



Specification

Certipur[®] Certified Reference Material

Manufacturer:	Merck KGaA, Frankfurter Str. 250, 64293 Darmstadt, Germany
Description of CRM:	ICP multi-element standard XXI
Art. No.:	1.09498.0001
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 5%
Nominal value:	See table on page 2
Specification:	See table on page 2

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 on page 2.



Specification

1.09498.0001			
2.74473.0100			
Element	Specification mg/l	Uncertainty** mg/l	NIST Standard Reference Material
Ag	9.9 – 11.0	± 0.5	SRM 3151
Al	9.9 – 11.0	± 0.5	SRM 3101a
As	9.9 – 11.0	± 0.5	SRM 3103a
Ba	9.9 – 11.0	± 0.5	SRM 3104a
Be	9.9 – 11.0	± 0.5	SRM 3105a
Bi	9.9 – 11.0	± 0.5	SRM 3106
Ca	9.9 – 11.0	± 0.5	SRM 3109a
Cd	9.9 – 11.0	± 0.5	SRM 3108
Co	9.9 – 11.0	± 0.5	SRM 3113
Cr	9.9 – 11.0	± 0.5	SRM 3112a
Cs	9.9 – 11.0	± 1.0	SRM 3111a
Cu	9.9 – 11.0	± 0.5	SRM 3114
Fe	9.9 – 11.0	± 0.5	SRM 3126a
Ga	9.9 – 11.0	± 0.5	SRM 3119a
In	9.9 – 11.0	± 0.5	SRM 3124a
K	9.9 – 11.0	± 0.5	SRM 3141a
Li	9.9 – 11.0	± 0.5	SRM 3129a
Mg	9.9 – 11.0	± 0.5	SRM 3131a
Mn	9.9 – 11.0	± 0.5	SRM 3132
Na	9.9 – 11.0	± 0.5	SRM 3152a
Ni	9.9 – 11.0	± 0.5	SRM 3136
Pb	9.9 – 11.0	± 0.5	SRM 3128
Rb	9.9 – 11.0	± 0.5	SRM 3145a
Se	9.9 – 11.0	± 0.5	SRM 3149
Sr	9.9 – 11.0	± 0.5	SRM 3153a
Tl	9.9 – 11.0	± 0.5	SRM 3158
U	9.9 – 11.0	± 0.5	SRM 3164
V	9.9 – 11.0	± 0.5	SRM 3165
Zn	9.9 – 11.0	± 0.5	SRM 3168a
1.08623.0100			
Hg *	9.9 – 11.0	± 0.4	SRM 3133

* Hg in separate bottle

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