

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



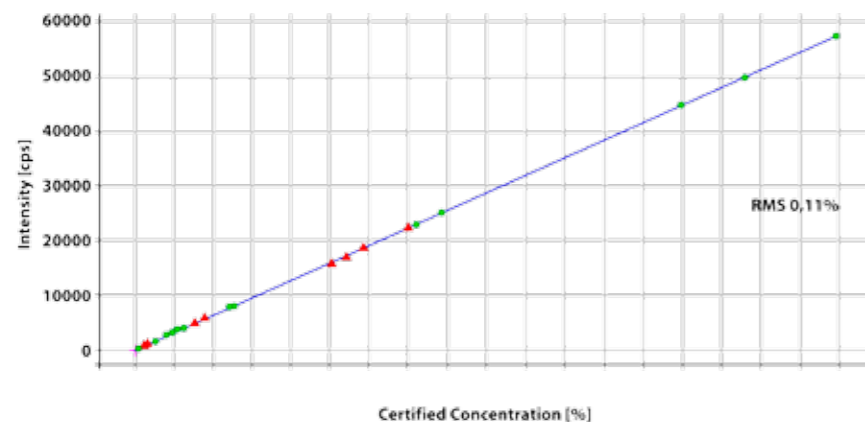
Vulcan 4MA



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.

Al calibration curve in ashes



Concentration ranges for fusion programs

Component	DIN		ASTM
	Black Coal Ash	Brown Coal Ash	Coal Ash
	%	%	%
SiO ₂	20 to 60	10 to 60	33.2 to 57.5
Al ₂ O ₃	10 to 40	5 to 20	11.6 to 33.1
Fe ₂ O ₃	5 to 20	0 to 40	3.1 to 41.8
CaO	0 to 10	15 to 45	1.5 to 4.5
MgO	0 to 5	0 to 5	0.4 to 4.5
K ₂ O	0 to 5	0 to 5	0.3 to 3.1
Na ₂ O	0 to 5	0 to 5	0.2 to 7.41
TiO ₂	0 to 2	0 to 2	0.5 to 1.5
P ₂ O ₅	0 to 2	0 to 2	0.1 to 3.4
MnO	0 to 1	0 to 1	0.008 to 0.26
BaO	0 to 1	0 to 1	0.05 to 2.84
SO ₃	0 to 10	5 to 35	0.41 to 14.72

FLUXANA application package covers also to the trace elements Cu, Cr, Ni, Sr, V, Zn.

Validation with control samples

DCC* 07 2009 Coal Ash	Al ₂ O ₃	BaO	CaO	Fe ₂ O ₃	K ₂ O	MgO	Mn ₂ O ₃	Na ₂ O	P ₂ O ₅	SiO ₂	SO ₃	SrO	TiO ₂
1	29,04	0,09	0,77	4,34	4,19	1,34	0,04	1,14	0,37	57,13	0,23	0,04	1,13
2	29,14	0,10	0,77	4,30	4,18	1,36	0,04	1,14	0,38	57,41	0,19	0,04	1,12
Mean	29,09	0,09	0,77	4,32	4,19	1,35	0,04	1,14	0,38	57,27	0,21	0,04	1,13
Diff	0,10	0,01	0,00	-0,04	-0,01	0,03	0,00	0,00	0,00	0,28	-0,04	0,00	-0,00
Certificate	28,99	0,09	0,79	4,23	4,24	1,39	0,03	1,08	0,36	56,74	0,31	0,04	1,10
DIN 51729-10 repeatability	0,35	0,01	0,05	0,08	0,06	0,04	0,01	0,04	0,02	0,63	0,02	0,01	0,03
ASTM D4326_04 repeatability	0,83	0,02	0,17	0,223	0,14	0,15	0,02	0,20	0,06	1,26	0,23	0,04	0,06

* Round robin sample from Delta Control issued 2009

Brown Coal Ash	Al ₂ O ₃	BaO	CaO	Fe ₂ O ₃	K ₂ O	MgO	Mn ₂ O ₃	Na ₂ O	P ₂ O ₅	SiO ₂	SO ₃	SrO	TiO ₂
1	9,02		23,17	5,88	0,23	2,01	0,15	0,03	0,14	25,04	33,10	0,07	0,44
2	9,10		22,90	5,84	0,23	2,01	0,14	0,07	0,13	25,29	32,90	0,07	0,44
Mean	9,06		23,04	5,86	0,23	2,01	0,14	0,05	0,14	25,17	33,00	0,07	0,44
Diff	0,08		-0,27	-0,04	0,00	0,00	-0,01	0,04	-0,01	0,25	-0,20	0,00	-0,01
DIN 51729-10 repeatability	0,19		0,23	0,05	0,01	0,03	0,01	0,28	0,01	0,23	0,21	0,01	0,03
ASTM D4326_04 repeatability	0,83		0,39	0,22	0,14	0,09	0,03	0,20	0,05	1,26	0,20	0,04	0,06

The results prove the agreement of the FLUXANA Calibration Package with the Standard methods from DIN and ASTM.

Application packages

FLUXANA has developed applications for the following product. We will be pleased to help you set up your own high precision method. Ready to go application packages:

Part-No.:	Application
CS- 0002 Set	FLUXANA Calibration Coal Ash, Coke Ash and Fly Ash based on fused bead