Sample: Iron smelting slag – Myers Wood D414s-D

#### Morphology:

Dense, dark grey/black slag material. Some visible vesicles, ranging in diameter from c.1mm to 5mm. Surfaces vary: one side smooth, no sign of ropey flow, whilst the opposite side is very uneven, possibly reflecting the surface over which the slag flowed.

### **Microscopy:**

An iron oxide dendritic structure, mainly skeletal but some blocky features. Blocky fayalitic material (light grey) contained in a glassy phase (darker grey). A few very small iron prills observed and some evidence of blocky/angular phases (mid grey). No cracking in the sample structure noted.



Figure 9.1: Morphological and optical microscopy data for Myers Wood iron smelting slag sample D414s-D from Appendix 55.

Sample: Blast furnace slag – Rievaulx RIV 105/63-C

#### Morphology:

Very porous and lightweight, grey/green opaque material, lighter than RIV 111/68-A. Visible vesicles, either round (*c*.5mm in diameter) or rectangular (up to 6mm x 2mm). Signs of surface flow.

## **Microscopy:**

No dendritic structure. An almost featureless glassy phase (mid grey) containing laths of darker grey material but no blocky/angular phases. A substantial number of small prills observed. A considerable quantity of voids in the sample structure noted, of varying sizes but with no associated cracking.



Figure 9.2: Morphological and optical microscopy data for Rievaulx blast furnace slag sample RIV 105/63-C from Appendix 55.

Sample: Lead smelting slag – Grinton Smeltings GS-B

#### Morphology:

Dense, grey/black slag material. Very small visible vesicles (<0.5mm in diameter) throughout the body of the sample but some large voids (>5mm in diameter) on the surface. Some surface degradation with a white coloured material observed, possibly lead carbonate, and other yellow/red patches caused by iron oxide content.

### **Microscopy:**

A considerable quantity of needles, laths and angular phases (darker grey) contained in an otherwise featureless glassy phase. Some larger blocky/angular phases (mid grey) and a large amount of small prills observed. A small quantity of voids, of varying size with some associated cracking noted.



Figure 9.3: Morphological and optical microscopy data for Grinton Smeltings lead smelting slag sample GS-B from Appendix 55.

Sample: Glass production residues – Hutton H4C

## Morphology:

Dense, dark green translucent glassy material. A few visible vesicles, ranging in diameter from c.1mm to 2mm. Some surface degradation or oxidation observed.

#### **Microscopy:**

An almost featureless glassy phase containing a few blocky/angular phases (light grey). Some small voids, with no associated cracking noted.



Figure 9.4: Morphological and optical microscopy data for Hutton glass production residue sample H4C from Appendix 55.

Sample: Glass production crucibles - Knightons KC3

### Morphology:

Dense, dark yellow/grey/blue-grey material, coarse with no sign of temper but evidence of layering. Very small visible voids, all <<1mm in diameter. Sample surface has a dark yellow/black coloration.

## **Microscopy:**

A very porous fabric consisting of an even distribution of large grained material (light grey) interspersed with large voids (mid grey). Some very small prill-like inclusions (white) noted.



Figure 9.5: Morphological and optical microscopy data for Knightons glass production crucible sample KC3 from Appendix 55.





Figure 9.6: Scanning electron microscopy data for Myers Wood iron smelting slag sample D414s-D from Appendix 56: sites of interest 1 (upper) and 2 (lower).

SCANNING E	LECTRON N	<b>AICROSCOPY</b>											
lron smelting	slag	ŭ	ample	Myers Wood	D414s-D		Site of Intere	st 1					
		Spectrum 1:	Area		Spectrum 2:	Area		Spectrum 3	: Phase		Spectrum 4:	Phase	
Element	Formula	Weight% W	feight% sigma	Compound%	We ght% W	'eight% sigma	Compound%	Weight% V	Veight% sigma	Compound%	Weight% W	/eight% sigma	Compourc%
Sa Za	Na2O	00		00	0.0 1.0	0.1	0 0	, , c c	0.1	, r Ö	5.5	0.0	0.1
UN A	MgC AI2CG	200		0 a 2 r	7 7 7 7		0 W			- F	20.3		- 6 8 6 6 8 6
र ज		2 G 1 G	- <del>-</del>	205	- 0	, - , -	20 E	40,	5 C	20 B	700	 	2.00
5 6	P205	- 1 1 1 1 1	10	90 00	12	0	2.7	0.4	0.0	0.1		- 00	і и О
o.	SO3	00	0.0	00	1.0	0.0	1.0	n.d.	•		n.d.		
¥	K20	0.3	0.0	40	0.1	0.0	0.2	n.d.			n.d.		
S	CaO	0.8	0.0	-	0.7	0.0	1.0	0.2	0.0	0.3	0.1	0.0	0.1
Ē	Ti02	0.1	0.0	02	0.1	0.0	0.1	n.d.			0.4	0.0	0.7
>	V205	n d.			n.d.			, Ö	0.0	, Ö	n.d.		
<u>ර</u> :	Cr203	ц г			n d		1	n.d.		1	n.d.		1
Mn	MnO	0.3	0.1	4	7. 0	0.1	0.5	4.0	0.1	0.6	0.2	0.0	0.2
ЪС Ч	FeO -	54.1	0.2	69.6	55.4	0.2	71.2	2, 1	0.2	66.5 	40.9 2 2	0.2	52.6
3 :	001	n -	0.1	4 0	0.5	0.0	7.0	4,		0.0 9	0.2	0.1	0.2
ᡓ᠂	D ( Z	с -					г. л	, , Jo	5	, , S (			
Ξĸ	0 CuC 4 CuC	נית בי			ים ביו			. T	L.0	d			
5 c			Ċ		0.0 20.0	Ċ		на. 201	c		94 у	c	
- - -		50.00 2000	7.7		50.5 100.0	0.2		32.1 100.0	N.Z			7.U	
Dials		0.001			0.001			100.0			100.0		
		Spectrum 5:	Phase		Spectrum 6:	Phase							
Element	Formula	Weight% W	'eight% sigma	Campound%	We ght% W	'eight% sigma	Compound%						
Na :	Na2O	ц.			n.d.								
βM 1	NgU	р, с,	•		n.d.	4	•						
ਦ ਹ	AIZOG	0.7	0.0	4 ·	7.0	0.0	8.0 0						
<u>.</u>	Si02	0. 1	0.0	4		0.0	0.3						
1.	P205	п.			n.d.								
<u>د</u> در	so:	ц.			Ъ.								
۷ ک		στ			σ Ξ								
S F			Ċ	0		Ċ	с с						
= >	V205		0.0	2		0.0	r n						
. č	0.203	; <del>,</del>	00	¢									
Mn	MnO	10	10		0	0,1	0.2						
0 L	FeO	75.9	0.2	97.6	75.8	0,2	97.6						
8	000	4.0	0.1	0 4	0.5	0.1	0.6						
īz	0iz	n d.			0.1	0.1	0.1						
S	CuO	n d.			n.d.								
Zn	ZnO	n d.			0.1	0.1	0.2						
0		22.8	0.2		22.6	0.2							
Totals		100.0			100.0								
Processing op	tion : Oxyger	n by stoichiomé	erry (Normalise	ਰੇ	Ċ	d. = not detects	p						
Sample is poli-	aucius . 4 shed.												
Sample is coa	ted with Cart	con - thicknes:	s (nm): 15.0, de	ensity (g/cm3):	2.25								
Detector efficiu	sncy : Calcul	aticn											

