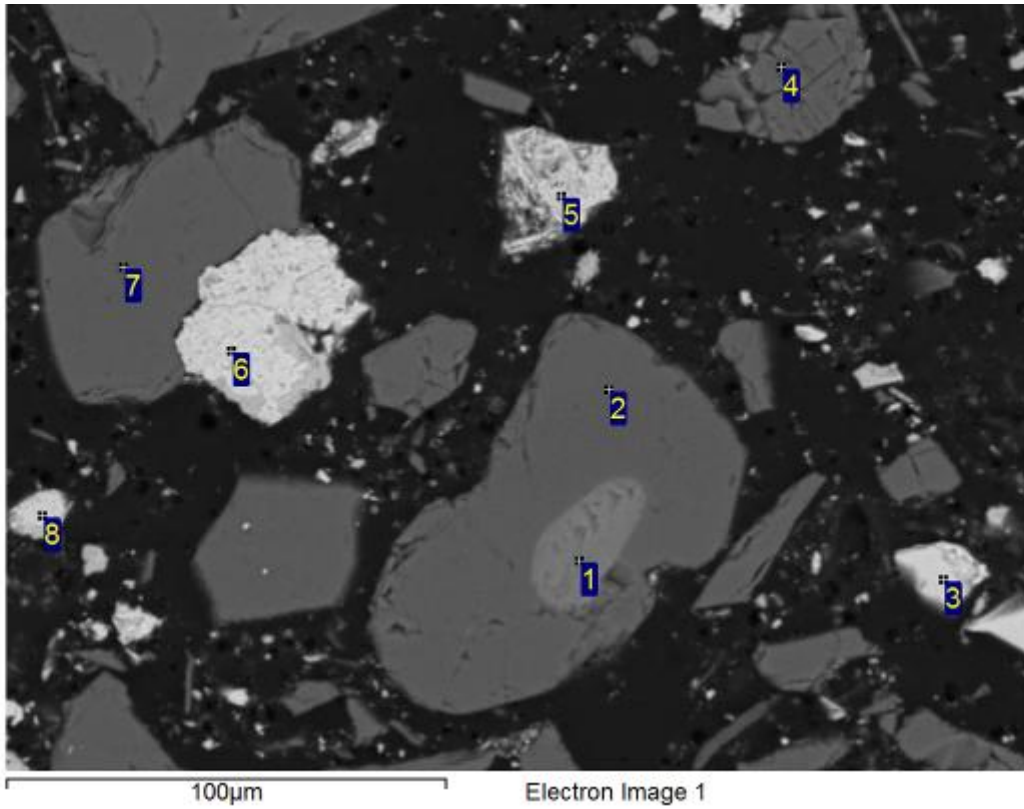
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	33.7	0.6	1.1	64.6	100.0	Fe Oxide
2	44.5	0.5	0.3	54.7	100.0	Fe Oxide
3	57.2		42.4	0.4	100.0	Quartz

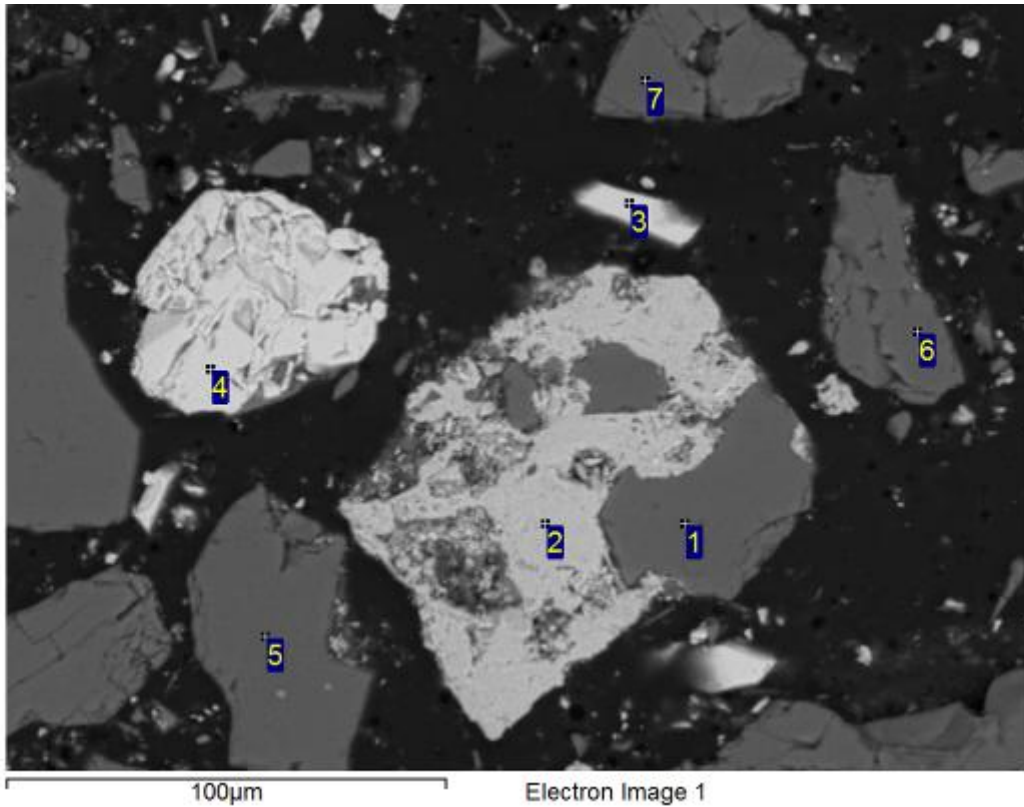
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	Ca	Fe	Total	Mineral ID
1	58.5	0.5	0.4		34.7	6.0	100.0	Carbonate
2	57.5			42.5			100.0	Quartz
3	36.5		0.9			62.7	100.0	Fe Oxide
