Gravimetric Certificate

LGC | DR EHRENSTORFER™

ISO 17034 Certified Reference Material

Product Identification

Article Code: DRE-LA15088400ME
Article Name: 2-Methylisoborneol
Formula: C11H20O
Mol. Weight: 168.28
CAS No.: 2371-42-8

Lot Number: H995704ME
Expiry Date: 28.01.2024
Storage Temperature: 20°C ± 4°C

Storage and handling: The CRM should be stored in the original sealed bottle at the temperature given above. After use the bottle should be tightly closed and protected from moisture and light. The expiry date is valid for original sealed bottles under recommended storage conditions only.

Gravimetric Data

Compound Name:	Lot. No.:	Purity:	Weight:
2-Methylisoborneol	995703	99.6 %	1.903 mg

Batch Solvent:	Solvent Lot:	Batch size:
Methanol	V8F518048G5	190.00 ml

Concentration: 9.98 mg/l **Expanded Uncertainty U:** 0.41 mg/l

The uncertainty of this standard is calculated in accordance with the ISO 17034 and EURACHEM/CITAC Guide - Quantifying Uncertainty in Analytical Measurement, Second Edition. The expanded uncertainty is U(exp) = u(CRM) x k, where k is the coverage factor at the 95% confidence level (k=2). Uncertainty u(CRM) is based on the combination of the uncertainties associated with each individual operation involved in the analysis of the product: $u(CRM) = \sqrt{u(char)^2 + u(bb)^2 + u(lts)^2 + u(sts)^2}$; u(char) is the uncertainty of characterisation; u(bb) uncertainty of homogeneity test; u(lts) uncertainty of stability test long-term; u(sts) uncertainty of stability test short-term. u(lts) and u(sts) are not included in the calculation as the stability statement is based on real evidence opposed to simulation.
Minimum sample: 1 ml is recommended as the minimal sample amount. If less material is used, it is recommended to increase the certified uncertainty by a factor of two for half sample and a factor of four for a quarter of sample.
Intended use: Use this CRM as calibrant for chromatography or any other analytical technique.

Analytical Data

Traceability of chromatography: To the International System of Units (SI).

Instrument:	GC/FID	Injector:	280°C
Detection:	FID	Initial Temp:	60°C for 5 min
Column:	Optima-5MS, 0.25 µm, 0.25 mm	End Temp:	280°C for 1 min
Inj.-Vol.:	1 µl	Gradient:	15°C/min
Flow:	1.0 ml/min		
Ret.Time:	11.36 min		

Comment
Traceability: The balances used are calibrated with weights traceable to the national standards (DKD).
Calibrated class A glassware is used for volumetric measurements.

Attachment: Exemplary chromatogram of given method

Certificate Revision 1 - 28.01.2019 - M. Beck

Certified on: 28.01.2019
Certified by: M. Beck
RM Release

The LGC Labor GmbH, accreditated by DAkkS as indicated by the accreditation number D-RM-19883-01 & D-PL-19883-01, has shown competence based on ISO 17034:2017 with relevant parts of DIN EN ISO/IEC 17025:2018 for production of certified reference materials in form of organic pure substances and in form of single and multi-component solutions of organic pure substances.

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The warranty for this product is limited to the purchasing price of this product.

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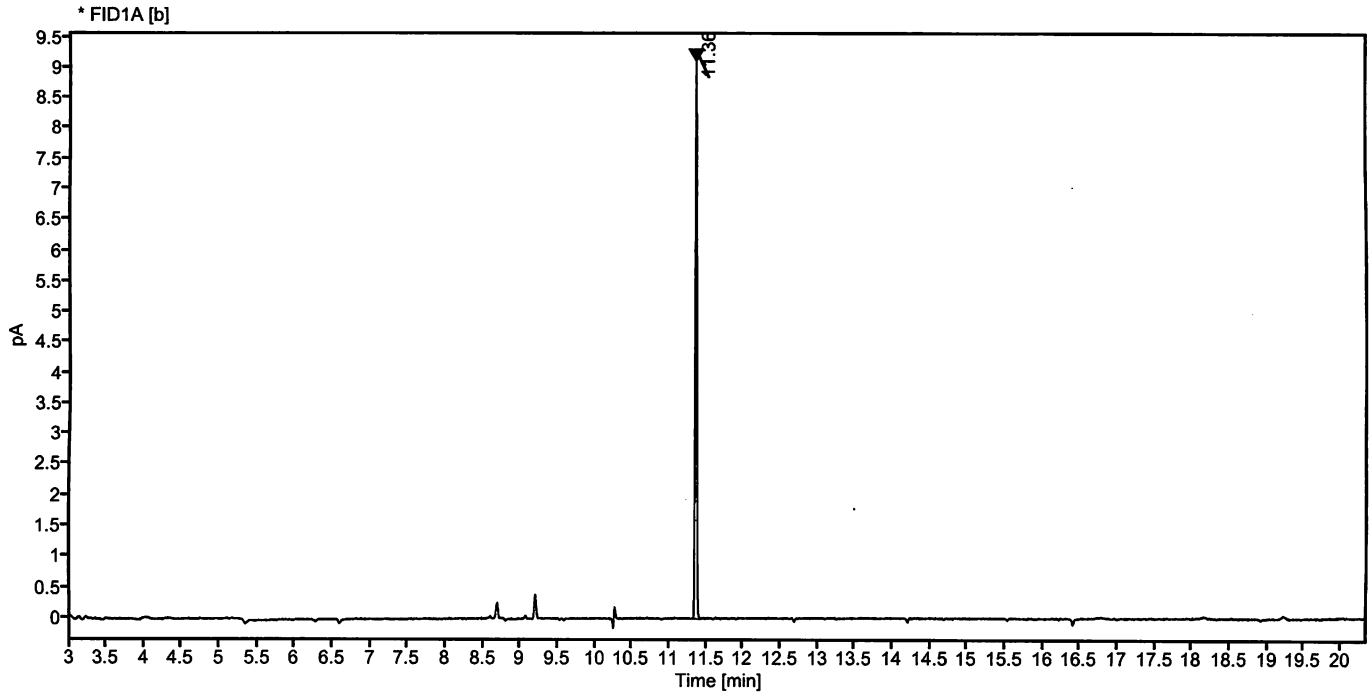
Data file:	15088400-13.dx	**Instrument:**	FID 4
Sample name:	H995704ME	**Sequence Name:**	2019KW04-0125a
Inj. volume [µl]:	1.0	**Injection date:**	1/26/2019 2:01:45 AM
Acq. method:	PESK.amx	**Location:**	57

Sample Description 2-Methylisoborneol



Signal: * FID1A [b]

Nr.	RT [min]	Area [pA*s]	Height [pA]	Area%	Width [min]
1	11.36	13.03454	9.10	100.00	0.117
	Sum	13.03			