Figure 9.6 (cont'd): Scanning electron microscopy data for Myers Wood iron smelting slag sample D414s-D from Appendix 56: site of interest 1 spectra analysis.

Item control      Super vision      Super vision<												
Termet      Finance      Statement / Main      St	Iron smelt	ing slag	Sample	Myers Wood	D414s-D	Site of Inter	est 2					
Mu      Mu<	Element Tement	Formula	Spectrum 1: Area Mainht <sup>o</sup> , Mainht <sup>o</sup>	siama Compound%	Spectrum 2: Area Mainht% - We cott	é siams . Campoi ne <sup>0</sup>	Spectrum 3	t: Phase Meicht% sicma	റണ്ണവാർ%	Spectrum 4: Meinht <sup>es,</sup> M	Phase Jeinht% simme	di iodino. U
Mg      Mg      12      01      23      23      24      01<	Na	Na2O	0.1 0.1	1 0.2	0.0 0.1 0		n.d.			n.d.		
N      NO3      17      010      17      010      17      010	бM	OgM	0.2	1 0.3	02	.0 0.3	0.1	0.1	0.1	0.4	0.0	0.7
S      SG2      16      01      23      36      01      36<	А	AI203	1.7 0.	1 3.2	2.0	. 3.7	0.0	0.0	1.0	0.2	0.0	0.3
F      FOG      11      01      23      13      01<	Ω.	SiO2	9.5	1 20.2	9.5	. 20.4	0.2	0.0	4	13.9	0.1	29.6
5      500      01<	<u>م</u> ،	P205	1.1	1 2.5	1.5	. 3.4	0.1	0.0	0.1	4.0	0.0	0.0
7      500      600	s n	SO3	0.1	0.2	n.d.		n.d.			, i	0.0	- 0 - 1
1      100      01      010	<u> </u>	O Z	07	0.0	20	.0 . 0.4	р.ц.			n.d.	4	c t
V      V000      V1      V00      V1      V00      V1      V00      V1      V00      V1      V1 </td <td>5 F</td> <td>CaC</td> <td>0.6</td> <td>5.0 0</td> <td>5. 5. 7.</td> <td>0.0</td> <td></td> <td>Ċ</td> <td>Ċ</td> <td>7 7</td> <td>0.0</td> <td>N 0</td>	5 F	CaC	0.6	5.0 0	5. 5. 7.	0.0		Ċ	Ċ	7 7	0.0	N 0
0.1      0.00      0.0 <td>= &gt;</td> <td></td> <td></td> <td>- 0</td> <td>ר - ד ב ר</td> <td></td> <td>7 r 0 c</td> <td>0.0</td> <td>0.0</td> <td>יד בים</td> <td></td> <td></td>	= >			- 0	ר - ד ב ר		7 r 0 c	0.0	0.0	יד בים		
Min      Min <td>, č</td> <td>01203</td> <td></td>	, č	01203										
Fine      Fine <th< td=""><td>, M</td><td>MnO</td><td>0.0</td><td>1 0.4</td><td>0 7 C</td><td>0.5</td><td>2.0</td><td>0.1</td><td>0.2</td><td>40</td><td>0.1</td><td>0.6</td></th<>	, M	MnO	0.0	1 0.4	0 7 C	0.5	2.0	0.1	0.2	40	0.1	0.6
Co      0.4      0.1      0.5      0.4      0.1      0.6      0.4      0.1      0.6      0.4      0.1      0.6      0.4      0.1      0.6      0.4      0.1      0.6      0.4      0.1      0.6      0.4      0.1      0.6      0.4      0.1      0.6      0.4      0.1      0.6      0.4      0.1      0.6      0.4      0.1      0.6      0.4      0.1      0.6      0.4      0.1      0.6      0.4      0.1      0.1      0.6      0.4      0.1	e L	FeO	55.0 0.	2 70.8	8.53	.2 65.3	75.5	0.2	97.1	52.0	0.2	66.9
Nime      Nime <th< td=""><td>ပိ</td><td>000</td><td>0.4</td><td>1 0.5</td><td>4.0</td><td>.`</td><td>0.6</td><td>0.1</td><td>0.8</td><td>0.5</td><td>0.1</td><td>0.6</td></th<>	ပိ	000	0.4	1 0.5	4.0	.`	0.6	0.1	0.8	0.5	0.1	0.6
Cu      Cu      0.1	ïz	0 N	nd.		n.d.		0.1	0.1	0.1	n.d.		
Zn      Zn      0.2      0.1      0.2      0.1	0n	0n0	nd.		0.1 C	0.1	n.d.			'n.d.		
0      304      02      308      02      320      02      320      02      320      02      320      02      320      02      320      02      320      1000      12      1000 <th11< th="">      10      <t< td=""><td>Ľ,</td><td>ZnO</td><td>0.2 0.</td><td>1 0.2</td><td>n.d.</td><td></td><td>n.d.</td><td></td><td></td><td>, Ö</td><td>0.1</td><td>0.1</td></t<></th11<>	Ľ,	ZnO	0.2 0.	1 0.2	n.d.		n.d.			, Ö	0.1	0.1
Totals      1000      <	0		30.4 0.	2	30.8	2	22.7	0.2		32 0	0.2	
Element      Spectrum 5: Phase        Na      Wagner/rum 5: Phase        Na      Nacion      Neight/weight/s veight/s signa compound/s        Na      Nacion      Nacion      Nacion        Na      Nacion      Nacion      Nacion      Nacion        Nacion      Nacion      Nacion      Nacion      Nacion      Nacion        Nacion	Totals		100.0		100.0		0.00,			100.0		
Element      Formula      Spectrum S: Phase Mag      Amale      Ama												
Flement      Formula      Weight% Signa      Compound%        Ma      N320      nd			Spectrum 5: Phase									
Ma Ma20 nd Mg Mg0 nd S S02 0.6 0.1 0.1 49.3 S S02 0.6 0.0 1.3 K K20 nd C 20 0.1 0.0 0.2 K C 20 0.1 0.0 0.1 T Tr02 0.5 0.0 0.9 Mn Mn0 0.1 0.0 0.1 K Mn0 0.1 0.0 0.1 C 2.3 1.1 0.2 47.3 Mn Mn0 0.1 0.2 47.3 Mn Mn0 0.1 0.2 Mn Mn0 0.1 0.2 Mn0 0.0 Mn Mn0 0.1 0.2 Mn0 0.0 Mn Mn0 0.1 0.0 Mn0 0.1 0.2 Mn0 0.0 Mn Mn0 0.1 0.0 Mn Mn0 0.1 0.0 Mn Mn0 0.1 0.2 Mn0 0.0 Mn0 0.0 Mn Mn0 0.1 0.0 Mn0 0.1 0.0 Mn0 0.0 Mn0 0.0 Mn0 0.1 0.0 Mn0	Element	Formula	Weight% Weight%	sigma Compound%								
