

TYPICAL PERFORMANCE FOR CEMENT APPLICATION

PRECISION using the universal Goniometer

ARL 9900 Intellipower 3600 XRF spectrometer

CLINKER and CEMENT as Pressed Powders

Element on universal Goniometer	Range (%)	Typical Precision (%) 1 sigma at mid-range 10 sec.
CaO	59 - 68%	0.032%
SiO ₂	18 - 24	0.012
Al ₂ O ₃	3 - 6	0.006
Fe ₂ O ₃	1 - 4	0.004
S tot	0.2 - 5	0.005
MgO	0.5 - 4	0.005
K ₂ O	0.05 - 2	0.002
Na ₂ O	0.02 - 0.7	0.004
Cl	0.001 - 0.02	0.0002
P ₂ O ₅	0.04 - 0.5	0.002
Mn ₂ O ₃	0.002 - 0.3	0.001
Cr ₂ O ₃	0.001 - 0.1	0.0005
TiO ₂	0.01 - 0.4	0.0015
SrO	0.02 - 0.2	0.0005
Free CaO on Compact integrated XRD system		Typical Precision (%) 1 sigma at mid-range 30 sec.
Free CaO	0.2 – 3.0%	0.008

Nota :

- Precision values are standard deviation (SD) over 10 repeat measurements of 10s on a sample prepared as pressed pellet using the universal goniometer.
- Free lime specifications are valid for our Compact Integrated XRD system
- For guaranteed values the above precision levels must be multiplied by factor 1.5.