

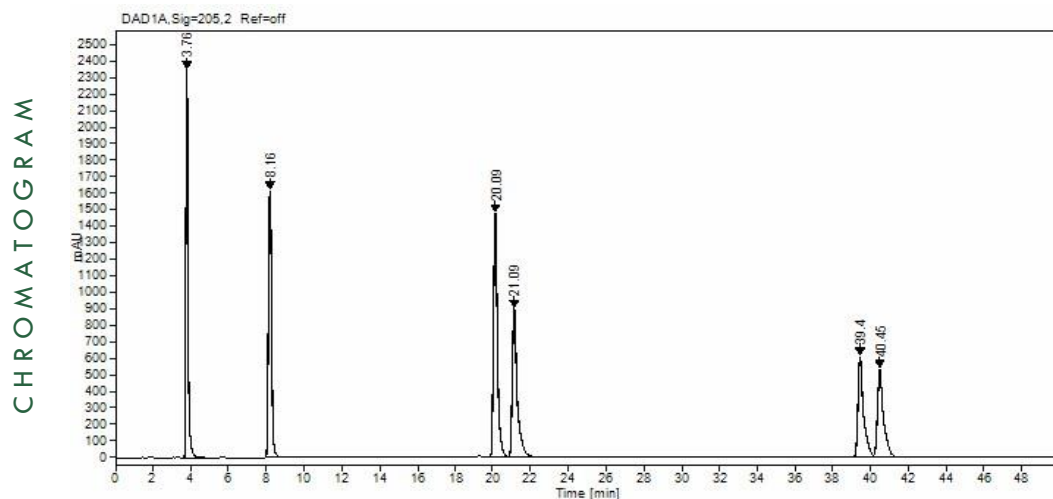
Reference Material

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 Phthalate Esters Mix 1 2000 µg/mL in Isooctane	Product Code DRE-YA08060100IO	Lot Number G1017393IO	Format Multicomponent Solution	Expiry Date 05 Aug 2024	Storage Temp 20°C ± 4°C
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Compound Name	CERTIFIED		CAS	Lot Number	Purity (%)	Amount (mg)	RT (min)
	Concentration (µg/mL)	Expanded Uncertainty U (µg/mL)					
Phthalic acid, bis-methyl ester	2000.01	61.14	131-11-3	41202	99.9	280.281	3.76
Phthalic acid, bis-ethyl ester	2000.02	40.61	84-66-2	G1006212	99.6	281.127	8.16
Phthalic acid, bis-butyl ester	2000.03	40.61	84-74-2	G167183	99.4	281.695	20.09
Phthalic acid, benzylbutyl ester	1999.97	40.62	85-68-7	G141686	98.5	284.260	21.09
Phthalic acid, bis-2-ethylhexyl ester	1999.97	41.07	117-81-7	G142368	99.3	281.969	39.40
Phthalic acid, bis-n-octyl ester	2000.03	40.61	117-84-0	G993713	99.4	281.695	40.45

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	<i>Müller</i>	RM Release
	N. Müller	05 Aug 2019		



Instrument
HPLC/DAD

Detection
DAD

Column
Nucleodur C18 PAH EC 3
µm 150 x 3 mm

Method Details
see Batch information

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: Isooctane, Lot No. I245021, 140.00 mL.

Chromatography Details

Eluent A: Acetonitrile:water for 2 min

Eluent B: Acetonitrile:water 9:1 for 10 min

Eluent A->B: 33 min

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.