Mg      MgO      nd        P      P205      0.1      0.0      13        S      S02      0.1      0.0      13        K      X200      nd      0.0      0.2        K      X200      nd      0.0      0.2        K      X200      nd      0.0      0.1        V      V205      nd      0.0      0.1        V      V205      nd      0.0      0.1        Mm      M00      0.1      0.0      0.1        Mm      M0      0.1      0.0      0.1        Mm      M0      0.1      0.2      47.3        Co      0.3      0.1      0.4      0.4        Mm      M0      0.1      0.2      47.3        Mm      M0      0.1      0.4      0.4        Mm      M0      0.1      0.2      47.3        Co      0.0      0.3      0.1      0.4        Mm      NO      nd      0.4      0.4	Ra I	Na2O	.pu									
All      Al203      26.1      0.1      49.3        F      P205      0.1      0.0      1.3        F      P205      0.1      0.0      1.3        T      T022      0.1      0.0      1.3        T      T02      0.1      0.0      0.1        Ca      Ca(0)      0.1      0.0      0.1        T      T02      0.5      0.0      0.3        Min      0.1      0.0      0.3      0.1        Min      0.1      0.2      47.8      0.1        Min      0.1      0.2      47.8      0.1        Min      0.1      0.4      0.3      0.1        Min      0.0      0.3      0.1      0.4        Min      0.0      0.3      0.1      0.4        Min      0.0      0.1      0.4      0.1        Min      0.0      0.1      0.4      0.1        Min      0.0      0.1      0.4      0.0        Min      0.0      <	бМ	MgO	nd.	4								
Si02      0.0      1.3        R      P205      0.1      0.0      1.3        K      K20      0.1      0.0      0.1        T      T02      0.1      0.0      0.1        V      V205      0.1      0.0      0.1        K      R20      0.1      0.0      0.1        K      V205      0.1      0.0      0.1        K      V205      0.1      0.0      0.1        K      M      M00      0.1      0.2        K      M      0.0      0.1      0.4        K      N      0.1      0.4      0.4        K      N      0.1      0.4      0.4        K      N      0.0      0.1      0.4        K      N      0.1      0.4      0.4        K      N      0.1      0.4      0.4        K      0.0      0.1      0.4      0.4        K      0.0      0.1      0.4      0.4 <t< td=""><td>द (</td><td>AI203</td><td>26.1 0.</td><td>1 49.3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	द (	AI203	26.1 0.	1 49.3								
P      P205      0.1      0.0      0.2        K      K20      nd      0      0      0        Ti      T02      0.1      0.0      0.1      0.0      0.1        Ti      T02      0.1      0.0      0.1      0.0      0.1      0.0      0.1        Cr      V205      nd      0.0      0.1      0.0      0.9      0.9        Cr      Cr203      nd      0.0      0.1      0.4      0.1      0.4        M      MO      0.1      0.2      47.8      0.4	ភ	Si02	0.6	0 1.3								
x      xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	ň.	P205	0.1	0 0.2								
K x20      N3      N20      N3        Ti      T02      0.5      0.0      0.1        V      V205      nd.      0.0      0.1        Cr      C/203      nd.      0.0      0.1        Min      Min0      0.1      0.0      0.2        Fe      Fe0      37.1      0.2      47.8        Co      Co      0.3      0.1      0.4        N      NO      nd.      0.2      47.8        Co      0.3      0.1      0.4      0.4        Ci      CuO      nd.      0.2      0.4        Ci      CuO      nd.      0.2      0.4        Cu      CuO      nd.      0.4	במ	50 20 20	d -									
Till      T.20      0.1      0.0      0.1        V      V202      0.5      0.0      0.9        Kin      MinO      0.1      0.0      0.9        Kin      MinO      0.1      0.2      47.5        Fie      FeO      37.1      0.2      47.5        Cu      CoC      0.3      0.1      0.4        Ni      NiO      n.d.      0.4      5.1        Cu      n.d.      0.2      47.5      5.1        Cu      CuO      n.d.      0.4      5.1        NiO      n.d.      0.2      47.5      5.1        Cu      NO      n.d.      0.4      5.1        Cu      n.d.      0.2      47.5      5.1        Cu      n.d.      10.0.0      1.0      1.0        Cu      n.d.<	⊻ (	220										
