



Specification

Certipur[®] Certified Reference Material

Manufacturer:	Merck KGaA, Frankfurter Str. 250, 64293 Darmstadt, Germany
Description of CRM:	ICP multi-element standard V
Art. No.:	1.10714.0500
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
Matrix:	HCl 5%
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
Al	15 - 25	± 4	SRM 3101a
As	15 - 25	± 4	SRM 3103a
B	1.5 - 2.5	± 0.4	SRM 3107
Ba	1.5 - 2.5	± 0.4	SRM 3104a
Be	0.75 - 1.25	± 0.2	SRM 3105a
Ca	7.5 - 12.5	± 2	SRM 3109a
Cd	1.5 - 2.5	± 0.4	SRM 3108
Cr	1.5 - 2.5	± 0.4	SRM 3112a
Cu	1.5 - 2.5	± 0.4	SRM 3114
Fe	1.5 - 2.5	± 0.4	SRM 3126a
Hg	4.0 - 6.0	± 1	SRM 3133
K	75 - 125	± 10	SRM 3141a
Li	1.5 - 2.5	± 0.4	SRM 3129a
Mg	0.75 - 1.25	± 0.2	SRM 3131a
Mn	0.75 - 1.25	± 0.2	SRM 3132
Na	15 - 25	± 4	SRM 3152a
Ni	3.7 - 6.3	± 1	SRM 3136
P	7.5 - 12.5	± 2	SRM 3139a
Pb	15 - 25	± 4	SRM 3128
Sc	0.75 - 1.25	± 0.2	SRM 3148a
Se	15 - 25	± 4	SRM 3149
Sr	0.75 - 1.25	± 0.2	SRM 3153a
Te	15 - 25	± 4	SRM 3156
Ti	1.5 - 2.5	± 0.4	SRM 3162a
Y	0.75 - 1.25	± 0.2	SRM 3167a
Zn	1.50 - 2.50	± 0.4	SRM 3168a

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