

Certified Reference Material

Product Name

EPA Method 533 PFAS Mixture 151 100 µg/mL in Methanol:Water

REFERENCE MATERIAL CERTIFICATE

ISO 17034

This certificate is designed in accordance with ISO 17034 and ISO Guide 31. This certified reference material (CRM) was designed, produced and verified in accordance with ISO/IEC 17025, ISO 17034 and a registered quality management system ISO 9001.

Product Code

DRE-A50000151MW

Lot Number

2-H538849MW

Format

Multicomponent Solution

Expiry Date

19 Jun 2030

Storage Temp

4°C +/- 4°C

Compound Name	CERTIFIED		CAS	Lot Number	Purity (%)	Amount (mg)	RT (min)
	Concentration (ug/mL)	Expanded Uncertainty U (ug/mL)					
heptafluorobutyric acid (PFBA)	98.31	4.5	375-22-4	1306.421.1.2P	99.1	4.96	3.70
nonafluoropentanoic acid	98.21	3	2706-90-3	399.158.1P	99	4.96	5.98
1H,1H,2H,2H-perfluorohexanesulfonic acid	100	2.3	757124-72-4	9062.158.1.1P	100	5.00	6.77
perfluorohexanoic acid (PFHxA)	101.4	3.1	307-24-4	2982.158.1P	99	5.12	7.12
Potassium nonafluoro-1-butanesulfonate	98.2	2.3	29420-49-3	6918.1.1P	99.8	4.92	7.22
perfluoroheptanoic acid (PFHpA)	99.79	3	375-85-9	2981.158.1P	99	5.04	7.94
sodium Undecafluoro-1-pentanesulfonic acid as Free Acid (analyte originated in salt form)	99.23	4.6	630402-22-1	12181.286.2.1P	95	5.22	8.10
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTS)	99.57	3	27619-97-2	5909.158.2.1P	98	5.08	8.26
perfluorooctanoic acid (PFOA)	99.98	2.2	335-67-1	2655.7.1P	95.4	5.24	8.61
tridecafluorohexane-1-sulfonic acid potassium salt (PFHxS) as free acid	100.9	2.2	3871-99-6	4416.1.2P	99.6	5.06	8.81
perfluorononanoic acid (PFNA)	98.21	3	375-95-1	2983.158.1P	99	4.96	9.24
Perfluoroheptanesulfonic Acid Sodium Salt as perfluoroheptanesulfonic acid (PFHpS)	99.14	4.5	21934-50-9	11017.286.1.2P	97	5.11	9.44
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	99.33	3	39108-34-4	7068.158.2P	97	5.12	9.46
perfluorodecanoic acid (PFDA)	100.4	3	335-76-2	2979.158.1P	98	5.12	9.88
heptadecafluorooctanesulfonic acid potassium salt (PFOS) as free acid	101.6	2.3	2795-39-3	4417.1.1P	100	5.08	10.09
perfluoroundecanoic acid (PFUnDA)	100.6	6.5	2058-94-8	3740.421.1.1P	99.8	5.04	10.57
sodium perfluoro-1-nonanesulfonate as Free Acid (analyte originated in salt form)	99.52	10	98789-57-2	8570.421.2P	93.9	5.30	10.74
perfluorododecanoic acid (PFDoA)	99.2	4.6	307-55-1	3738.158.2P	100	4.96	11.32
sodium perfluorodecane sulfonic acid as free acid (analyte originated in salt form)	98.87	10	2806-15-7	8034.421.2P	94.9	5.21	11.46
perfluorotridecanoic acid (PFTrDA)	98.63	6.3	72629-94-8	3739.421.1.2P	93.4	5.28	12.17
perfluorotetradecanoic acid (PFTeDA)	98.42	6.3	376-06-7	3737.421.2.2P	92.5	5.32	13.07
perfluorooctane sulfonamide	100.2	2.9	754-91-6	5605.747.1P	87	5.76	16.25
N-methyl perfluorooctanesulfonamidoacetic acid	99.33	4.6	2355-31-9	8137.286.2.2P	97	5.12	17.31
N-ethyl perfluorooctanesulfonamidoacetic acid	99.05	10	2991-50-6	8138.421.1P	93.8	5.28	18.30

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

HuiChen Stavros, Ph.D.

