

**Certified Reference Material**

This certificate is designed in accordance with ISO 17034 and ISO Guide 31. This certified reference material (CRM) was designed, produced and verified in accordance with ISO/IEC 17025, ISO 17034 and a registered quality management system ISO 9001.

Product Name

Fluorene D10 10 µg/mL in Cyclohexane

Product Code

DRE-L20800200CY

CAS No.

81103-79-9

Mol. Weight

176.28

Mol. Formula

C₁₃D₁₀

Lot Number

H1375039CY

Format

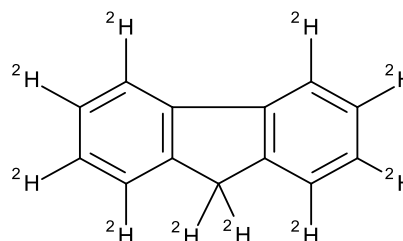
Solution

Expiry Date

23 Aug 2029

Storage Temp

20°C ± 4°C

**CERTIFIED**

Concentration
10.00 µg/mL

CERTIFIED

Expanded Uncertainty (U)
0.50 µg/mL

Uncertainty

The certified value(s) and uncertainty(ies) are determined in accordance with ISO 17034 with an 95% confidence level (k=2). Uncertainty is based on the Total Combined Uncertainty, including uncertainties of preparation, purity of neat materials, homogeneity and stability testing. Stability values are based on real evidence opposed to simulation.

The producer certifies that this certified reference material meets the specification stated in this certificate until the expiry date, provided it is stored unopened at the recommended temperature herein. Product warranties for this certified reference material are set out in the terms and conditions of purchase.

CERTIFIED BY

L. Messerschmid

CERTIFIED ON

23 Aug 2023

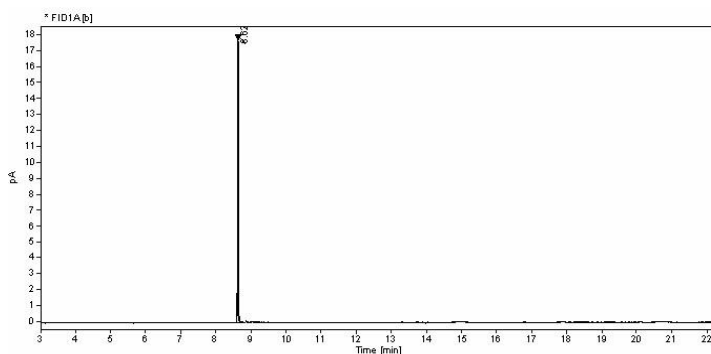
RM Release



REFERENCE MATERIAL CERTIFICATE

ISO 17034

CHROMATOGRAM



Signal: * FID1A [b]					
Nr.	RT [min]	Area [pA*s]	Height [pA]	Area%	Width [min]
1	8.62	27.41034	17.62	100	0.025

Instrument

GC/FID

Detection

FID

Column

Optima-5MS, 0.25 µm, 0.25 mm

Method Details

Initial Temp: 120°C / 4 min, End Temp: 320°C / 5 min, Gradient: 15°C/min

Inj.-Vol.

1.0 µL

Flow

1 mL/min

Method of Preparation

The certified value is based on gravimetric and volumetric preparation of this CRM. This CRM has been confirmed by the appropriate analytical techniques.

Batch Information

Solvent: Cyclohexane, Lot No. 007323CR04, 300.00 mL.

Concentration calculation based on Combined Purity = Chemical Purity * Isotopic Value.

Gravimetric Data

Compound Name	Lot No.	Combined Purity (%)	Weight (mg)	Chemical Purity (%)	Isotopic Purity (%)
Fluorene D10	1367297	98.3	3.051	99.0	99.3

Intended Use

This CRM is intended for use in a laboratory as a calibration and quality control standard or in method development for analytical techniques.

Safety

Proper precautions should be observed while handling. See Safety Data Sheet.

Traceability

The balances used for gravimetric measurements are calibrated with weights traceable to the national standards (DKD). The calibration of

the balances is verified daily internally and annually by an external accredited calibration service. Chromatographic methods are traceable to the International System of Units (SI).

Homogeneity

Random replicate samples of the final packaged CRM have been analysed to prove homogeneity compliant with ISO 17034.

Storage

The CRM should be stored in the original sealed container at the indicated temperature.

Instructions for use

The CRM should be used shortly after opening to avoid concentration changes due to evaporation. It is recommended to use 1 mL as the minimum sample size and if less material is used, to increase the certified uncertainty by a factor of two for half sample and four for a quarter of sample. If storage after opening is necessary, the CRM should be tightly closed and kept from light and moisture. If the CRM was in a sealed ampoule, it should be transferred to a vial with minimum head space. Visit the support section of our website lgcstandards.com for a series of Dr. Ehrenstorfer Tech Tip videos and frequently asked questions.

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LGC Labor GmbH is accredited by
DAKkS accreditation numbers
D-RM-19883-01-00 & D-PL-19883-01-00
on ISO 17034:2017 & ISO/IEC 17025:2018

