LGC | DR EHRENSTORFER™

REFERENCE MATERIAL CERTIFICATE ISO 17034

Reference Material

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

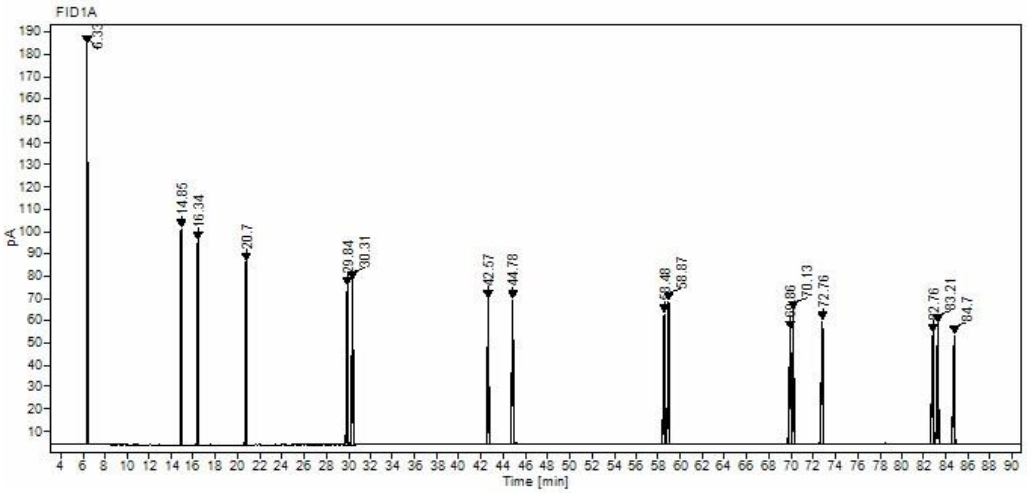
Product Name	Product Code	Lot Number	Format	Expiry Date	Storage Temp
PAH-Mix 25 2000 µg/mL in Acetone/Benzene	DRE-YA20950025AB	G1018351AB	Multicomponent Solution	22 Aug 2023	20°C ± 4°C

	CERTIFIED						
Compound Name	Concentration (µg/mL)	Expanded Uncertainty U (µg/mL)	CAS	Lot Number	Purity (%)	Amount (mg)	RT (min)
Naphthalene	2005.35	100.27	91-20-3	R986921	99.4	402.411	6.34
Acenaphthylene	2003.35	100.17	208-96-8	977695	99.1	403.228	14.85
Acenaphthene	2005.35	100.27	83-32-9	G172168	99.6	401.604	16.35
Fluorene	1999.32	99.97	86-73-7	129961	99.0	402.823	20.71
Phenanthrene	2005.38	100.27	85-01-8	G156210	99.0	404.044	29.84
Anthracene	2025.72	101.29	120-12-7	129951	99.5	406.091	30.31
Fluoranthene	2003.32	100.17	206-44-0	169969	98.6	405.267	42.57
Pyrene	1995.23	99.77	129-00-0	130640	98.5	404.040	44.78
Benz[a]anthracene	2003.33	100.17	56-55-3	169612	98.2	406.919	58.48
Chrysene	2005.38	100.27	218-01-9	1020808	97.7	409.421	58.87
Benzo[b]fluoranthene	2005.36	100.27	205-99-2	159495	99.4	402.414	69.87
Benzo[k]fluoranthene	2005.38	100.27	207-08-9	987073	98.0	408.166	70.13
Benzo[a]pyrene	2005.35	100.27	50-32-8	738373	99.0	404.038	72.75
Indeno[1,2,3-c,d]pyrene	2005.36	100.27	193-39-5	149840	99.4	402.414	82.76
Dibenz[a,h]anthracene	2001.33	100.07	53-70-3	987074	99.4	401.605	83.20
Benzo[g,h,i]perylene	2005.37	100.27	191-24-2	984427	94.2	424.630	84.70

The producer certifies that this 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 reference material are set out in the terms and conditions of purchase.

CERTIFIED BY	CERTIFIED ON		
D. Schmid	22 Aug 2019	D. Schmid	RM Release

CHROMATOGRAM



Instrument
GC/FID

Detection
FID

Column
Optima-5MS, 0.25 µm, 0.25 mm

Method Details
Temp: 120°C / 4 min-> 320°C / 16 min, Gradient: 2°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 RM. This RM has been confirmed by the appropriate analytical techniques.

Batch Information
Solvent: Acetone, Lot No. 161021612 / Benzene, Lot No. 21127, 1:1, 199.47 mL.

Intended Use
This RM 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.

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.

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. Only Class A glassware is used for volumetric measurements.

Homogeneity
Random replicate samples of the final packaged RM have been analysed to prove homogeneity consistent with ISO 17034.

Storage
The RM should be stored in the original sealed bottle at the indicated temperature.

Instructions for Use
The RM 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 the RM was in a sealed ampoule and storage after opening is necessary, it should be transferred to an amber vial with minimum head space and a Teflon-lined silicon septum. Visit the support section of our website lgcstandards.com for a series of Dr. Ehrenstorfer Tech Tip videos and frequently asked questions.

LGC Labor GmbH
Bgm.-Schlosser-Straße 6A
86199 Augsburg, Germany
T | +49 821 906080
F | +49 821 9060888
E | dr.ehrenstorfer@lgcgroup.com

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

DAkkS Deutsche Akkreditierungsstelle D-RM-19883-01-00