4	55.6			44.0		0.3	100.0	Quartz
5	37.3		0.8			61.9	100.0	Fe Oxide
6	36.9		0.9	0.3		62.0	100.0	Fe Oxide
7	56.9			43.1			100.0	Quartz
8	36.7		0.8			62.5	100.0	Fe Oxide

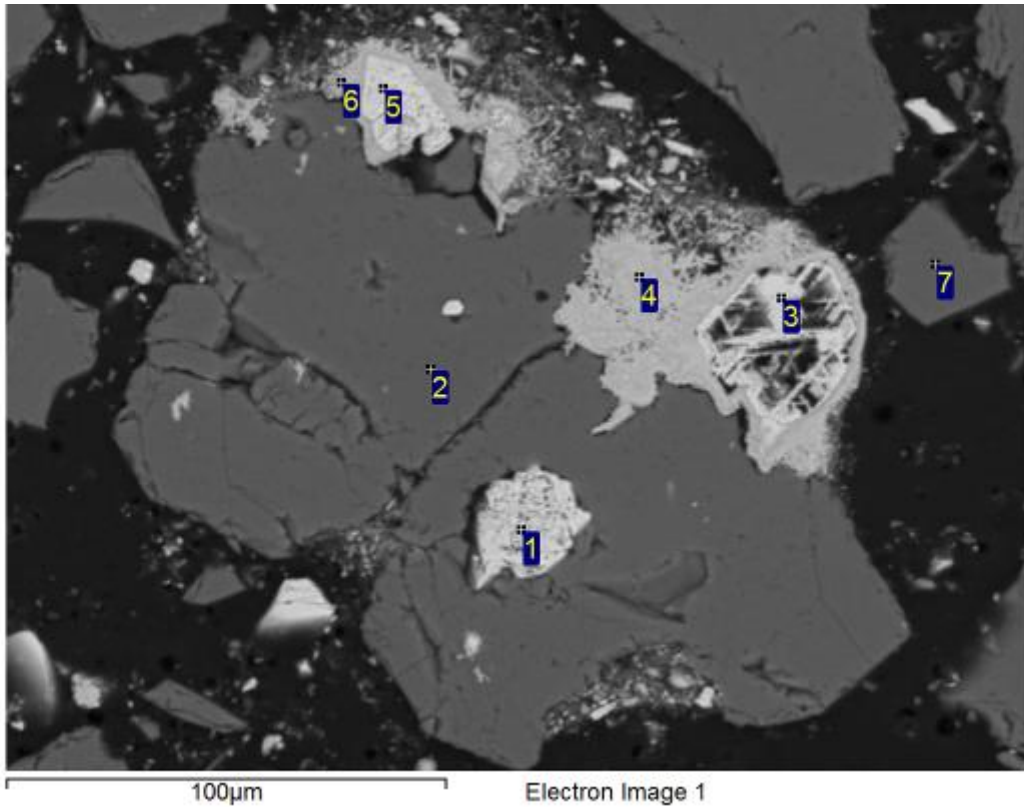
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	56.6		43.0	0.4	100.0	Quartz
2	44.3	0.4	1.1	54.2	100.0	Fe Oxide
3	36.6	0.3		63.1	100.0	Fe Oxide
4	37.0	0.3		62.6	100.0	Fe Oxide
5	56.7		43.3		100.0	Quartz
