



Specification

Certipur[®] Certified Reference Material

Manufacturer:	Merck KGaA, Frankfurter Str. 250, 64293 Darmstadt, Germany
Description of CRM:	GF AAS multi-element standard XVIII
Art. No.:	1.09500.0100
Traceability:	Element standard solutions are measured applying high precision ICP-OES and are directly traceable to the corresponding NIST SRM[®] . <i>NIST: National Institute of Standards and Technology, Gaithersburg, USA.</i>
Minimum shelf life:	3 years
Nominal value:	See table below
Specification:	See table below

The effective element mass fractions are measured lot specifically.
The certified effective mass concentrations and the measurement uncertainties are calculated and shown in the table below.

Element	Specification mg/l	Uncertainty** mg/l	NIST Standard Reference Material
Be	4.5 – 5.5	± 0.5	SRM 3105a
Cd	4.5 – 5.5	± 0.5	SRM 3108
Ag	9 - 11	± 0.5	SRM 3151
Cr	18 - 22	± 1	SRM 3112a
Fe	18 - 22	± 1	SRM 3126a
Mn	18 - 22	± 1	SRM 3132
Ba	45 - 55	± 2	SRM 3104a
Co	45 - 55	± 2	SRM 3113
Cu	45 - 55	± 2	SRM 3114
Ni	45 - 55	± 2	SRM 3136
Al	90 - 110	± 2	SRM 3101a
As	90 - 110	± 2	SRM 3103a
Pb	90 - 110	± 2	SRM 3128
Sb	90 - 110	± 2	SRM 3102a
Se	90 - 110	± 2	SRM 3149
Tl	90 - 110	± 2	SRM 3158

****The measurement uncertainty can vary depending on the primary reference material.**