

Gravimetric Certificate



ISO Guide 34 Certified Reference Material

Product Identification

Article Code: DRE-L2001690010
Article Name: PCB No. 169
Formula: C₁₂H₄Cl₆
Mol. Weight: 360.86
CAS No.: 32774-16-6

Lot Number: H85559510
Expiry Date: 26.06.2023
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: PCB No. 169	Lot. No.: 30906	Purity: 97.5 %	Weight: 10.663 mg
Batch Solvent: Iso-octane	Solvent Lot: H355M13	Batch size: 1040.00 ml	

Concentration: 10.00 mg/l Expanded Uncertainty U: 0.31 mg/l

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 $U(\text{exp}) = u(\text{CRM}) \times k$, where k is the coverage factor at the 95% confidence level ($k=2$). Uncertainty $u(\text{CRM})$ is based on the combination of the uncertainties associated with each individual operation involved in the analysis of the product: $u(\text{CRM}) = \sqrt{u(\text{char})^2 + u(\text{bb})^2 + u(\text{Its})^2 + u(\text{sts})^2}$; $u(\text{char})$ 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 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/ECD	Injector: 320°C
Detection: ECD	Initial Temp: 120°C for 4 min
Column: Optima-5MS, 0.25 µm, 0.25 mm	End Temp: 320°C for 5 min
Inj.-Vol.: 2.0 µl	Gradient: 15°C/min
Flow: 1.0 ml/min	
Ret.Time: 16.61 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.
Property value was determined by gravimetric measurements and confirmed by peak area comparison.

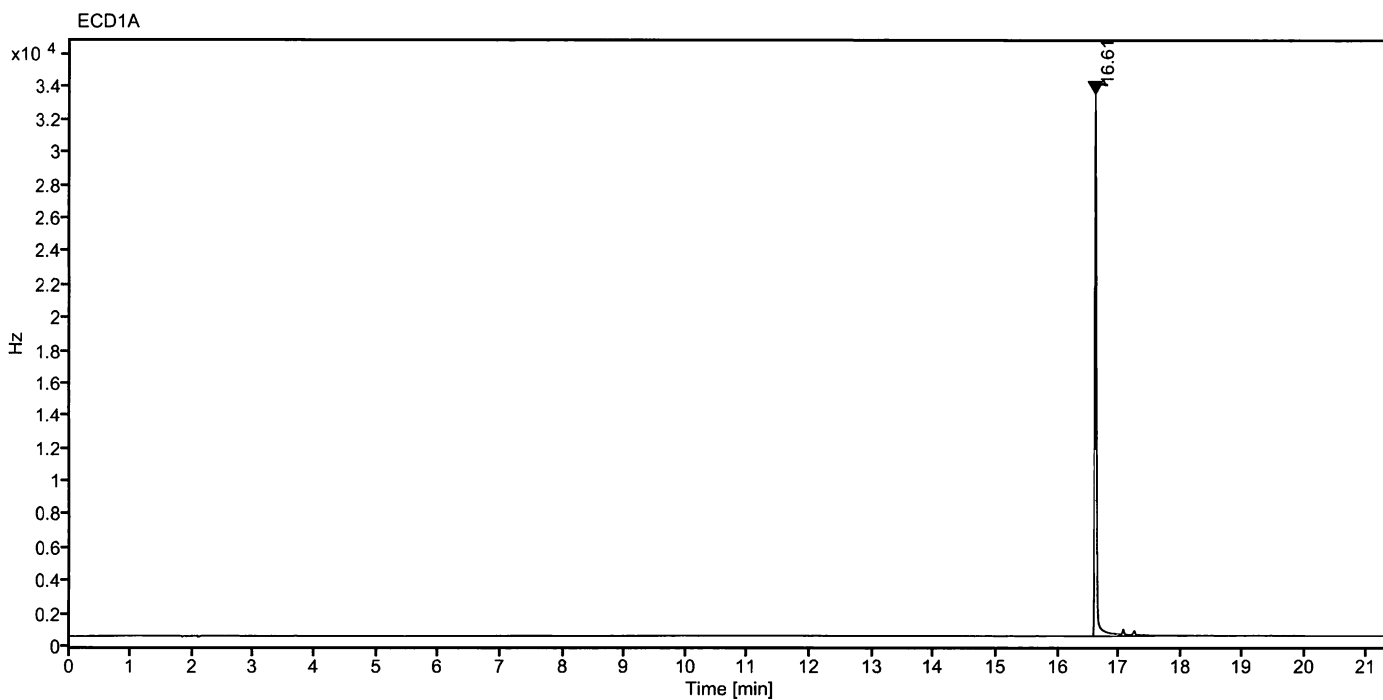
Certificate Revision 1 - 26.06.2018 - D. Schmid

Certified on: 26.06.2018
Certified by: D. Schmid
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.

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

Data file: 20016900-16.dx **Instrument:** ECD
Sample name: H855595IO **Sequence Name:** 2018KW23-ECD-0606-a
Inj. volume [µl]: 2.0 **Injection date:** 6/6/2018 9:33:56 PM
Acq. method: PAHK_2.amx **Location:** 64
Sample Description PCB No. 169



Signal: ECD1A

Nr.	RT [min]	Area [Hz*s]	Height [Hz]	Area%	Width [min]
1	16.61	66064.52354	32928.72	100.00	0.030
	Sum	66064.52			

Schmid D.