



Specification

Certipur[®] Certified Reference Material

Manufacturer:	Merck KGaA, Frankfurter Str. 250, 64293 Darmstadt, Germany
Description of CRM:	ICP multi-element standard IV
Art. No.:	1.11355.0100
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
Matrix:	HNO ₃ 6%
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
Ag	990 - 1100	± 5	SRM 3151
Al	990 - 1100	± 5	SRM 3101a
B	990 - 1100	± 5	SRM 3107
Ba	990 - 1100	± 5	SRM 3104a
Bi	990 - 1100	± 5	SRM 3106
Ca	990 - 1100	± 5	SRM 3109a
Cd	990 - 1100	± 5	SRM 3108
Co	990 - 1100	± 5	SRM 3113
Cr	990 - 1100	± 5	SRM 3112a
Cu	990 - 1100	± 5	SRM 3114
Fe	990 - 1100	± 5	SRM 3126a
Ga	990 - 1100	± 5	SRM 3119a
In	990 - 1100	± 5	SRM 3124a
K	990 - 1100	± 5	SRM 3141a
Li	990 - 1100	± 5	SRM 3129a
Mg	990 - 1100	± 5	SRM 3131a
Mn	990 - 1100	± 5	SRM 3132
Na	990 - 1100	± 5	SRM 3152a
Ni	990 - 1100	± 5	SRM 3136
Pb	990 - 1100	± 5	SRM 3128
Sr	990 - 1100	± 5	SRM 3153a
Tl	990 - 1100	± 5	SRM 3158
Zn	990 - 1100	± 5	SRM 3168a

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