6	57.1		42.9		100.0	Quartz
7	56.2		43.4	0.3	100.0	Quartz

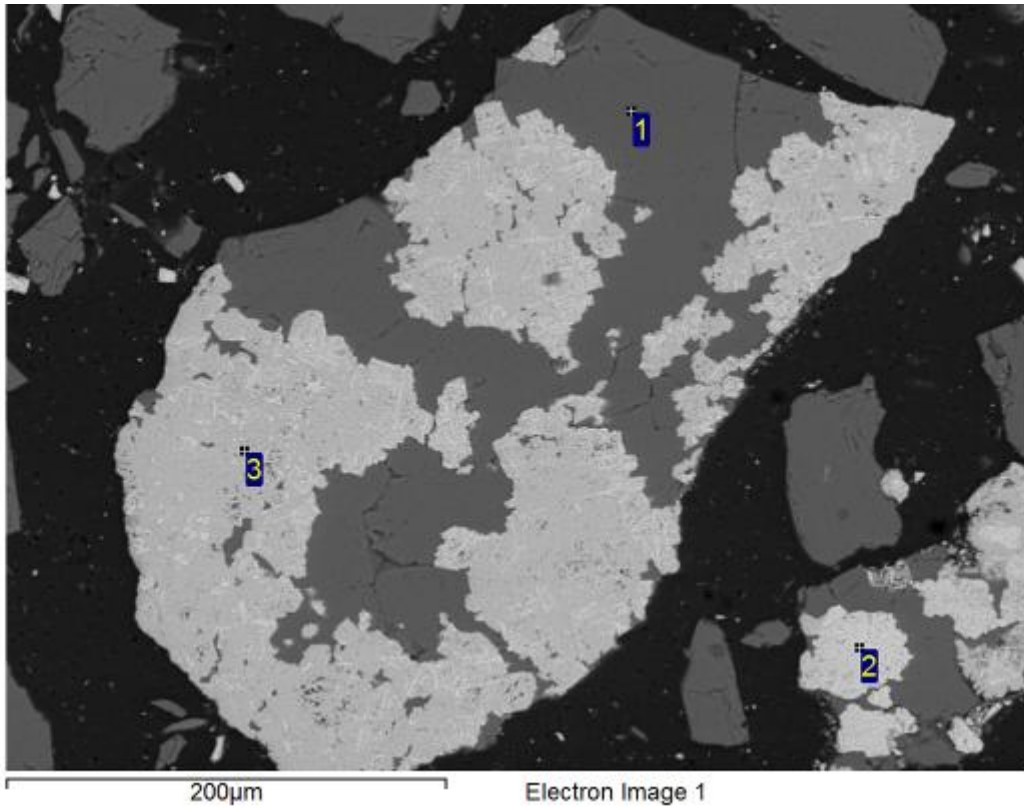
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Fe	Total	Mineral ID
1	30.6	0.5			68.9	100.0	Fe Oxide
2	57.3		42.3		0.4	100.0	Quartz
3	37.6	0.6			61.8	100.0	Fe Oxide
4	43.0	0.8	0.4	0.6	55.1	100.0	Fe Oxide
5	36.4	0.3			63.3	100.0	Fe Oxide
6	43.6	0.4	0.6		55.5	100.0	Fe Oxide
7	56.6		43.1		0.3	100.0	Quartz