V      V205      N      V205      N        Mn      MnO      0.1      0.2      V205      N        Mn      MnO      0.1      0.2      V205      N        Mn      MnO      0.1      0.2      V205      N        Ni      MnO      0.1      0.2      47.8      V205      N        Ni      N/O      n.d.      0.2      47.8      V205      N </td <td>5 F</td> <td>282 F</td> <td>0.1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	5 F	282 F	0.1									
V      V      V        Mn      MnO3      0.1      0.0      0.2        Fe      FeO      37.1      0.2      47.9        Co      0.3      0.1      0.2      47.9        Ni      NIO      nd      0.2      47.9        Co      0.3      0.1      0.4      0.4        Cu      CuO      nd      0.4      0.4        Cu      CuO      nd      0.4      0.4        ZnO      nd      0.2      1.0      0.4        Zno      nd      1.0      0.4      1.0        Zno      3.5      1.0      0.2      1.0        Zno      3.5      1.0      0.2      3.5        Processing option: Oxygen by stotchometry (Normalised)      n.d. = not detected	= >	102		8-0 0								
Mn      Mn      0.1      0.2      0.2        Fe      Fe0      37.1      0.2      47.8        Co      0.3      0.1      0.2      47.8        Ni      NO      nd.      0.2      47.8        Co      0.3      0.1      0.2      47.8        Cu      CuO      nd.      0.3      0.1      0.4        Zu      ZuO      nd.      0.2      47.8      0.4        Zu      CuO      nd.      0.4<	> Č	0.203										
Fe      Fe0      37.1      0.2      47.8        Ni      NO      n.d.      0.1      0.4        Ni      NO      n.d.      0.1      0.4        Ni      NO      n.d.      0.1      0.4        Zin      ZuO      n.d.      0.3      0.1      0.4        Zin      ZuO      n.d.      0.3      1.0      0.4        Zin      ZuO      n.d.      0.3      0.1      0.4        Zin      ZuO      n.d.      0.2      0.4      0.2        Zin      ZuO      n.d.      0.2      0.4      0.4        Zin      ZuO      n.d.      0.2      0.4      0.4        Coossing option: Oxygen by stoichiometry (Normalised)      n.d. = not detected      Number of freetions: 2      n.d. = not detected        Number of freetions: 2      Sample is polished.      n.d. = not detected      N.d. = not detected	Ā	MnO	0.1	0 0.2								
Co      0.3      0.1      0.4        Ni      NiO      n.d.      0.1      0.4        L      LO      n.d.      0.1      0.4        Zn      ZnO      n.d.      0.1      0.4        Zn      ZnO      n.d.      0.1      0.4        Processing option : Oxygen by stochiometry (Normalised)      n.d. = not detected      n.d. = not detected        Number of iterations : 2      Sample is polibrid.      n.d. = not detected      n.d. = not detected	Fe	FeO	37.1 0.	2 47.8								
Ni NO nd. Cu CuO nd. Cu CuO nd. Totals 100.0 35.1 0.2 Processing option: Oxygen by stolchiometry (Normalised) n.d. = not detected Number of iterations: 2 Sample is projed. Sample is projed. Samuel are revelated with Carbon - thirkness trunty 15.0 density (a/cm3t, 2.95)	ပိ	000	0.3 0.	1 0.4								
Cu CuO nd. Zn ZnO nd. 35.1 0.2 Totals 100.0 Processing option : Oxygen by stoichiometry (Normalised) n.d. = not detected Number of ferations : 2 Sample is polished. n.d. = hort detected	ī	0N	nd.									
Zn ZnO n.d. O 35.1 0.2 Totals 100.0 Processing option : Oxygen by stoichiometry (Normalised) n.d. = not detected Number of freateons : 2 Sample is polished. Samma is coolad with Carthon - thirkness Ammy 15.0 chemicals 0.25	ō	CnO	- p c									
0  35.1  0.2    Totals  100.0    Processing option : Oxygen by stoichiometry (Normalised)  n.d. = not detected    Number of iterations : 2  Sample is polished.    Sample is polished.	5	ZnO	р С									
Totals 100.0 Processing option: Oxygen by stolchiometry (Normalised) n.d. = not detected Number of iterations: 2 Samtle is poliated. Samtle is poliated.	ю		35.1 0.	2								
Processing option : Oxygen by stoichiometry (Normalised) n.d. = not detected Number of iterations : 2 Sample is polished. Samua is constart with Carbon - thickness Jumy 15, 0, daneity (n/cm3), 2, 25	Totals		100.0									
Processing option : Oxygen by stolchiometry (Normalised) Number of iterations : 2 Sample is polished. Samula is explaid.												
Number of iterations : 2 Sample is poolshed. Sample is poolshed.	Processing	option : Oxyge	n by stoichiometry (No	o-malised)	n.d. = no	ot defected						
Gampler is postanted. Sampler is postanted with Carbon - thinknass (mm): 15.0. danshir (n/vm3): 2.05.	Number of Sample is r	iterations : 2 voliched										
	Cample is ,	vonsneu. vooted with Oos	then thickness (nm)	16 Accessive (atoms)	200							

