

## Reference Material

Product Name

Phenol-Mix 18 10 µg/mL in Acetonitrile

Product Code

DRE-LA19000018AL

Lot Number

686947AL

### Format

### Multicomponent Solution

Expiry Date

09 Apr 2023

Storage Temp

$$20^{\circ}\text{C} + 4^{\circ}\text{C}$$

This certificate is designed in accordance with ISO Guide 31. This reference material (RM) was designed, produced and verified in accordance with a registered quality management system ISO 9001. All measurements were performed according to ISO/IEC 17025 by a DAkkS accredited laboratory (D-PL-19883-01-00).

Compound Name	CERTIFIED			Lot Number	Purity (%)	Amount (mg)	RT (min)
	Concentration (µg/mL)	Expanded Uncertainty U (µg/mL)	CAS				
2-Chlorophenol	10.1	0.5	95-57-8	159962	99.5	1.010	11.68
2,4-Dichlorophenol	10.0	0.5	120-83-2	122535	99.8	0.998	17.42
2,5-Dichlorophenol	10.0	0.5	583-78-8	116860	99.4	1.010	17.49
2,3-Dichlorophenol	10.0	0.5	576-24-9	171866	99.2	1.003	17.70
3-Chlorophenol	10.0	0.5	108-43-0	G979784	98.8	1.013	18.23
4-Chlorophenol	10.0	0.5	106-48-9	G157847	99.5	1.006	18.23
2,6-Dichlorophenol	10.0	0.5	87-65-0	115396	98.5	1.012	18.46
2,3,5-Trichlorophenol	10.0	0.5	933-78-8	123658	99.4	1.004	22.19
2,4,6-Trichlorophenol	10.1	0.5	88-06-2	123819	99.6	1.010	22.69
2,4,5-Trichlorophenol	10.0	0.5	95-95-4	123815	97.3	1.023	22.85
2,3,4-Trichlorophenol	10.0	0.5	15950-66-0	123648	98.6	1.014	23.11
2,3,6-Trichlorophenol	10.0	0.5	933-75-5	112952	99.9	1.005	23.51
3,5-Dichlorophenol	10.0	0.5	591-35-5	50507	99.0	1.005	23.62
3,4-Dichlorophenol	10.0	0.5	95-77-2	G436602	99.9	1.000	24.23
3,4,5-Trichlorophenol	10.1	0.5	609-19-8	G451917	99.5	1.010	29.28
Pentachlorophenol	10.0	0.5	87-86-5	125990	98.4	1.015	32.29

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**

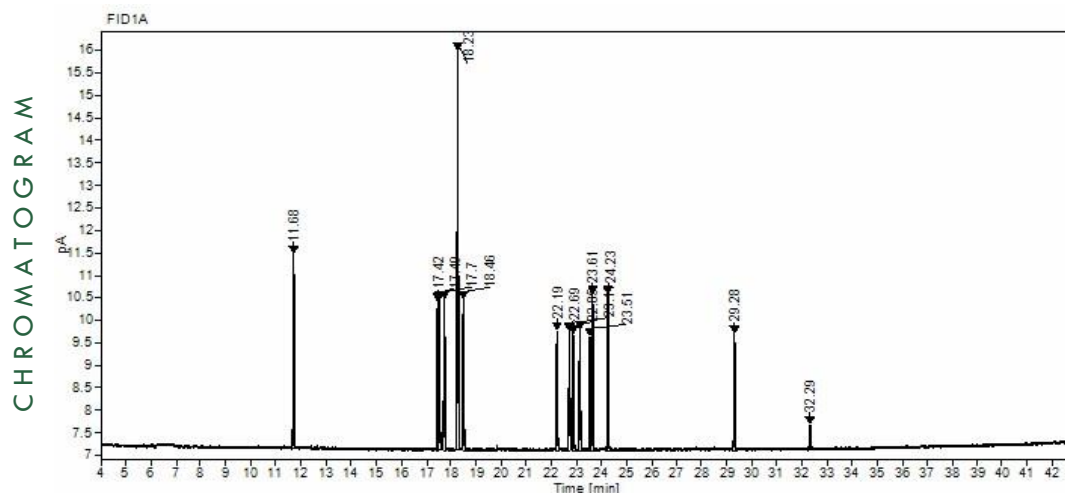
N. Müller

**CERTIFIED ON**

09 Apr 2019

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RM Release	
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Instrument  
GC/FID

Detection  
FID

Column  
Optima-5MS, 0.25 µm,  
0.25 mm

Method Details  
Temp: 60°C / 5 min -> 280°C /  
6 min, Gradient: 5°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: Acetonitrile, Lot No. 170670810, 100.00 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 EURACHEM/CITAC Guide for "Quantifying Uncertainty in Analytical Measurement, 3rd edition", with an 95% confidence level ( $k=2$ ). Uncertainty is based on the Total

Combined Uncertainty, including uncertainties of characterisation 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 measurement.

#### 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](http://lgcstandards.com) for a series of Dr. Ehrenstorfer Tech Tip videos and frequently asked questions.