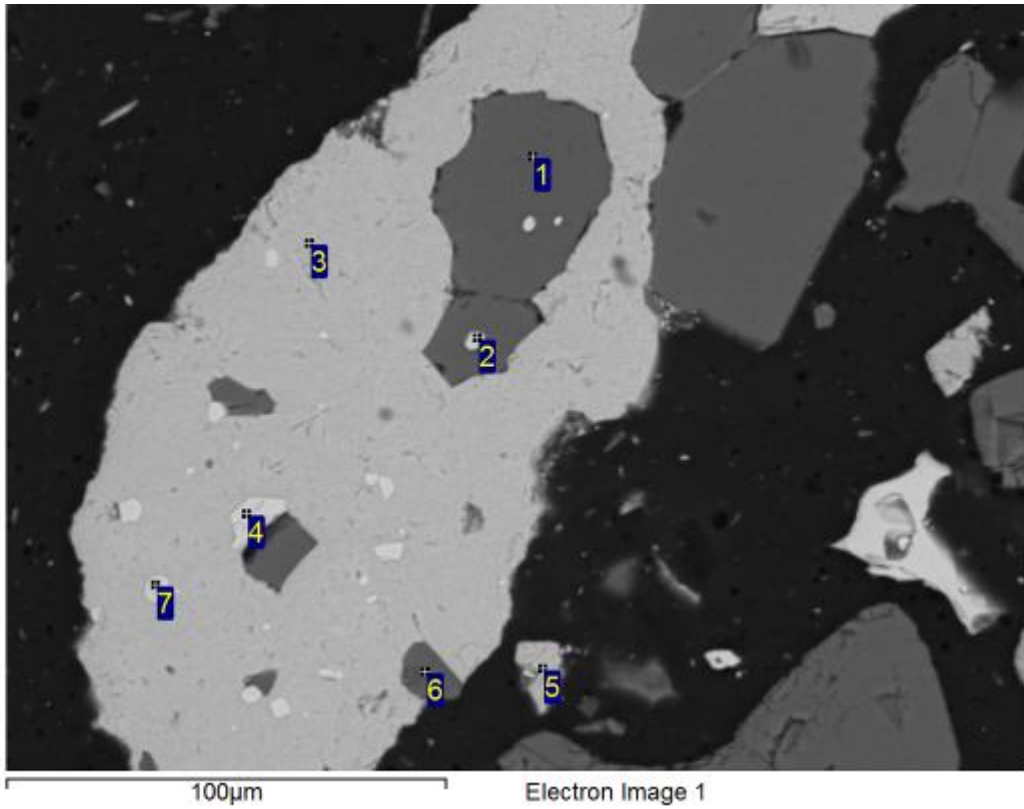
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	57.6	42.1	0.3	100.0	Quartz
2	35.7	0.3	64.0	100.0	Fe Oxide
3	46.8	0.3	52.9	100.0	Fe Oxide

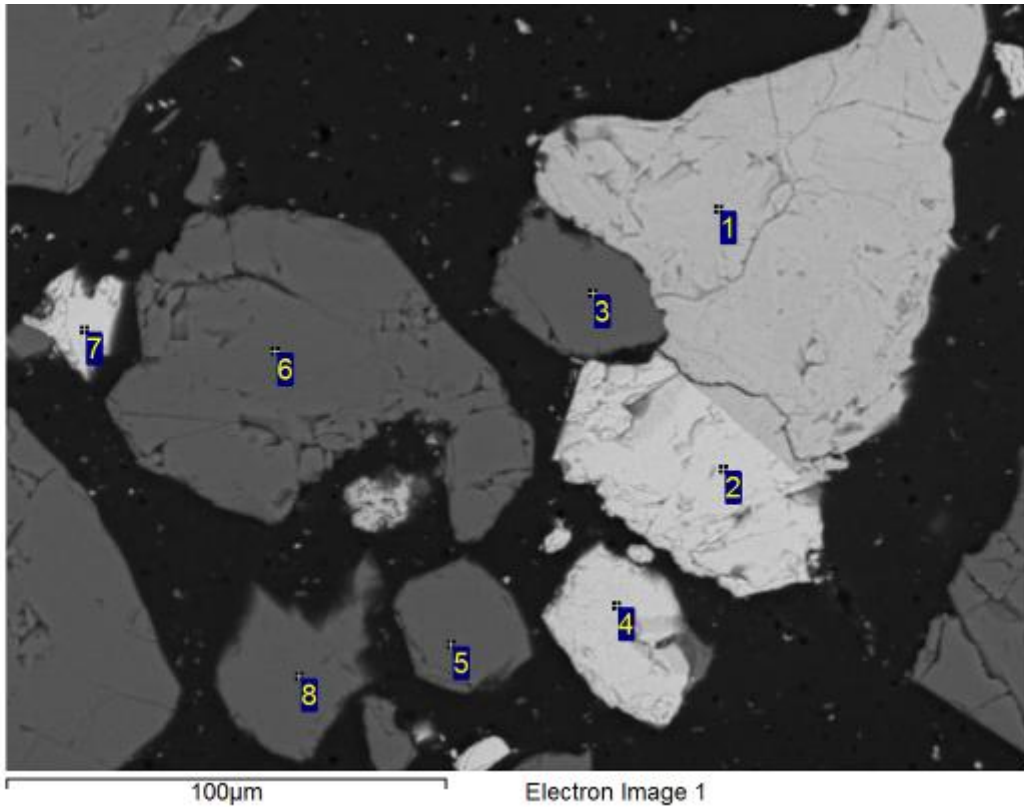
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	P	Fe	Total	Mineral ID
1	56.6	42.7		0.7	100.0	Quartz
2	36.8	0.7		62.5	100.0	Fe Oxide
3	44.4	1.0		54.6	100.0	Fe Oxide
4	35.4			64.6	100.0	Fe Oxide
