

Certificate of Analysis



EHRENSTORFER™

ISO Guide 34 Reference Material

Product Identification

Article Code: DRE-C15981100

Article Name: 1-Pentanol

Formula: C₅H₁₂O

Mol. Weight: 88.15

CAS No.: 71-41-0

Lot Number:

G833884

Expiry Date:

08.06.2024

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: 99.51% (g/g)

Expanded Uncertainty U= 0.70% (g/g)

The uncertainty of this standard is calculated in accordance with the ISO Guide 34 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:	200°C
Detection:	FID	Initial Temp:	40°C for 5 min
Column:	Optima-SMS, 0.25 µm, 0.25 mm	End Temp:	200°C for 16 min
Inj.-Vol.:	1 µl	Gradient:	15°C/min
Flow:	1.0 ml/min		
Ret.Time:	6.76 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 ($U(\text{exp}) = 0.04\%$ (g/g)).
Identity: EA, NMR, RT, IR, MS

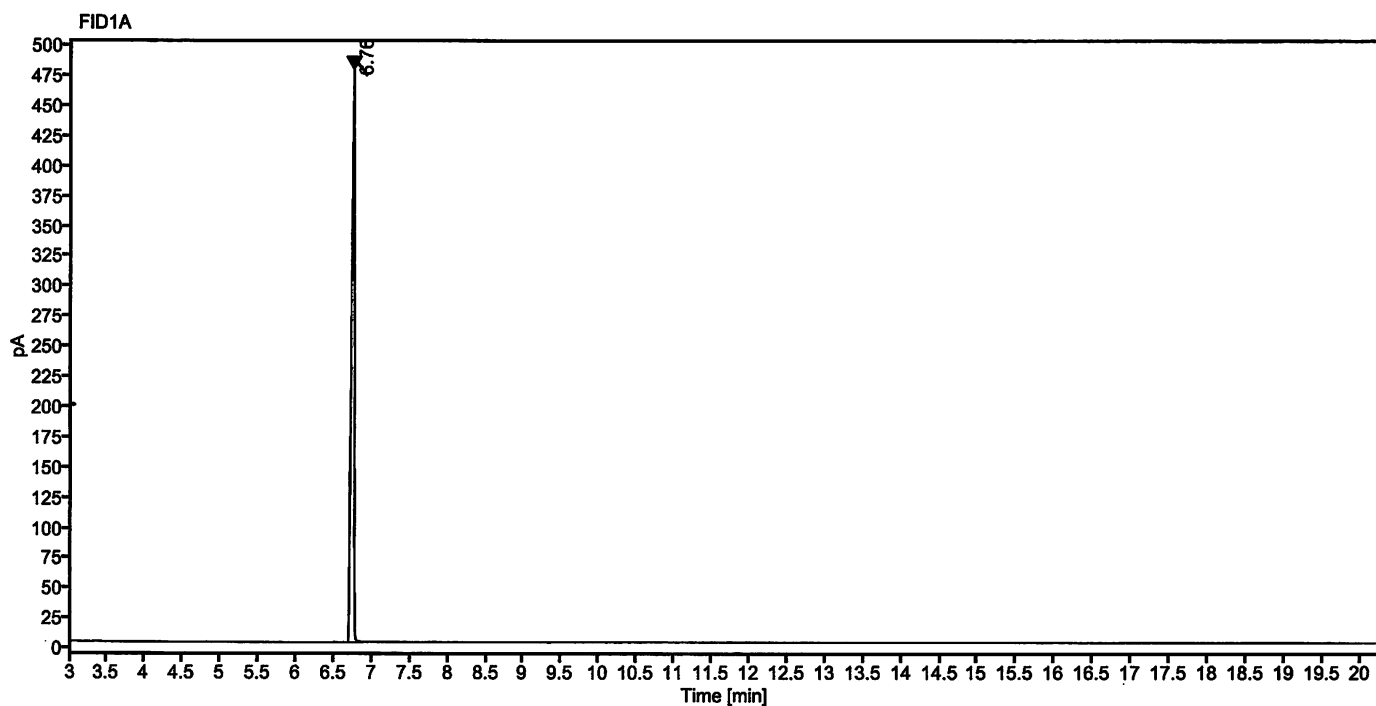
Certificate Revision 1 - 08.06.2018 - N. Müller

Certified on: 08.06.2018
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 Guide 34:2009 with relevant parts of DIN EN ISO/IEC 17025:2005 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.

LGC Labor GmbH - Bgm.-Schlosser-Straße 6A - 86199 Augsburg - Germany
Phone +49 821 906080 - Fax +49 821 9060888 - augsburg.inquiry@lgcgroup.com
The warranty for this product is limited to the purchasing price of this product.

Data file: 15981100-02.dx Instrument: FID 3
Sample name: 80523ME G833884 Sequence Name: 2018KW21-FID3-0523-a
Inj. volume [μ l]: 1.0 Injection date: 5/23/2018 3:54:01 PM
Acq. method: 200.amx Location: 105
Sample Description 1-Pentanol



Signal: FID1A						
Nr.	RT [min]	Area [pA*s]	Height [pA]	Area%	Width [min]	S/N
1	6.76	1214.70375	474.36	100.00	0.409	8015.1
Sum		1214.70				

Handwritten signature