

# Commitment to Quality: Elevating Certipur<sup>®</sup> Standards to Certified Reference Material

## Newly launched ICP-Multi Standards & Conductivity Standards

Our unwavering commitment to quality is a top priority as a premier supplier of analytical reagents and high-quality Certified Reference Material grade standards. We have established a robust Quality Assurance System that adheres to ISO 9001 standards, ensuring the utmost quality across all our products. With a strong focus on precision, every product is manufactured to exact specifications, guaranteeing consistent quality and reliability. Our Certipur<sup>®</sup> line of ICP multi-element and Conductivity certified reference material standards, are derived from exceptionally pure starting materials produced in accordance with ISO 17034 guidelines and characterized per ISO/IEC 17025 standards.

We are elevating our Certipur<sup>®</sup> ICP multi-element and Conductivity standard solutions to a higher quality grade, now designated as Certified Reference Material (CRM). These solutions are traceable to standard reference materials from NIST. Our comprehensive Certificate of Analysis (COA) will include detailed information on content, composition, traceability, and both release and expiry dates.

**Table 1 : Newly launched ICP-Multi element Standards**

Newly launched Item Number	New Product Name	Quality Grade of new product
1044470500	ICP Multi element standard solution XXIV certified reference material, (15 elements in diluted nitric acid) tuning solution 700 ES Certipur <sup>®</sup>	Certified Reference Material
1044510100	ICP Multi element standard solution XIII certified reference material, (15 elements in diluted nitric acid) Certipur <sup>®</sup>	Certified Reference Material
1044520500	ICP Multi element standard solution XIV certified reference material, (11 elements in 2% hydrochloric acid) Certipur <sup>®</sup>	Certified Reference Material
1044530100	ICP Multi element standard solution XVI certified reference material, (21 elements in diluted nitric acid) Certipur <sup>®</sup>	Certified Reference Material
1044640100	ICP Multi element standard solution XI certified reference material, (7 elements in diluted nitric acid) for sludge testing Certipur <sup>®</sup>	Certified Reference Material
1044790100	ICP Multi element standard solution VIII certified reference material, (24 elements in diluted nitric acid) Certipur <sup>®</sup>	Certified Reference Material
1044820100	ICP Multi element standard solution X certified reference material, (23 elements in diluted nitric acid) for surface water testing Certipur <sup>®</sup>	Certified Reference Material

Newly launched Item Number	New Product Name	Quality Grade of new product
1044830100	ICP Multi element standard solution IX certified reference material, (9 elements in diluted nitric acid) Certipur®	Certified Reference Material
1044860100	ICP Multi element standard solution XVII certified reference material, (7 elements in 15% hydrochloric acid) Certipur®	Certified Reference Material
1044870100	GF AAS Multi element standard solution XVIII certified reference material, (16 elements in diluted nitric acid) Certipur®	Certified Reference Material
1044880100	ICP Multi element standard solution VI certified reference material, (30 elements in diluted nitric acid) for ICP-MS Certipur®	Certified Reference Material
1044920500	ICP Multi element standard solution V certified reference material, (26 elements in 5% hydrochloric acid) for wavelength calibration Certipur®	Certified Reference Material
1044980100	ICP Multi element standard solution IV certified reference material, (23 elements in diluted nitric acid) Certipur®	Certified Reference Material
1044990100	ICP Multi element standard solution I certified reference material, (19 elements in diluted nitric acid) Certipur®	Certified Reference Material
1172830100	ICP Multi element standard solution XXV certified reference material, (29 elements in diluted nitric acid) for MS Certipur®	Certified Reference Material