5	40.9	1.4	0.4	57.3	100.0	Fe Oxide
6	56.4	42.9		0.7	100.0	Quartz
7	37.0			63.0	100.0	Fe Oxide

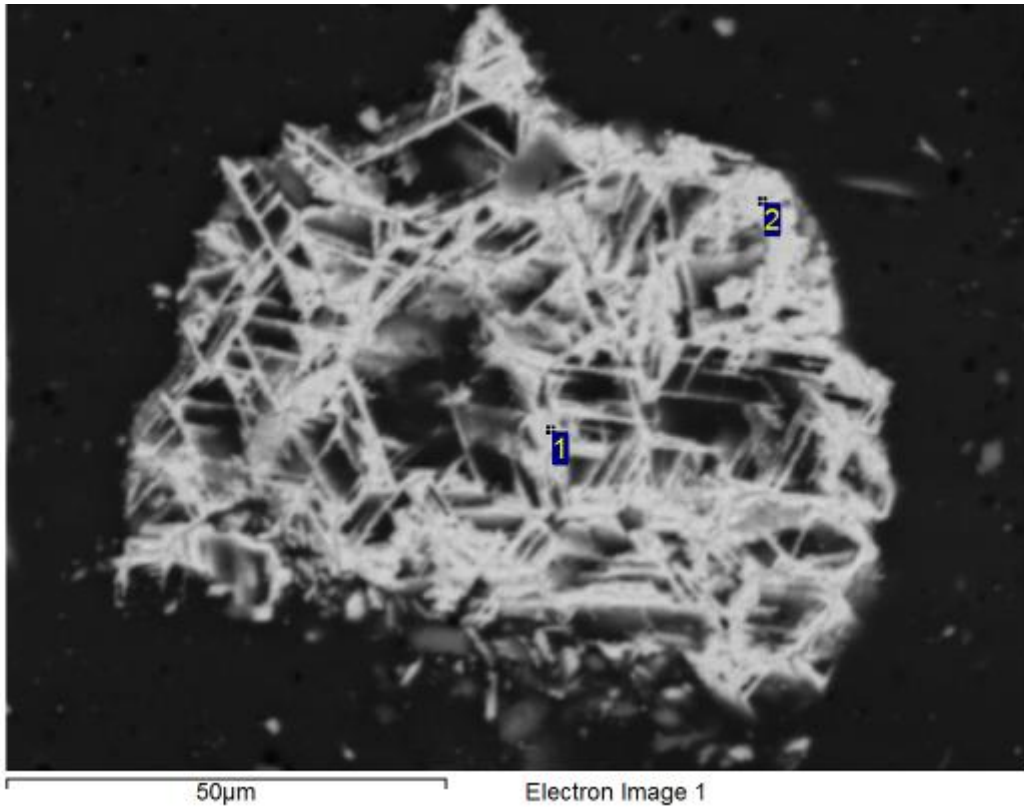
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Fe	Total	Mineral ID
1	44.4	0.4	0.4	0.5	54.3	100.0	Fe Oxide
2	37.1				62.9	100.0	Fe Oxide
3	56.4		43.0		0.6	100.0	Quartz
4	36.5				63.5	100.0	Fe Oxide
5	56.8		42.6		0.6	100.0	Quartz
6	56.8		42.9		0.3	100.0	Quartz
7	36.4				63.6	100.0	Fe Oxide
