Cambridge Isotope Laboratories, Inc.

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www.isotope.com

CERTIFICATE OF ANALYSIS

This certificate was designed to comply with the requirements in ISO 33401

Potassium Perfluoro-1-Octanesulfonate

Certified Reference Material (CRM)

Product No.:	ULM-11563-1.2
Lot/Batch No.:	SEDG-016
Description:	Potassium perfluoro-1-octanesulfonate
Formula:	$C_8F_{17}O_3S \cdot K$
Molecular Mass:	538.22
Package Volume:	1.2 mL
Solvent (Matrix):	Methanol
Manufacture Date: (MM/DD/YY)	08/04/2023
Retest Date: (MM/DD/YY)	08/04/2028
Storage:	Store refrigerated (+2°C to +8°C). Protect from light.
Shipping:	Ambient. See stability section.
Intended Use:	This CRM is suitable for laboratory use only; not for diagnostic purposes.
Safety:	Please refer to Safety Data Sheet. This material may contain components which have been reported to have flammable, poisonous, toxic, mutagenic and/or carcinogenic properties. This material should be handled by qualified personnel. Use proper disposal methods.

Analyte	Certified Concentration (of the salt)	Combined Expanded Uncertainty (± $k = 2$)
Potassium perfluoro-1-octanesulfonate (PFOS)	50.0 µg/mL	0.34 µg/mL

- This CRM has been prepared and certified following the requirements in ISO/IEC 17025 and ISO 17034. This standard meets the requirements of a CRM as defined by ISO Guide 30 and is traceable to the SI through an unbroken chain of comparisons.
- Prepared concentration values are based on results obtained from gravimetric preparation of the solution corrected for the measured chemical purity of the neat material.
- Expanded Uncertainty: Calculated as a combined expanded uncertainty using k=2.
- 100µL is the minimum sample size for which the uncertainty are valid.

Cambridge Isotope Laboratories, Inc. certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the retest/expiry date when stored unopened as recommended.

Meghan Weldon
Meghan Weldon, Quality Assurance/Regulatory Affairs Supervisor

4/8/26
Date

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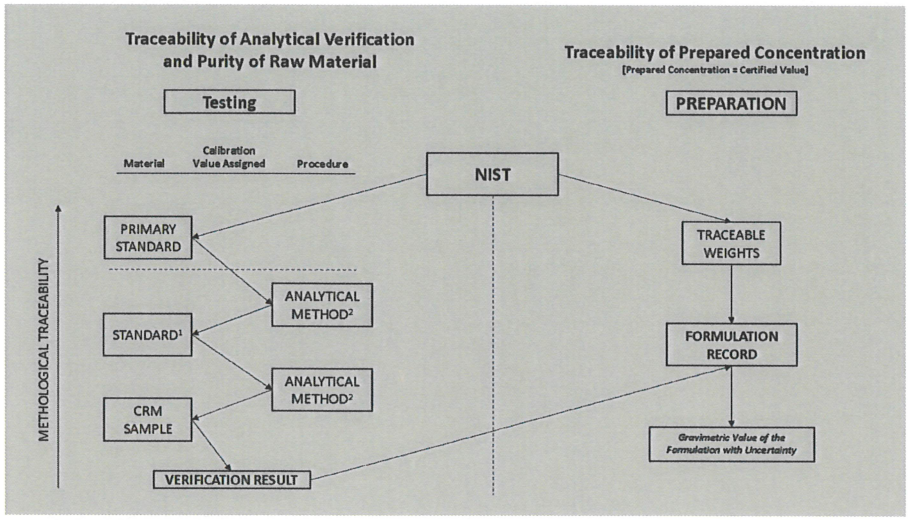
Neat Material

The neat material utilized in the preparation of this CRM has been thoroughly characterized using multiple analytical techniques, including but not limited to HPLC, GC/MS, NMR, quant-NMR, etc. Purity of the neat material has been accounted for in preparation of the formulated material. For purities below 98%, it has been verified that the impurities do not interfere with the intended use through chromatographic purity.

Traceability

CRM are traceable to specific raw material lots. CRM have been gravimetrically prepared using NIST traceable weights and qualified balances calibrated by an external ISO/IEC 17025 accredited laboratory. Analytical methods for verification of concentration and purity of raw materials are traceable to a certified reference standard and described more fully below. A summary of the analytical data for this CRM is available upon request.



¹ Standard can be CRM, RM, or working standard.
² Analytical method can be GC, LC, qNMR, MS.

Solution Standard Verification and Homogeneity

The CRM is prepared by weighing and mixing the analyte of interest with solvent until completely dissolved and homogenized.

The packaged ampoules are sampled using a random sampling plan. The analyzed results of multiple ampoules are used to assess the homogeneity of the batch and are incorporated into the expanded uncertainty.

Solution standard verification demonstrates confirmation that the specified requirements have been fulfilled in accordance with the requirements of ISO/IEC 17025 and ISO 17034. Additional information is available upon request.

Uncertainty

Factors are evaluated for their contribution to the uncertainty of the CRM concentration are manufacturing, homogeneity, stability, and shipping. Rigorous process controls are employed during these processes.

Retest/Expiration Date:

CRM are assigned a retest date upon release. Routine verification testing for composition and concentration are performed until the retest date. Upon completion of the shelf-life protocol an expiration date is assigned. Retest/Expiration dates are valid for CRM stored as indicated in their original composition and container.

Storage and Stability

Short-term stability studies are performed under accelerated conditions for a period of one to four weeks. Real-time stability testing with acceptance criteria identical to the original release testing is used to establish shelf life. Stability studies are ongoing. Once studies are complete the uncertainty contributions will be added to the overall expanded uncertainty.

COA Revision History

Rev #	Date	Revised By	Reason for Change
1	03/25/26	M. Klosin	New document
2	03/26/26	M. Klosin	Storage conditions updated
3	04/08/26	M. Klosin	Defined concentration is for salt, added Ilac logo.