

Engineering Analytics Laboratories

Reference Materials & Certified Reference Materials

Provided for the following ASTM listed reference materials for use with Differential Scanning Calorimetry (DSC), Thermomechanical Analyzers (TMA), Dynamic Mechanical Analyzers (DMA), Simultaneous Differential Thermogravimetric (SDT) analyzers, and Thermogravimetric Analyzers (TGA).

Reference Materials with Certificate:

Material	Melt Point (°C)	Curie Point (°C)	Enthalpy (J/g)
Adamantane	-65.54 ± 0.2	-	20.57 ± 0.9
Indium	152.59 ± 1.8	-	28.57 ± 1.3
Tin	232.65 ± 2.1	-	60.4 ± 0.7
Zinc	419.527 ± 2.1	-	107.4 ± 0.7
Aluminum	660.33	-	398.1
Silver	961.78	-	104.4 ± 3.9
Gold	1,064.18	-	64.59
Alumel	-	152.6	-
Nickel	1,453	358.2 ± 2.1	-
Perkalloy	-	482 ± 2.0	-
Iron	-	767 ± 3.0	-

Information in the above table is provided from literature sources with materials internally tested to match expected values and adjusted accordingly to account for purity / alloy variations. Perkalloy was tested for actual value based on final alloy composition.

Certified Reference Materials:

Material	Melt Point (°C)	Curie Point (°C)	Enthalpy (J/g)
Indium	152.44 ± 0.9	-	30.2 ± 1.06
Zinc	419.59 ± 0.03	-	108.34 ± 0.2

Information in the above table is determined through independent testing combined with rigorous internal testing of the high and ultra-high purity materials. All CRMs are accompanied with extensive documentation proving purity and property values. Additional information such as "How to Use" and "How to Analyze" provided with the documentation.

Company and Production Information:

- ISO Accreditation through PJLA, Inc. #122465:
 - ISO 17034: 2106 RMP for DSC, TGA, and DMA
 - ISO/IEC 17025: 2017 Testing Lab for DSC, TGA, and DMA
- RM Purity – Matches Literature purity at minimum
- CRM Purity – Matches or Exceeds NIST purity (current or last offered)
- Raw Material Origin – USA (First Pick), UK, Germany
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EA Labs RM and CRMs stands apart from other ISO 17034: 2016 RMP companies:

Metric	EA Labs	OEMs	3 rd Part RMPs
RM Documentation			
RM w/ Certificate	✓	None Known	None Known
ISO 17034: 2016	✓	Some	Some
Internal Verification Testing	✓	Some	Some
USA Products	Most Qualify	Some	Not Known
CRM Documentation			
Certificate	Raised Sealed & Signed	Signed	Signed
Value plus Uncertainty	✓	✓	✓
Comparison to Alt. Providers	✓		
Expiration Date	✓	✓	✓
Full Traceability and Purity	✓	Limited	Limited
How to Use	✓		
How to Analyze	✓		
How to Store	✓		
MSDS	Printed & Downloadable	Various Forms	Various Forms