**Table 2 : Newly launched Conductivity Standards**

Newly launched Item Number	New Product Name	Quality Grade of new product
1046040105	Conductivity water (nominal 0 mS/cm) certified reference material, Test solution for measurement of electrolytic conductivity, traceable to PTB Certipur®	Certified Reference Material
1018110105	Potassium chloride solution (nominal 0.015 mS/cm), Certified Reference Material for the measurement of electrolytic conductivity, traceable to PTB (c=0.0001 mol/l) Certipur®	Certified Reference Material
1015860001	Potassium chloride solution (nominal 0.147 mS/cm), Certified Reference Material for the measurement of electrolytic conductivity, traceable to PTB (c = 0.001 mol/l) Certipur®	Certified Reference Material
1015530001	Potassium chloride solution (nominal 1.41 mS/cm), Certified Reference Material for the measurement of electrolytic conductivity, traceable to PTB (c=0.01 mol/l) Certipur®	Certified Reference Material
1015540001	Potassium chloride solution (nominal 12.8 mS/cm), Certified Reference Material for the measurement of electrolytic conductivity, traceable to PTB (c=0.1 mol/l) Certipur®	Certified Reference Material

The Certificate of Analysis for our newly launched certified reference material grade Certipur® line of ICP-multielement standards & Conductivity Standards includes:

- Certified content tested by high-precision ICP-OES
- Produced under ISO/IEC 17025 and ISO 17034 dual accreditation
- Maximum accuracy with calculated uncertainties, lot-specific values, and traceability to an SI unit through NIST SRM
- Detailed documentation in accordance with ISO Guide 31

To see our full portfolio of ICP-AAS standards visit us at: [ICP-AAS Portfolio](#)


www.sigmaldrich.com

### Certificate of Analysis – Certified Reference Material



#### Certipur® ICP Multi element standard solution IV


**Producer:** Merck KGaA, Frankfurter Str. 250, 64293 Darmstadt, Germany  
**Description of CRM:** ICP Multi element standard solution IV  
**Expiry date:** 2027/08/31  
**Ord. No.:** 1.04498.0100  
**Lot No.:** HC45452898  
**Composition:** 23 elements in HNO<sub>3</sub> Suprapur® 6.5%


Element	Certified value as mass concentration	Associated uncertainty, U=k·u (k=2) as mass concentration	Traceable to NIST SRM®	Batch Code NIST SRM®
Ag	998 mg/l	±20 mg/l	SRM 3151	160729
Al	996 mg/l	±20 mg/l	SRM 3101a	140903
B	993 mg/l	±20 mg/l	SRM 3107	190605
Ba	996 mg/l	±20 mg/l	SRM 3104a	140909
Bi	994 mg/l	±20 mg/l	SRM 3106	180815
Ca	998 mg/l	±20 mg/l	SRM 3109a	130213
Cd	997 mg/l	±20 mg/l	SRM 3108	130116
Co	992 mg/l	±20 mg/l	SRM 3113	190630
Cr	994 mg/l	±20 mg/l	SRM 3112a	170630
Cu	997 mg/l	±20 mg/l	SRM 3114	120618
Fe	995 mg/l	±20 mg/l	SRM 3126a	140812
Ga	998 mg/l	±20 mg/l	SRM 3119a	140124
In	996 mg/l	±20 mg/l	SRM 3124a	110516
K	999 mg/l	±20 mg/l	SRM 3141a	140813
Li	998 mg/l	±20 mg/l	SRM 3129a	100714
Mg	995 mg/l	±20 mg/l	SRM 3131a	140110
Mn	995 mg/l	±20 mg/l	SRM 3132	210714
Na	999 mg/l	±20 mg/l	SRM 3152a	200413
Ni	995 mg/l	±20 mg/l	SRM 3136	120619
Pb	998 mg/l	±20 mg/l	SRM 3128	101026
Sr	998 mg/l	±20 mg/l	SRM 3153a	990906
Tl	996 mg/l	±20 mg/l	SRM 3158	151215
Zn	993 mg/l	±20 mg/l	SRM 3168a	120629

**Accreditation:** Merck KGaA, Darmstadt, Germany is accredited by the German accreditation authority DAKKS as registered reference material producer D-RM-15185-01-00 in accordance with ISO 17034.  
**Certificate issue date:** 2024/09/30

CRM released by Approving Officer or delegate of Quality Control


  
  
Deutsche  
Akkreditierungsstelle  
D-RM-15185-01-00  
ISO 17034

  
Dipl.-Ing. Ayfer Yildirim  
Responsible Laboratory Manager



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### Certificate of Analysis – Certified Reference Material



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Merck KGaA  
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