

Certificate of Analysis



ISO Guide 34 Reference Material

Product Identification

Article Code: DRE-C15875000

Article Name: Para Red

Formula: C16H11N3O3

Mol. Weight: 293.28

CAS No.: 6410-10-2

Lot Number: G855268

Expiry Date: 09.07.2024

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: 97.71% (g/g)

Expanded Uncertainty U= 0.94% (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: HPLC/DAD

Detection: DAD

Column: ReproSil 100 C18 5 µm 250 x 3 mm

Inj.-Vol.: 10 µl

Flow: 1.0 ml/min

Ret.Time: 3.74 min

Method Details

Acetonitrile:Water 4:1

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: 0.16% (g/g) by Karl-Fischer-Titration ($U(\text{exp}) = 0.20\%$ (g/g)).

Purity was determined by elemental analysis

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

Certificate Revision 1 - 09.07.2018 - M. Beck

Certified on: 09.07.2018

Certified by: M. Beck

RM Release

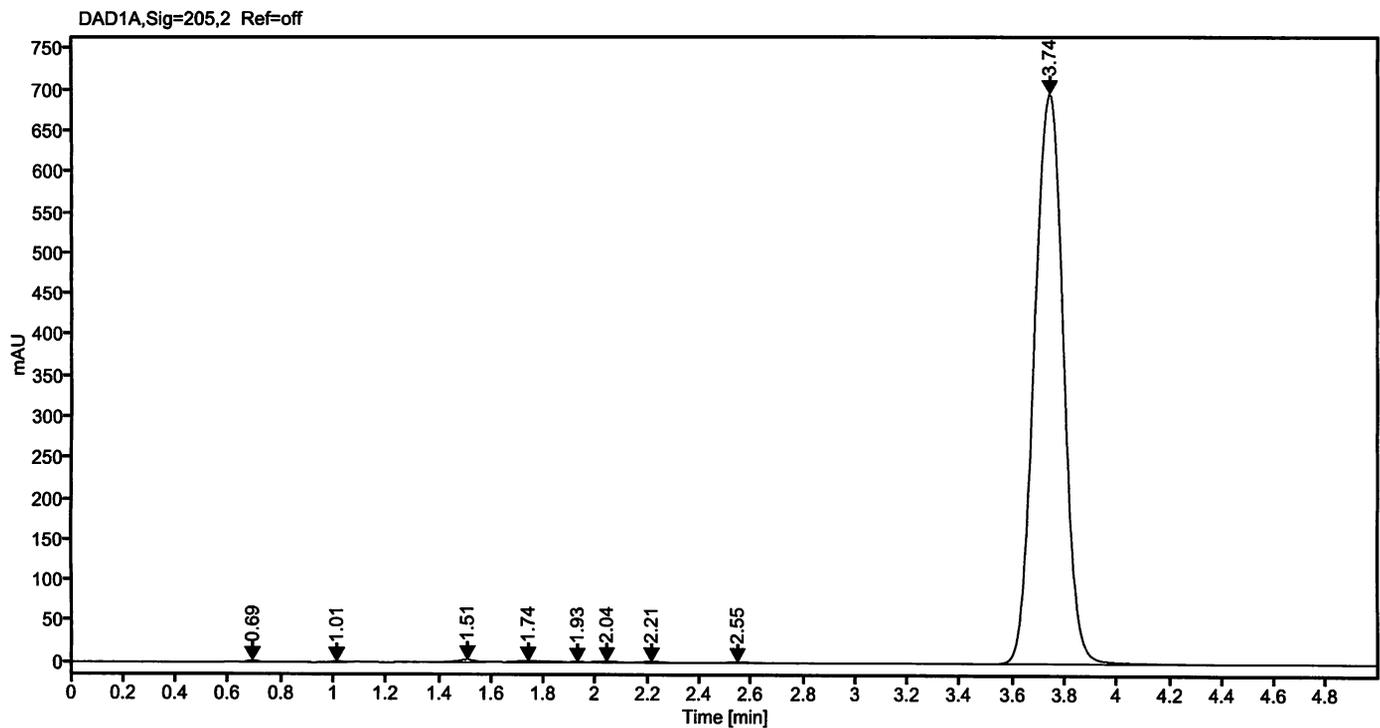
The LGC Labor GmbH, accredited by DAkkS as indicated by the accreditation number D-RM-19883-01 & D-PL-19883-01, has shown competence based on ISO Guide 34:2009 with relevant parts of DIN EN ISO/IEC 17025:2005 for production of certified reference materials in form of organic pure substances and in form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

06.07.2018

Data file: 15875000-18.dx Instrument: DAD5
Sample name: 80601AL G855268 Sequence Name: 04062018-2
Inj. volume [µl]: 10.0 Injection date: 6/4/2018 11:06:20 PM
Acq. method: S1_41K.amx Location: P3-A2

Sample Description Para Red



Signal: DAD1A, Sig=205,2 Ref=off

Nr.	RT [min]	Area	Height	Area%
1	0.69	6.50396	2.22	0.12
2	1.01	3.15432	1.26	0.06
3	1.51	13.89059	3.06	0.26
4	1.74	12.03306	1.36	0.22
5	1.93	2.44732	0.52	0.05
6	2.04	6.82738	1.34	0.13
7	2.21	6.60993	1.24	0.12
8	2.55	7.43033	0.96	0.14
9	3.74	5340.53743	695.35	98.91
	Sum	5399.43		