Figure 9.6 (cont'd): Scanning electron microscopy data for Myers Wood iron smelting slag sample D414s-D from Appendix 56: site of interest 2 spectra analysis.



Figure 9.7: Scanning electron microscopy data for Rievaulx blast furnace slag sample RIV 105/63-C from Appendix 57: sites of interest 1 (upper) and 2 (lower).

SCANNING ELECT	KUN MICK											
Blast furnace slag		Sample	Rievaulx 105	63-C		Site of Intere	st 1					
	Spe	ectrum 1: Area		Spectrum 2: /	Area		Spectrum 3:	Phase		Spectrum 4: I	Phase	
Element Form	ula We	eigh1% Weight% sgma	Compound%	Weight% W	eight% sigma	Compound%	Weight% W	/eigh1% sigma n 1	Compound%	Weight% W	eight% sigma 0.0	Compound%
Ma MaO	) -	1.7 0.0	1 00 1 00	1.7	0.0	40 C İ	1.4	00	1 00	1.6	0.0	2.7
Al AZO	5	10.9 0.1	20.6	11.0	0.1	20.8	11.0	0.1	207	11.0	0.1	20.8
Si SiO2	. 1	22.0 0.1	47.0	22.0	0.1	47.0	21.9	0.1	46.9	22.1	0.1	47.2
Р20 0 Р20	ц.	1.d.		n.d.			Ч	i k	, ¢	n.d.		
202 202		- 10 - 1	ç		0	¢	- ► 		- 0	j ¢ ₹	00	¢
	-	1.4 0.0 15.8 0.1	- ~ cc	140	0.5		 	) - -	2.50	15.7	0.0	210
TI TIO2		0.5 0.0	- 60	;u 2⊂		4 C	200	.00	- 6 U	50	0.0	2 C
V20	. un	0.1 0.0	010	n.d.	5	5	n.d.	5	5	5 T	0.0	0.1
Cr Cr2C		1.d.	ł	n.d.			5	0.0	0.1	n.d.		
Mn MrO	-	1.0 0.1	ი ,	1.0	0.1	1.3	1.0	0.1	1.3	1.0	0.1	1.3
Fe FeO		2.3 0.1	30	2.3	0.1	2.9	2.2	0.1	2.8	2.1	0.1	2.7
Co Co Co Co Co		<u>,</u> d.		n.d.			0 	0.1	0.1	n.d.		
NON IN IN		1.d.		n.d.			n.d.			р. Ч		
20 CuO				ים בי			, 1 1 1			ים בים		
				י ד ב			5 T 1 C				,	6
	` ``				с С С		19.0	e U			- 6	5
Totas Totas	• +	1000		1000	4		0.04 1000	Ņ.			7	
	-	0.00		0.000			2.001			0.001		
i	Spe	ectrum 5: Phase	:									
Element Form	nula We	sight% Weight% sgma	Compound%									
Na Na2(	0	n.d.										
Ng MgO	_ `	.d.										
AZC AZC	2	1.a.										
Si SiO2	- · ·	0.2 0.0	90									
л с 2021	'n	0.0 	¢ ∧									
202 202	·											
		1.u. 0.0	¢									
Ca H CaO		0.0 2 d	90									
	, ×											
Mn MrO		0.1 0.1	0									
Fe FeO		74.7 0.2	96.1									
000 000		0.3 0.1	03									
Ni Ni		0.1 0.1	01									
		1.d.										
	2											
497 0	2	1.u. 23.3 0.2										
Tota s	~	00.00										
Processing option : ( Number of iterations	Oxygen by s ∶3	stoichiometry (Normalise	g)	n.c	d. = not detecte	ğ						
Sample is polished.	acture of the	thickness (nm) 15 0 de	A Versey (a) and	30								
Detector efficiency :	Calculation	m 'nint fillth ee≙ NMIII.		2								

Figure 9.7 (cont'd): Scanning electron microscopy data for Rievaulx blast furnace slag sample RIV 105/63-C from Appendix 57: site of interest 1 spectra analysis.

SCANNING	ELECTRON	MICROSCOL	Z										
Blast furnac	e slag		Sample	Rievaulx 105/	63-C		Site of Interes	st 2					
		Spectrum	1: Area		Spectrum 2:	Area		Spectrum 3:	Phase		Spectrum 4:	Phase	
Element	Formula	Weight%	Weight% s gma	Compound%	Weight% W	∕eight% sigma	Compound%	Weight% V	/eigh1% sigma	Compound%	Weight% W	/eight% sigma	Compound%
BN Mg	McO McO	0.1	- C C	N 00	0.1 7 7	0.0	0 5 0 6	0- 	0.0	0.1	0.1		0.1
A	A2O3	10.9	9 C	20.6	10.8	, c , c	20.5	10.9	0.1	206	0.4 0.4	. 1.0	- 8 9.8
N	SiO2	22.0	0.1	47.0	22.1	0.1	47.2	22.1	0.1	47.2	6.≻	0.1	16.8
٩	P205	٦.d.			n.d.			n.d.			1.8	0.0	4.1
s S	S03	0.1	0.0	02	n.d.			n.d.			0.3	0.0	0.7
¥	K20	1.7	0.0	20	1.7	0.0	2.0	1.7	0.0	2.1	0.5	0.0	0.6
Ca	CaO	16.0	0.1	22.3	15.8	0.1	22.2	15.7	0.1	22 0	4.8	0.1	6.7
ц	Ti02	0.5	0.0	08	0.5	0.0	0.8	0.6	0.0	1.0	0.1	0.0	0.2
>	V205	Ъ.С			n.d.			n.d.			0.1	0.0	0.1
ڻ ن	Cr203	Ъ.С.			n.d.			0.1	0.0	0.1	n.d.		
Nn	Mro	1.0	0.1	ი ,	1.0	0.1	1.3	1.0	0.1	1.3	0.3	0.0	0 4
Fe	FeO	23	0.1	29	2.3	0.1	2.9	сі Г. і	0.1	2.7	46.5	0.2	59.9
ő	CoO	Ъ.			n.d.			n.d.			0.2	0.1	0.3
īz	0 N	0.1	0.1	0	n.d.			n.d.			n.d.		
C	CnO	Ъ.С.			0.1	0.1	0.1	n.d.			n.d.		
Zn	ZnO	J.d.			n.d.			n.d.			n.d.		
As	As203	л.d.			n.d.			0.1	0.1	0.1	0.1	0.1	0.1
0		44.0	0.2		43.0	0.2		44.0	0.2		31.9	0.2	
Totas		100.0			100.0			100.0			100.0		

Processing oprion : Oxygen by stochiometry (Normalised) n.d. = not detected Number of iterations : 3 Number of iterations : 3 Sample is polished. Sample is constant with Carbon - thickness (nm): 15.0, density (g/cm3) 2.25 Detector efficiency : Carbon - thickness (nm): 15.0, density (g/cm3) 2.25

Figure 9.7 (cont'd): Scanning electron microscopy data for Rievaulx blast furnace slag sample RIV 105/63-C from Appendix 57: site of interest 2 spectra analysis.





Figure 9.8: Scanning electron microscopy data for Grinton Smeltings lead smelting slag sample GS-B from Appendix 58: sites of interest 1 (upper) and 2 (lower).

