

# Certificate of Analysis



## ISO Guide 34 Reference Material

### Product Identification

Article Code: DRE-C17945100

Article Name: m-Xylene

Formula: C<sub>8</sub>H<sub>10</sub>

Mol. Weight: 106.16

CAS No.: 108-38-3

Lot Number: G974443

Expiry Date: 16.07.2024

Storage Temperature: 20°C ± 4°C

Storage and handling: The RM 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.

Purity: 99.82% (g/g)

Expanded Uncertainty U= 0.30% (g/g)

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  $U(\text{exp}) = u(\text{RM}) \times k$ , where  $k$  is the coverage factor at the 95% confidence level ( $k=2$ ). Uncertainty  $u(\text{RM})$  is based on the combination of the uncertainties associated with each individual operation involved in the analysis of the product:  $u(\text{RM}) = \sqrt{u(\text{char})^2 + u(\text{bb})^2 + u(\text{Its})^2 + u(\text{sts})^2}$ ;  $u(\text{char})$  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 mg 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 RM as calibrant for chromatography or any other analytical technique.

### Analytical Data

Traceability of chromatography: To the International System of Units (SI).

Instrument: GC/FID

Detection: FID

Column: Optima-5MS, 0.25 µm, 0.25 mm

Inj.-Vol.: 1 µl

Flow: 1.0 ml/min

Ret.Time: 8.79 min

Injector: 200°C

Initial Temp: 40°C for 5 min

End Temp: 200°C for 16 min

Gradient: 15°C/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.

Water Content: <0.10% (g/g) by Karl-Fischer-Titration ( $U(\text{exp}) = 0.03\%$  (g/g)).

Purity was determined by chromatographic assay, corrected by water content and/or residue solvents.

Identity: EA, NMR, RT, IR, UV, MS

Certificate Revision 1 - 16.07.2018 - M. Beck

Certified on: 16.07.2018

Certified by: M. Beck

RM Release

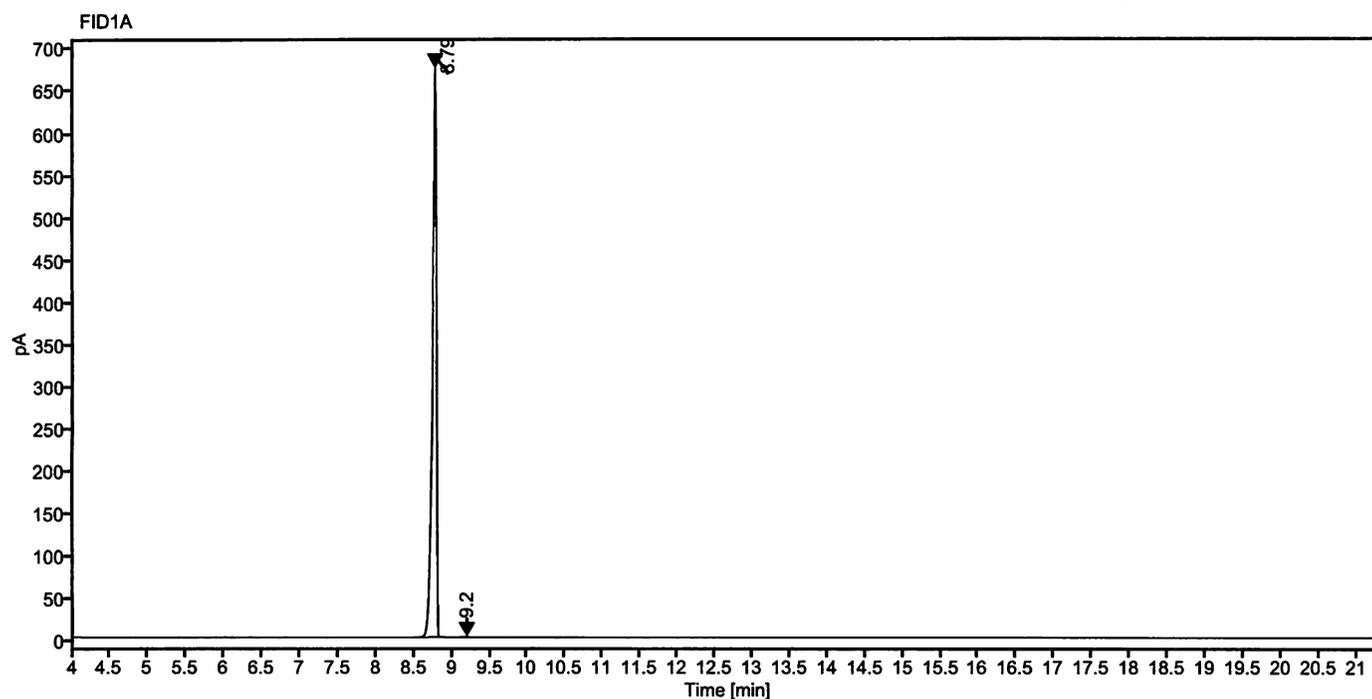
The LGC Labor GmbH, accredited by DAkks as indicated by the accreditation number D-RM-19883-01 & D-PL-19883-01, has shown competence based on ISO Guide 34:2009 with relevant parts of DIN EN ISO/IEC 17025:2005 for production of certified reference materials in form of organic pure substances and in form 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.

*RB*

Data file: 17945100-07.dx Instrument: FID 2  
Sample name: 80707AL G974443 Sequence Name: 2018KW26-0627-a  
Inj. volume [µl]: 1.0 Injection date: 6/27/2018 5:19:44 PM  
Acq. method: 200.amx Location: 56

Sample Description m-Xylene



Signal: FID1A

Nr.	RT [min]	Area [pA*s]	Height [pA]	Area%	Width [min]
1	8.79	2355.24940	672.58	99.83	0.332
2	9.20	3.95674	1.52	0.17	0.163
	Sum	2359.21			

*M. Bar*