

Certificate of Analysis



ISO 17034 Reference Material

Product Identification

Article Code: DRE-C14195500

Article Name: n-Hexane

Formula: C₆H₁₄

Mol. Weight: 86.17

CAS No.: 110-54-3

Lot Number: G752716

Expiry Date: 17.10.2023

Storage Temperature: 20°C ± 4°C

Storage and handling: The RM 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.

Purity: 99.35% (g/g)

Expanded Uncertainty U= 0.30% (g/g)

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 $U(\text{exp}) = u(\text{RM}) \times k$, where k is the coverage factor at the 95% confidence level ($k=2$). Uncertainty $u(\text{RM})$ is based on the combination of the uncertainties associated with each individual operation involved in the analysis of the product: $u(\text{RM}) = \sqrt{u(\text{char})^2 + u(\text{bb})^2 + u(\text{its})^2 + u(\text{sts})^2}$; $u(\text{char})$ is the uncertainty of characterisation; $u(\text{bb})$ uncertainty of homogeneity test; $u(\text{its})$ uncertainty of stability test long-term; $u(\text{sts})$ uncertainty of stability test short-term. $u(\text{its})$ and $u(\text{sts})$ are not included in the calculation as the stability statement is based on real evidence opposed to simulation.

Minimum sample: 1 mg 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 RM 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: 2.49 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.

Water Content: <0.10% (g/g) by Karl-Fischer-Titration ($U(\text{exp}) = 0.22\%$ (g/g)).

Purity was determined by chromatographic assay, corrected by water content and/or residue solvents.

Identity: EA, NMR, RT, IR

Attachment: Exemplary chromatogram of given method

Certificate Revision 1 - 28.09.2018 - N. Müller

Certified on: 28.09.2018

Certified by: N. Müller

RM Release

The LGC Labor GmbH, accredited 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.

Data file: 14195500-65-r001.dx

Instrument: FID 3

Sample name: G752716

Sequence Name: 2018KW37-0914b

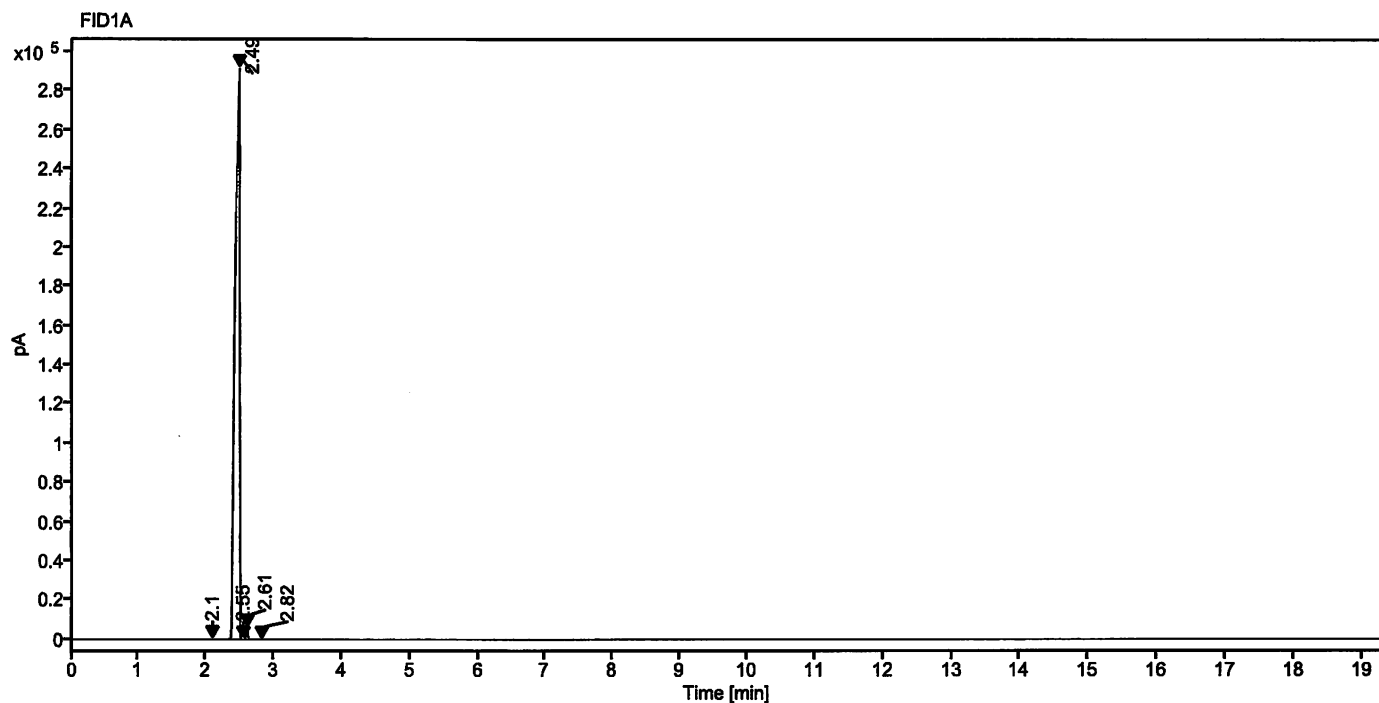
Inj. volume [μl]: 1.0

Injection date: 9/16/2018 3:20:43 PM

Acq. method: PESK.amx

Location: 52

Sample Description n-Hexane



Signal: FID1A

Nr.	RT [min]	Area [pA*s]	Height [pA]	Area%	Width [min]
1	2.10	485.60335	289.53	0.04	0.113
2	2.49	1367368.96474	291865.83	99.44	0.275
3	2.55	30.27387	26.93	0.00	0.031
4	2.61	7191.68071	5954.61	0.52	0.156
5	2.82	18.82346	10.34	0.00	0.117
	Sum	1375095.35			

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