Lead smelt.	ing slag		Sample	Grintan Smel	ttings GS-B		Site of Intere	st 1					
ļ	L	Spectrum	1: Area	à	Spectrum 2	: Area	in the second se	Spectrum 3	s: Phase	č	Spectrum	4: Phase	č
Element F	Formula	VVeight% D.9	weignt% sigma 0.5	Compound% 0.0	Weight% V	Veight% sigma 0.5	Compound%	weight%	//eignt% sigma 0.5	Compound%	Weight% 1.4	Weight% sigma 0.5	Compound% 0.0
Na Z	Na2O	0.7	0.1	1.0	0.7	0.1	0.0		0.1	1.5	0.7	0.1	0.9
Мg	OgM	0.4	0.1	0.7	0.4	0.1	0.7	4.0	0.0	0.7	0.5	0.1	0.8
'ਵ	AI2O3	1.6	0.1	3.0	1.7	0.1	3.2	4.1	0.1	7.8	1.2	0.1	2.3
Si	SiO2	14.5	0.1	31.0	14.7	0.1	31.3	17.6	0.1	37.6	14.6	0.1	31.2
۵.	P205	4.0	0.0	0.8	0.3	0.0	0.8	0.1	0.0	0.2	0.4	0.0	0.9
s	SO3	0.1	0.1	0.2	0.1	0.1	0.3	n.d.			0.1	0.1	0.2
¥	K20	0.6	0.0	0.7	0.7	0.0	0.8	0.9	0.0	1.1	0.6	0.0	0.7
Ca	CaO	6.6	0.1	9.3	6.6	0.1	<u>6</u> .9	11.3	0.1	15.8	7.2	0.1	10.1
i	TiO2	0.1	0.1	0.2	0.2	0.1	0.3	0.1	0.1	0.2	0.1	0.1	0.2
>	V205	n.d.			n.d.			n.d.			n.d.		
ں م	Cr203	n.d.			n.d.			0.1	0.1	0.1	n.d.		
Mn	MnO	0.1	0.1	0.1	n.d.			n.d.			0.2	0.1	0.2
Fe	Fe203	B.0	0.1	8.6	5.9	0.1	8.4	2.4	0.1	3.5	6.0	0.1	8.6
°0	CeO	n.d.			0.1	0.1	0.1	n.d.			0.1	0.1	0.1
īz	Nio	0.1	0.1	0.1	n.d.			n.d.			0.1	0.1	0.1
Ou	CuO	n.d.			0.1	0.1	0.2	n.d.			n.d.		
Zn	ZnO	6.2	0.2	7.7	5.9	0.1	7.4	8.2	0.2	10.2	6.3	0.1	7.8
As	As203	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	n.d.		
Ag	Ag2O	0.1	0.1	0.1	0.1	0.1	0.1	n.d.			n.d.		
Sb	Sb203	0.2	0.2	0.3	0.2	0.2	0.2	n.d.			0.2	0.2	0.3
Ba	BaO	18.6	0.2	20.8	18.3	0.2	20.4	15.0	0.2	16.7	17.8	0.2	19.8
ЪЪ	0qd	13.5	0.2	14.5	13.0	0.2	14.0	3.4	0.1	3.7	13.5	0.2	14.6
0		29.3	0.3		29.5	0.3		34.3	0.3		29.3	0.3	
Totals		100.0			100.0			100.0			100.0		
Processing .	option : Oxyge	n by stoichik	ometry (Normalise	jd)	E	.d. = not detect	ed						
Number of it Sample is pr	terations : 3 dished												
Sample is cr	oated with Car	bon - thickr	iess (nm): 15.0, di	ensity (g/cm3):	2.25								
Detector eth	iciency : Calcu	lation											

Figure 9.8 (cont'd): Scanning electron microscopy data for Grinton Smeltings lead smelting slag sample GS-B from Appendix 58: site of interest 1 spectra analysis.

Lead smel:	ting slag		Sample	Grinton Sme	Itings GS-B		Site of Intere	st 2					
Element	Formula	Spectrum Weight%	1: Area Weidht% sigma	Compound%	Spectrum 2 Weiaht% V	: Area Veicht% sigma	Compound%	Spectrum 3 Weiaht% V	: Phase Veicht% sigma	Campaund%	Spectrum 4 Weight%	: Phase Veidht% sigma	Compound%
		1.5	0.5	0.0	1.8	0.5	0.0	n.d.			0.7	0.5	0.0
Na	Na2O	0.7	0.1	0.9	0.7	0.1	1.0	1.6	0.1	2.1	0.2	0.1	0.3
Mg	OgM	4.0	0.1	0.6	0.4	0.1	0.7	0.7	0.1	1.1	0.1	0.1	0.1
A,	AI2O3	1.5	0.1	2.9	1.6	0.1	2.9	0.3	0.0	0.6	0.3	0.0	0.5
si	Si02	14.5	0.1	31.0	14.5	0.1	30.9	17.9	0.2	38.2	3.3	0.1	7.1
с.	P205	0.2	0.0	0.5	0.4	0.0	0.8	n.d.			0.1	0.0	0.2
s	SO3	0.1	0.1	0.3	0.1	0.1	0.3	n.d.			8.1	0.1	20.3
¥	K20	0.7	0.0	0.8	0.6	0.0	0.8	0.2	0.0	0.2	0.2	0.0	0.2
Ca	CaO	6.6	0.1	9.3	6.6	0.1	0.0	20.4	0.2	28.6	2.2	0.1	3.1
Ē	TiO2	n.d.			n.d.			n.d.			n.d.		
>	V205	n.d.			п.d.			n.d.			n.d.		
ن ک	Cr203	n.d.			n.d.			n.d.			n.d.		
Mn	MnO	0.1	0.1	0.1	0.1	0.1	0.1	n.d.			n.d.		
Fe	Fe203	5.8	0.1	8.3	5.7	0.1	8.2	2.5	0.1	3.6	3.0	0.1	4.0
°0	000	n.d.			0.1	0.1	0.1	0.1	0.1	0.1	n.d.		
īz	Nio	n.d.			n.d.			n.d.			n.d.		
Cu	CuO	0.1	0.1	0.1	n.d.			n.d.			0.1	0.1	0.2
Zn	ZnO	5.7	0.1	7.1	6.0	0.1	7.4	13.9	0.2	17.3	2.2	0.1	2.8
As	As203	0.1	0.1	0.1	n.d.			0.1	0.1	0.1	n.d.		
Ag	Ag2O	n.d.			n.d.			n.d.			n.d.		
Sb	Sb203	0.4	0.2	0.5	0.1	0.2	0.1	n.d.			n.d.		
Ba	BaO	18.9	0.2	21.1	18.6	0.2	20.8	3.4	0.1	3.8	5.5	0.2	6.1
Pb	0qd	14.0	0.2	15.1	13.9	0.2	15.0	4.8	0.2	5.2	50.4	0.4	54.3
0		28.9	0.3		29.0	0.3		35.1	0.3		23.7	0.3	
Totals		100.0			100.0			100.0			100.0		
Processing	I option : Oxyge	en by stoichic	ometry (Normalise	id)	ç	.d. = not detecte	pe						
Number of Sample is r	Iterations : 3 Voliched												
Sample is c	pointered with Car	bon - thickn	ress (nm): 15.0, d	ensity (g/cm3):	2.25								
Detector ef	fficiency : Calcu	llation											

Figure 9.8 (cont'd): Scanning electron microscopy data for Grinton Smeltings lead smelting slag sample GS-B from Appendix 58: site of interest 2 spectra analysis.