8	56.6		43.4			100.0	Quartz

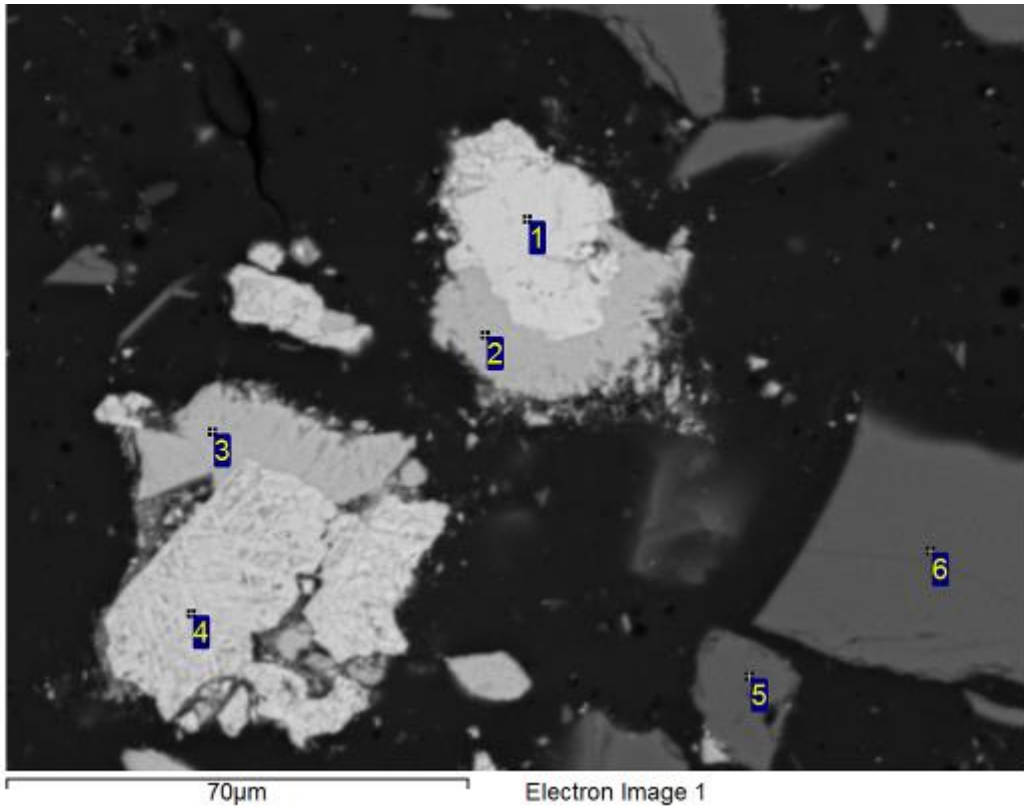
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	37.8	0.4	61.8	100.0	Fe Oxide
2	37.4		62.6	100.0	Fe Oxide

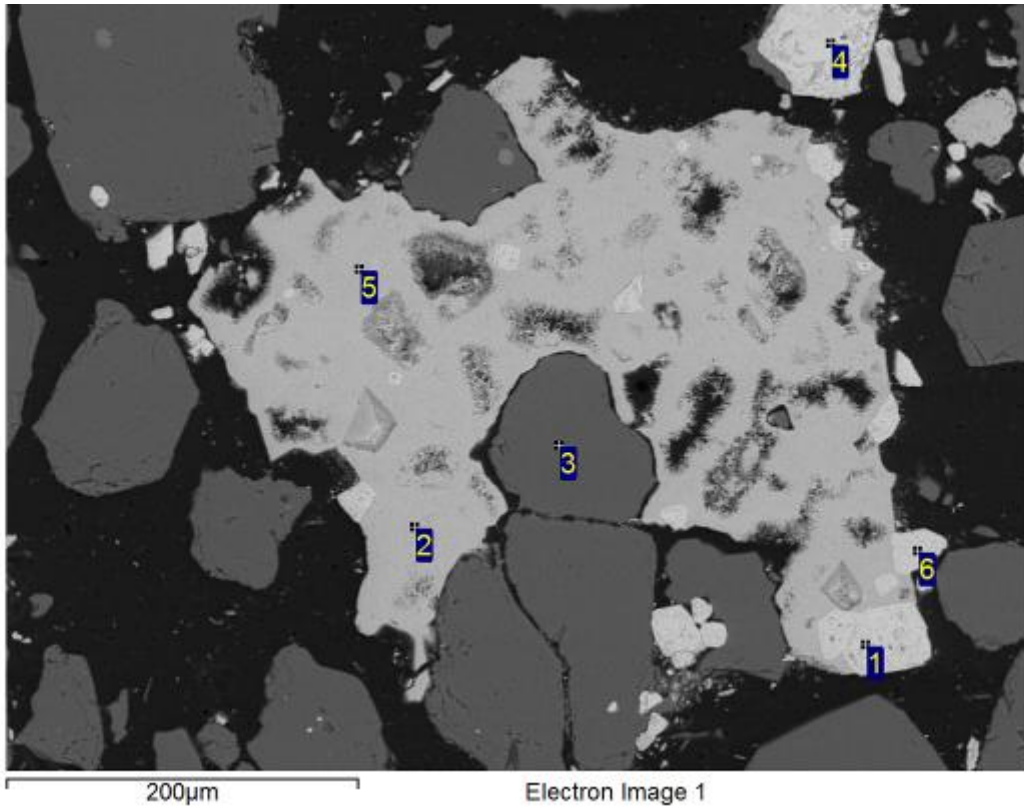
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	34.1	0.3	65.5	100.0	Fe Oxide
2	44.4	1.0	54.7	100.0	Fe Oxide
3	45.0	0.8	54.1	100.0	Fe Oxide
4	37.4		62.6	100.0	Fe Oxide
