



## Advantages to developing your application with us:

1. **No development time** in your laboratory
2. **Cost saving**
3. Fast introduction of **new methods**
4. **Easy calculation** of costs
5. **Guarantee** on reproducibility and accuracy
6. Calibration with **highest quality**
7. Newcomers become **experts** quickly
8. Guaranteed **after sales support**

## Typical content of a package:

- Sample **preparation tools**: fusion machine, mill
- **Chemicals**: flux, oxidizer, additives
- 1 set of **calibration standards** ready for measurement
- 1 set of **drift correction samples**
- 1 set of **validation samples**
- Installation of **measuring program** on the XRF instrument in your laboratory
- **Calibrating on site**
- **Validation** with your own samples
- **Training** of your laboratory staff
- **Customer acceptance**
- **After sales support** from our team of XRF experts
- Contribution to our **round robin tests**
- **Cross check** of routine results with our application laboratory



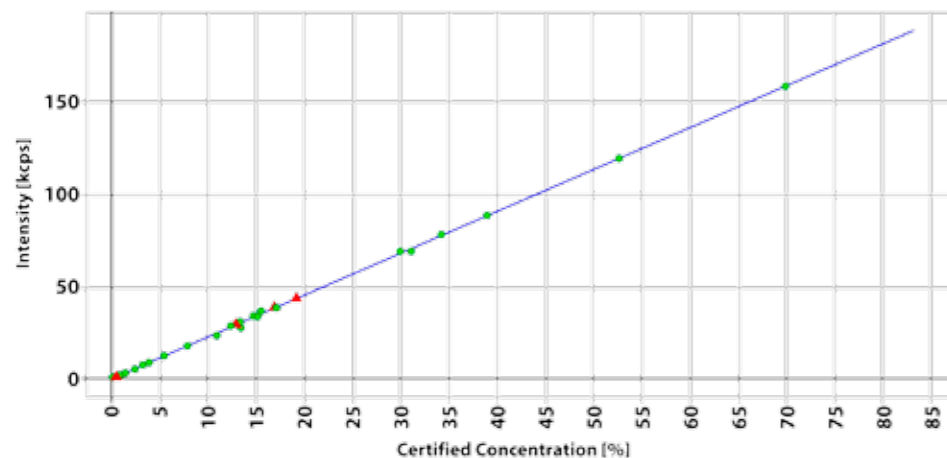
Vulcan 4MA



All standard calibrations are developed in our own application laboratory. We will be pleased to accept your test samples for evaluation in our laboratory and can work together with you to develop new methods to transfer to install in your laboratory.

Ask for a free presentation in our lab whenever you like.

## Fe calibration curve in slags and filter dust



## Concentration ranges for fusion programs

Component	Slags and Dusts	
	Min %	Max %
Al <sub>2</sub> O <sub>3</sub>	0	36
CaO	0	100
Cr <sub>2</sub> O <sub>3</sub>	0	18
Cu	0	0,4
Fe	0	70
K <sub>2</sub> O	0	2,5
MgO	0	22
Mn	0	10
Na <sub>2</sub> O	0	2,5
Ni	0	0,04
P <sub>2</sub> O <sub>5</sub>	0	16
Pb	0	8
S	0	1,2
SiO <sub>2</sub>	0	58
TiO <sub>2</sub>	0	12
V <sub>2</sub> O <sub>5</sub>	0	0,9
Zn	0	40

Component	Ferro Alloys	
	Min %	Max %
Si (FeSi)	40,0	90,0
Si (FeSiMn)	14,0	30,0
Mn (FeMn)	70,0	90,0
Mn(FeSiMn)	60,0	70,0
Mo (FeMo)	60,0	75,0
Cr (FeCr)	50,0	73,0
Ti (FeTi)	20,0	70,0
V (FeV)	40,0	84,0
Nb (FeNb)	60,0	68,0
W (FeW)	75,0	80,0
P traces	0,0	0,5
Mn traces	0,0	1,0
Si traces	0,0	1,0

## Validation examples

### Dust (DH 6202)

Component	Al <sub>2</sub> O <sub>3</sub>	CaO	Cu	Fe	K <sub>2</sub> O	MgO	Mn	Ni	P <sub>2</sub> O <sub>5</sub>	Pb	S	SiO <sub>2</sub>	TiO <sub>2</sub>	Zn
Cert. Values	2,56	1,22	0,24	25,6	2,50	3,10	3,58	0,04	0,52	0,98	2,12	15,64	0,52	9,88
Meas. Values	2,50	1,28	0,24	27,0	2,68	3,16	3,60	0,04	0,58	1,02	2,06	15,54	0,58	10,20
Diff	0,06	0,06		1,4	0,18	0,06	0,02		0,06	0,04	0,06	0,10	0,06	0,32

### Slag (CS 3921)

Component	Al <sub>2</sub> O <sub>3</sub>	CaO	Fe	K <sub>2</sub> O	MgO	Mn	P <sub>2</sub> O <sub>5</sub>	S	SiO <sub>2</sub>	TiO <sub>2</sub>
Cert. Values	4,79	50,05	16,92	0,013	2,99	2,31	1,36	0,196	10,46	0,78
Meas. Values	4,75	50,41	17,12	0,020	3,00	2,28	1,37	0,198	10,62	0,79
Diff	0,04	0,36	0,20	0,007	0,01	0,03	0,01	0,002	0,06	0,01

### FeSi (BS 140/1)

Component	Fe	Si
Cert. Values	52,8	45,2
Meas. Values	52,7	44,8
Diff	0,1	0,4

### FeCr (BS 130/2)

Component	Cr	Si
Cert. Values	52,6	2,12
Meas. Values	52,5	2,14
Diff	0,1	0,02

### FeMn (SL 12-06)

Component	Fe	Mn
Cert. Values	15,91	80,24
Meas. Values	16,53	80,03
Diff	0,62	0,21

### FeMo (SL 20-09)

Component	Fe	Mo
Cert. Values	29,00	68,87
Meas. Values	28,7	69,88
Diff	0,3	1,01

## Application packages

FLUXANA and HD Elektronik Kleve have developed applications for the following products.

We will be pleased to help you set up your own high precision method. Ready to go application packages:

Part No.:	Application
CS- 0003a	FeMo
CS- 0003c	FeSi
CS- 0003d	FeCr
CS- 0003e	FeTi
CS- 0003g	FeV
CS- 0003h	FeNb

Part No.:	Application
CS- 0003i	FeW
CS- 0003j	FeMn + FeMnSi
CS- 0007	Raw Materials
CS- 0017	Slags
CS- 0023	Slags and Dusts