Figure 9.9: Scanning electron microscopy data for Hutton Common glass production residue sample H4C from Appendix 59: sites of interest 1 (upper) and 2 (lower).

SCANNING		<b>NICKOSCO</b>								
Glass worl	king residues		Sample	Hutton Comr	non slag H4	υ	Site of Intere	st 1		
		Spectrum	1: Area		Spectrum 2:	Area		Spectrum 3	3: Phase	
Element	Fomula	Weight%	Weight% sigma	Compound%	Weight% V	veight% sigma	Compound%	Weight% V	Weight% sigma	Compound%
Na	Na2O	1.6	0.1	2.2	, - 	, 0.1	2.2	23	, 0.1	1.0
Mg	OBM	1.3	0.1	2.1	1.3	0.1	2.1	1.6	0.1	2.7
Ā	AI203	1.6	0.1	3.1	1.6	0.1	3.1	1.9	0.1	3.7
Si	SiO2	29.7	0.2	63.6	29.8	0.2	63.7	31.4	0.2	67.2
٩	P205	0.9	0.1	2.1	0.8	0.1	1.9	1.0	0.1	2.4
ю	SO3	0.2	0.0	0.4	0.2	0.1	0.5	0.2	0.0	0.4
ō		0.7	0.0	0.0	0.6	0.1	0.0	0.6	0.1	0.0
¥	K20	3.7	0.1	4.4	0.0 0.0	0.1	4.5	3.0	0.1	3.6
S	CaO	13.8	0.1	19.3	13.9	0.1	19.4	10.9	0.1	15.2
F	Ti02	0.2	0.1	0.3	0.1	0.1	0.2	0.1	0.0	0.2
>	V205	n.d.			n.d.			n.d.		
ŭ	Cr2O3	0.1	0.1	0.1	0.1	0.1	0.1	n.d.		
Mn	MnO	0.3	0.1	0.4	0.2	0.1	0.2	0.1	0.1	0.2
Fe	Fe203	0.9	0.1	1.3	1.1	0.1	1.6	0.7	0.1	0.0
ი	000	0.1	0.1	0.1	n.d.			n.d.		
ž	0i0	n.d.			n.d.			n.d.		
Cu	CuO	n.d.			n.d.			n.d.		
Zn	ZnO	n.d.			0.1	0.1	0.1	n.d.		
0		45.0	0.2		45.0	0.2		46.3	0.2	
Totals		100.0			100.0			100.0		
Processing Number of	option : Oxyger iterations : 3	n by stoichic	ometry (Normalise	(p	-	.d. = not detect	p∈			
Sample is p	oolished.									
Sample is c Detector eff	coated with Cart ficiency : Calcul	bon - thickn lation	less (nm): 15.D, di	ensity (g/cm3):	2.25					

Figure 9.9 (cont'd): Scanning electron microscopy data for Hutton Common glass production residue sample H4C from Appendix 59: site of interest 1 spectra analysis.

		hase ight% sigma Compound% 0.1 2.7 0.1 2.5 0.1 2.4 0.1 2.5 0.1 2.5 0.1 7.4 0.1 7.4 0.1 1.2 0.1 1.2 0.1 0.3 0.1 0.5 0.1 0.5 0.0 0.5 0.1 0.5 0.0 0.0 0.1 0.5 0.1 0.5 0.0 0.0 0.1 0.3 0.3 0.0 0.0 0.0 0.0	
		Spectrum 4: P Weight% Weight% We 2.0 1.7 1.7 1.7 1.7 1.0 0.3 1.3 1.3 1.3 1.5 1.4 1.5 1.4 1.5 1.5 1.0 1.1 1.0 1.1 1.0 1.0 1.0 1.0 1.0 1.0	
		Compound% 3.1 2.7 2.5 3.5 0.5 1.5.7 1.5.7 0.1 0.1 0.1 0.1 0.1	
		Phase Veight% sigma 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	
	est 2	Spectrum 3: Veight% V 23 1.6 1.6 1.1 1.1 1.1 1.1 1.2 1.1 1.2 1.1 1.4 1.1 1.4 1.1 1.4 1.1 1.4 1.4	
	Site of Inter	Compound 2.3 2.3 2.2 2.3 2.3 2.3 2.3 2.3 2.3 2.3	eq
	0	Area eight% sigma 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	d. = not delect
	mon slag H4	Spectrum 2: Veight/w Weight/w 2: 1.3 1.3 1.3 0.6 0.2 1.3 0.2 1.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	É
	Hutton Com	Compound% 2.2 3.3 2.2 5.3 1.4 1.4 1.4 1.4 1.2 0.3 0.1 1.4 1.4 0.2 0.2 0.2 0.2	(j
	mple	Area eight% sigma 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	≄try (Normalis∈
IICROSCOPY	ÿ	Weigertum V Weigertum V 1.6 1.3 1.3 1.3 0.7 1.3 0.1 1.3 0.1 1.3 0.1 1.3 0.1 1.3 0.1 1.4 0.1 1.0 0.1 1.0 0.1 1.0 0.0 1.0 1.0 0.0 1.0 1	ımoirlamı
ELECTRON N	ing residues	Formula Na2O MgO Na2O NgO NgO S02 S03 S03 S03 S03 S03 S03 S03 S03 S00 S00	pption : Oxyger erations : 3 blished.
SCANNING	Glass work	고 이 것 인 고 있 주 고 요 고 요 고 요 고 요 - 이 것 인 고 있 구 고 요 - 이 가 인 고 있 수 그 요 ~ 그 요 ~ 고 요 ~ 2 0 년 0 년 0 년 0 년 0 년 0 년 0 년 0 년 0 년 0	Processing - Number of it Sample is po

Figure 9.9 (cont'd): Scanning electron microscopy data for Hutton Common glass production residue sample H4C from Appendix 59: site of interest 2 spectra analysis.



Figure 9.10: Scanning electron microscopy data for Knightons glass production crucible sample KC3 from Appendix 60: sites of interest 1 (upper) and 2 (lower).