5	57.7	42.0	0.3	100.0	Quartz
6	56.9	43.1		100.0	Quartz

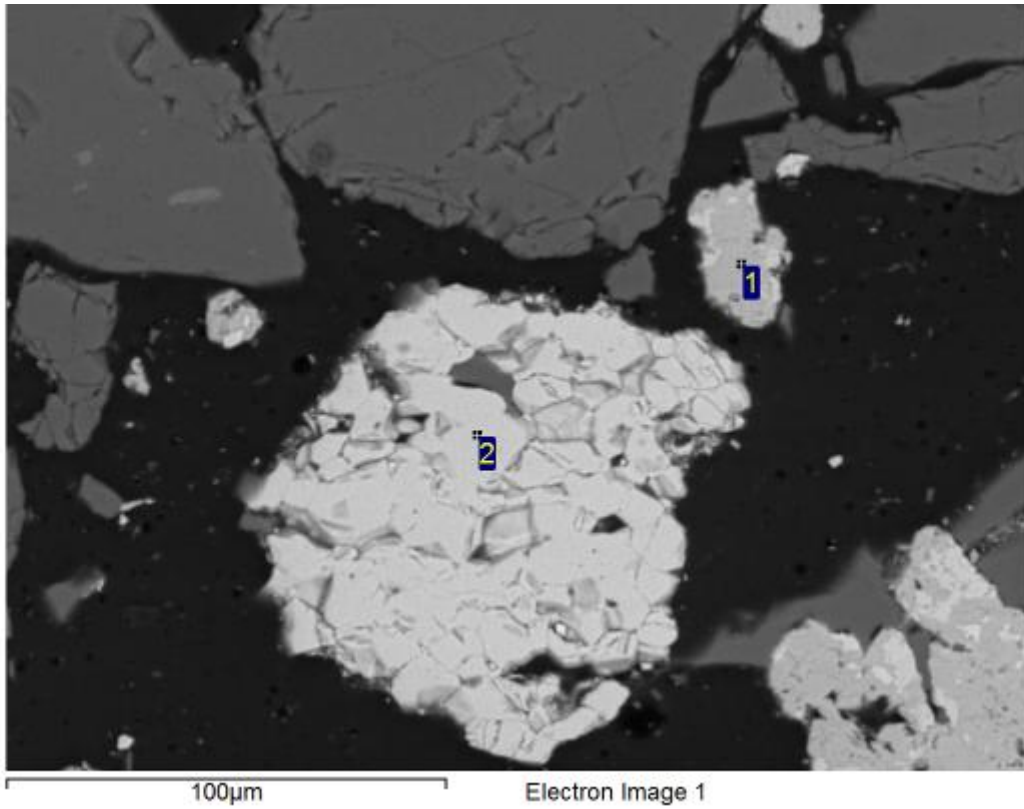
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Mn	Fe	Total	Mineral ID
1	36.5				63.5	100.0	Fe Oxide
2	44.6		0.8	0.3	54.2	100.0	Fe Oxide
3	56.4		43.2		0.4	100.0	Quartz
4	34.1		0.7		65.2	100.0	Fe Oxide
5	44.1	0.3	0.7		54.9	100.0	Fe Oxide
6	37.9				62.1	100.0	Fe Oxide

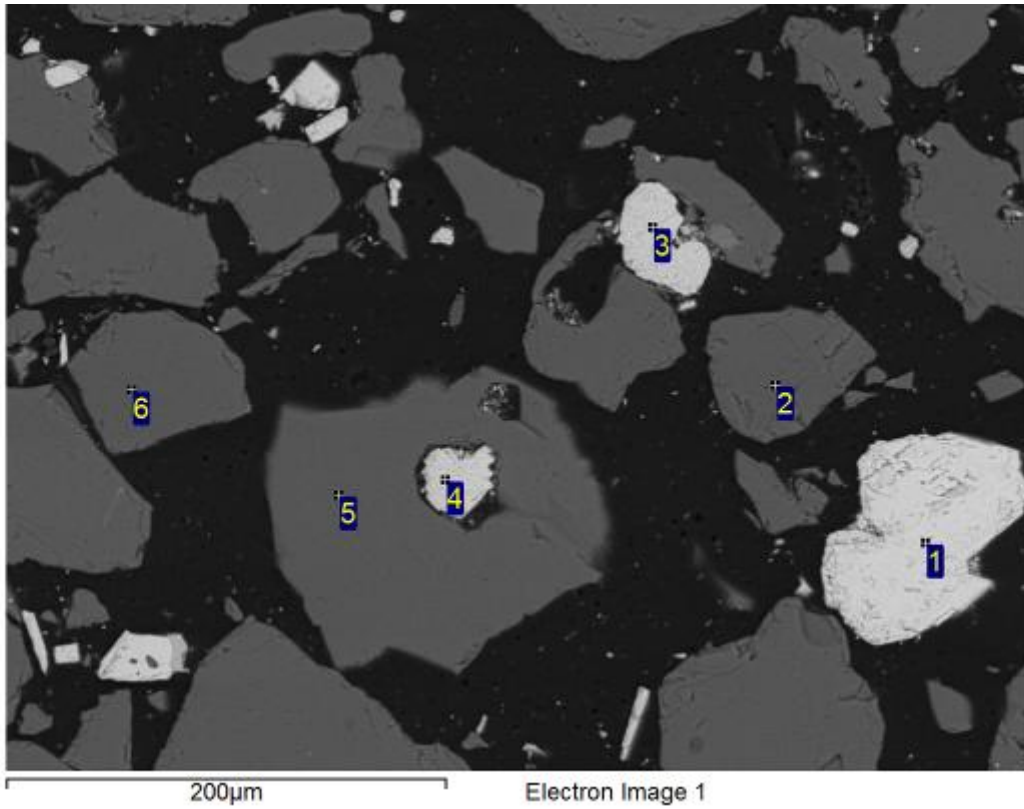
All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Fe	Total	Mineral ID
1	43.7	1.0	55.3	100.0	Fe Oxide
2	36.4		63.6	100.0	Fe Oxide

All results in weight%



Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Fe	Total	Mineral ID
1	34.2			65.8	100.0	Fe Oxide
2	55.9		44.1		100.0	Quartz
3	34.9			65.1	100.0	Fe Oxide
4	35.4	0.3		64.3	100.0	Fe Oxide
5	56.8		43.2		100.0	Quartz
6	56.6		43.4		100.0	Quartz

All results in weight%