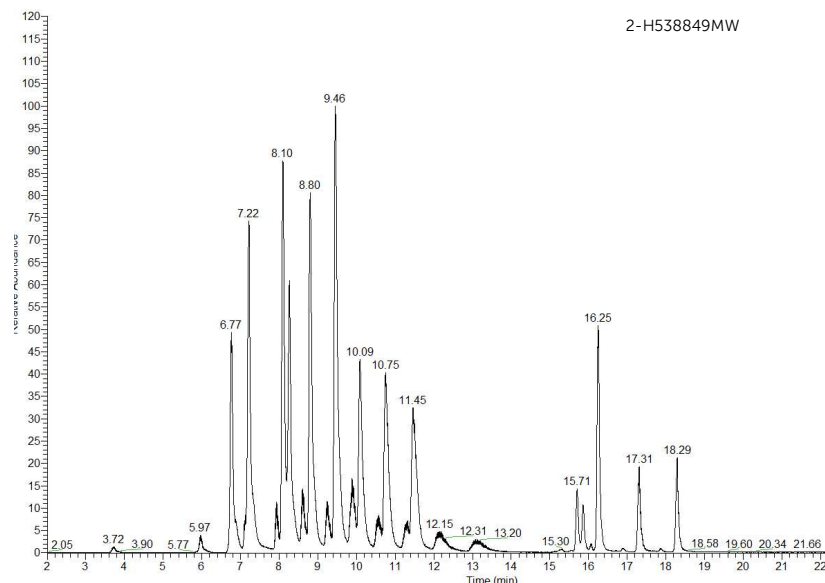
CERTIFIED ON

30 Jun 2025

HuiChen Stavros

RM

Release



Instrument
LC/HRMS – Negative Mode
Column/Flow
Vanquish C18+ 100 mm x 2.1 mm
ID 1.5 µm Particle/ 0.2 ml/min

Method Details
Mobile Phase A: Water w/0.1%
Acetic Acid
Mobile Phase B: Acetonitrile x/ 0.1%
Acetic Acid

Time	%A	%B
0	90	10
1.0	95	5
22	5	95
22.5	5	95
28.5	90	10

Inj-vol
0.5 µL

Method of Preparation

The certified value is based on gravimetric and volumetric preparation of this CRM. This CRM has been confirmed by the appropriate analytical techniques.

Batch Information

Solvent: Methanol:Water 96%:4%, Lot no. 246208-ME : 062025, 50 mL

N-ethyl perfluorooctanesulfonamidoacetic acid : Branched: 3.8%
N-methyl perfluorooctanesulfonamidoacetic acid : Linear:94.3%,
Branched:5.7% heptadecafluorooctanesulfonic acid potassium salt
(PFOS) as free acid : Branched: 21.3%, Linear: 78.7%
perfluorooctanoic acid (PFOA) : Linear:98.3%, Branched 1.7%
perfluorononanoic acid (PFNA) : Linear isomer only
perfluorooctane sulfonamide : *Linear: 66.1%, Branched: 33.9%

Intended Use

This CRM 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, long-term stability testing, and transportation stability.

Traceability

The balances used for gravimetric measurements are calibrated with weights traceable to the national standards (NIST). 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 CRM have been analysed to prove homogeneity consistent with ISO 17034.

Storage

The CRM should be stored in the original sealed bottle at the indicated temperature.

Instructions for Use

The CRM should be used shortly after opening to avoid concentration changes due to evaporation. It is recommended to use 1 µL as the minimum sample size. If storage after opening is necessary, it should be transferred to an amber vial with minimum head space and a Teflon lined silicon septum. If handled as recommended, use period after opening is a maximum of 197 days for an estimated 5% drift in concentration as a result of analyte and/or solvent transpiration. 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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The producer of this reference material is registered to ISO 9001:2015 under 56 100 19560019 by TUV USA and accredited to ISO 17025:2017 and ISO 17034:2016 by A2LA with the accreditation numbers 3031.01 and 3031.02.



ISO 17034 Accredited
Reference Material Producer
Cert. No. 3031.02