Glass workir	ng crucibles		Sample	Knightons K(	ñ		Site of Interes	st 1					
		Spectrum	1: Area		Spectrum	2: Area		Spectrum	3: Phase		Spectrum	4: Phase	
Element	Formula	Weight%	Weight% sigma	Compound%	Weight%	Weight% sigma	Compound%	Weight%	Weight% sigma	Compound%	Weight%	Weight% sigma	Compound%
Na	Na2O	0.2	0.0	0.2	0.1	0.0	0.2	n.d.			n.d.		
Mg	овм	0.5	0.0	0.8	4.0	0.0	0.6	n.d.			0.1	0.0	0.1
A	AI2O3	9.9	0.1	18.6	8.9	0.1	16.9	n.d.			n.d.		
Si	SiO2	34.7	0.1	74.1	35.8	0.1	76.7	46.8	0.1	100.0	46.8	0.1	100.0
۵	P205	0.2	0.0	0.5	0.2	0.0	0.5	0.1	0.0	0.3	0.1	0.0	0.1
s	SO3	n.d.			n.d.			n.d.			n.d.		
¥	K20	2.4	0.0	2.9	1.8	0.0	2.2	n.d.			n.d.		
Ca	CaO	0.2	0.0	0.3	0.2	0.0	0.3	n.d.			n.d.		
F	Tio2	0.7	0.0	1.2	0.5	0.0	0.8	n.d.			n.d.		
>	V205	n.d.			n.d.			n.d.			n.d.		
ۍ ت	Cr203	n.d.			л. Ц			n.d.			n.d.		
Mn	MnO	n.d.			n.d.			n.d.			n.d.		
Fe	Fe203	1.6	0.1	2.3	1.5	0.1	2.2	0.1	0.0	0.1	0.1	0.0	0.1
°0	000	n.d.			n.d.			n.d.			n.d.		
īz	0i0	.p.u			л.d.			n.d.			n.d.		
Cu	CnO	n.d.			0.1	0.1	0.1	n.d.			n.d.		
Zn	ZnO	n.d.			n.d.			0.1	0.1	0.1	n.d.		
As	As203	0.1	0.1	0.1	D.1	0.1	0.1	n.d.			n.d.		
Zr	ZrO2	n.d.			n.d.			n.d.			n.d.		
0		50.4	0.2		50.7	0.2		53.4	0.1		53.3	0.1	
Totals		100.0			100.0			100.0			100.0		
	;		:	•		-							
Processing of Number of ite.	otion : Oxyger rations : 3	n by staichic	ometry (Normalise	Ð		n.d. = not delect	pe						
Sample is pol.	ished.												
Sample is cos Detector effici	ated with Cart iency : Calcula	oon - thickn ation	ess (nm): 15.0, de	ensity (g/cm3):	2.25								

Figure 9.10 (cont'd): Scanning electron microscopy data for Knightons glass production crucible sample KC3 from Appendix 60: site of interest 1 spectra analysis.

Glass work	ing crucibles		Sample	Knightons K(	ñ		Site of Intere	st 2					
		Spectrum	1: Area		Spectrum 2	2: Area		Spectrum :	3: Phase		Spectrum	4: Phase	
Element	Formula	Weight%	Weight% sigma	Compound%	Weight%	Weight% sigma	Compound%	Weight%	Weight% sigma	Compound%	Weight%	Weight% sigma	Compound%
Na	Na2O	0.2	0.0	0.2	0.2	0.0	0.3	n.d.	,		n.d.	,	
Mg	OBM	0.5	0.0	0.8	0.5	0.0	0.8	0.1	0.0	0.1	n.d.		
₽	AIZO3	10.2	0.1	19.3	9.2	0.1	17.3	0.7	0.0	<u>н</u> .	n.d.		
Si	Si02	34.5	0.1	73.8	35.6	0.1	76.1	46.1	0.1	98.5	47.0	0.1	100.6
۵	P205	0.2	0.0	0.6	0.2	0.0	0.5	0.1	0.0	0.3	0.1	0.0	0.3
S	SO3	n.d.			n.d.			n.d.			n.d.		
¥	K20	2.0	0.0	2.4	1.8	0.0	2.1	0.1	0.0	0.1	n.d.		
Ca	CaO	D.3	0.0	0.4	0.3	0.0	0.4	n.d.			n.d.		
Ħ	TiO2	0.4	0.0	0.6	0.4	0.0	0.7	n.d.			n.d.		
>	V205	n.d.			n.d.			n.d.			n.d.		
ې م	Cr203	n.d.			n.d.			n.d.			n.d.		
Mn	MnO	n.d.			0.1	0.0	0.1	n.d.			n.d.		
Fe	Fe203	1.7	0.1	2.4	1.6	0.1	2.3	0.1	0.1	0.2	n.d.		
Co Co	000	n.d.			n.d.			n.d.			n.d.		
īz	Nio	n.d.			n.d.			n.d.			n.d.		
Cu	CUO	0.1	0.1	0.1	n.d.			0.1	0.1	0.1	n.d.		
Zn	ZnO	n.d.			n.d.			n.d.			n.d.		
As	As203	0.1	0.1	0.1	D.1	0.1	0.1	n.d.			n.d.		
Zr	ZrO2	n.d.			n.d.			n.d.			n.d.		
0		50.5	0.2		50.7	0.2		53.2	0.2		53.5	0.1	
Totals		100.0			100.0			100.0			100.0		
	:		-	2		•	-						
Processing - Number of it	option : Uxyger terations : 3	n by stoicnic	ometry (Normalise	Ð		n.d. = not delecte	De						
Sample is po	olished.												
Sample is ci Detector effi	oated with Cart iciency : Calcult	oon - thickn ation	iess (nm): 15.0, de	ensity (g/cm3):	2.25								

Figure 9.10 (cont'd): Scanning electron microscopy data for Knightons glass production crucible sample KC3 from Appendix 60: site of interest 2 spectra analysis.



Figure 9.11: Iron smelting slag: average iron content variation with magnetic susceptibility.



Figure 9.12: Blast furnace slag: average iron content variation with magnetic susceptibility.



Figure 9.13: Lead smelting slag: average iron content variation with magnetic susceptibility.



Figure 9.14: Glass production residues: average iron content variation with magnetic susceptibility.



Figure 9.15: Glass production crucibles: average iron content variation with magnetic susceptibility.



Figure 9.16: Iron smelting slag: average iron content predicted variation with mineral composition.