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
EU Drinking Water Directive PFAS Mixture 51 10 µg/mL in Methanol:Water	DRE-A30000051MW	1-G50423MW	Multicomponent Solution	21 May 2027	-18°C ± 4°C

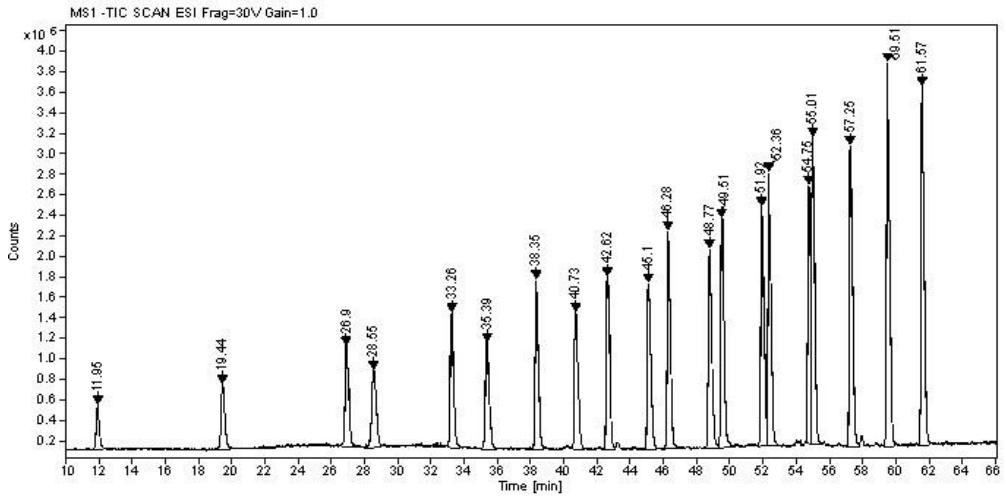
CERTIFIED

Compound Name	Concentration (µg/mL)	Expanded Uncertainty U (µg/mL)	CAS	Lot Number	Purity (%)	Amount (mg)	RT (min)
Perfluorobutanoic acid	10.00	0.50	375-22-4	1478831	98.8	2.125	11.94
Perfluoropentanoic acid	9.99	0.50	2706-90-3	1335500	99.5	2.108	19.45
Perfluorohexanoic acid	10.00	0.50	307-24-4	1546188	97.7	2.149	26.90
Perfluorobutanesulfonic acid	9.97	0.69	375-22-4[1]	1556784	88.5	2.366	28.56
Perfluoroheptanoic acid	10.01	0.62	375-85-9	1490901	99.9	2.105	33.22
Perfluoropentanesulfonic acid	10.02	0.66	2706-91-4	1503458	92.5	2.275	35.36
Perfluorooctanoic acid	9.98	0.63	335-67-1	1490904	97.3	2.155	38.35
Perfluorohexanesulfonic acid	10.02	0.66	355-46-4	1540109	93.6	2.249	40.69
Perfluorononanoic acid	10.01	0.64	375-95-1	1481557	96.0	2.189	42.62
Perfluoroheptanesulfonic acid	10.00	0.67	375-92-8	1418035	91.7	2.291	45.12
Perfluorodecanoic acid	10.00	0.50	335-76-2	1289796	96.7	2.171	46.29
Perfluorooctane sulfonic acid	9.98	0.63	1763-23-1	1546588	96.8	2.164	48.77
Perfluoroundecanoic acid	9.98	0.50	2058-94-8	1229270	99.8	2.101	49.50
Perfluorononanesulfonic acid	10.02	0.68	68259-12-1[1]	1505767	90.2	2.332	51.93
Perfluorododecanoic acid	10.00	0.67	307-55-1	1440818	91.3	2.299	52.35
Perfluorodecanesulfonic acid	10.00	0.73	335-77-3	1401828	82.6	2.543	54.76
Perfluorotridecanoic acid	9.98	0.68	72629-94-8	1534742	89.2	2.349	55.01
Perfluoroundecanesulfonic acid	10.02	0.51	749786-16-1[1]	1425464	92.7	2.269	57.26
Perfluorododecanesulfonic acid	9.99	0.50	79780-39-5[1]	1413185	90.0	2.331	59.51
Perfluorotridecanesulfonic acid	10.01	0.69	791563-89-8[1]	1438748	88.2	2.384	61.57

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		RM Release
I. Milusic	21 May 2025	J. Milusic	

CHROMATOGRAM



Instrument
HPLC/DAD+MS

Detection
DAD+MS

Column
Synergi Polar-RP 4 µm
250 x 4.6 mm

Method Details
see Batch information

Inj.-Vol.
10.0 µL

Flow
0.5 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: Methanol, Lot No. V2N046033A18 / Water, Lot No. O044006, 96:4, 210.00 mL.
[1]Corresponding salts were used for mix preparation. Material weighings and purities are calculated to the free acids. The certified concentration is given for the linear isomer according to the CAS# definition of the analyte. The purities of the used neat materials were determined with quantitative 19F-NMR for the linear isomers only.
Method Details
Eluent A: Acetonitrile:Water 20:80 + Formic Acid for 4 min
Eluent B: Acetonitrile:Water 70:30 + Formic Acid for 3 min
Eluent A->B: 71 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.

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LGC Labor GmbH is accredited by DAkkS as reference material producer on ISO 17034 (D-RM-19883-01-00).

All characterisation measurements at LGC Labor GmbH are accredited methods to ISO/IEC 17025.

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