01/20/2016

Report on XRF Fluorine Measurements

The following results were obtained using the Fluorine-PX8 Application on the AXIOS^{Max} Panalytical Instrument as described in VSL-1810-10 page 12

Sample name	Meas. date/time	F, %
ANL-LRM	1/19/2016 21:52	0.875
Pb-F CUBE	1/19/2016 22:17	13.09
ANL-LRM	1/19/2016 22:35	0.886

The error can be significant, the concentration is more than an order of magnitude larger than our single glass standard. A sample of pure PbF2 would be helpful.

F – 13 %

Pb – 87 % (by difference)

$\frac{13}{19} = 0.68$

$\frac{87}{207} = 0.42$

$\frac{0.68}{0.42} = 0.618$ (golden ratio ☺)

$\Rightarrow$ $\sim PbF_{1.6}$

PANalytical

Quantification of sample PBF CUBE

R.M.S.:	5.089
Result status:	
Sum before normalization:	105.3 %
Normalised to:	100.0 %
Sample type:	Solid
Correction applied for medium:	No
Correction applied for film:	No
Used Compound list:	OxidesVSL
Results database:	omnian 27mm
Results database in:	c:\panalytical\superq\userdata

	Element	Conc. (%)
1	Al	0.009
2	B	0.000
3	Br	0.023
4	Ca	0.000
5	Cl	1.270
6	Co	0.083
7	Cr	0.017
8	F	5.643
9	Hg	0.047
10	K	0.033
11	Li	0.000
12	Mg	0.019
13	Na	0.109
14	Ni	0.028
15	O	6.800
16	P	0.027
17	Pb	85.879
18	S	0.012
19	Si	0.000

Oxigen is calculated based on the corresponding oxides.