PFAS

有機フッ素化合物 標準品

Per- & Polyfluoroalkyl Substances (PFAS)

2026 Ver.2

WELLINGTON LABORATORIES

「有機フッ素化合物標準品カタログ2026 Ver.2」は弊社が提供可能な有機フッ素化合物(PFAS)関連の認証標準品(CRM)を全て記載しております。
本カタログより新しく追加された商品には NEW マークを付しております。

本カタログに掲載されている製品は、認定標準物質（CRM）です。
ウエリントンラボラトリーズ社は、インターテック（Intertek）よりISO9001の最新版への登録を受けており、カナダ試験所認定協会（CALA；A1226）よりISO/IEC17025の最新版、およびANSI国家認定委員会（ANAB；AR-1523）よりISO17034の認定を受けています。ウエリントンラボラトリーズ社の全製品に対する分析試験は、ウエリントンラボラトリーズ社の認定範囲に関連するISO/IEC17025の要件に従って実施されています。
ウエリントンラボラトリーズ社製品に添付される分析証明書には、CALA認定シンボルと併記されたILAC　MRAマークが記載されており、水道法に基づく水質基準に関する省令の規定に基づき、環境大臣（通知法）が指定した方法に準拠しています。

カタログ後半には、PFAS製品に関するクイックリファレンスガイド(日本語版)を掲載しております。
製品ご利用の際の参考資料としてご活用いただけますと幸いです。

『用途確認書』について

『第一種特定化学物質』に指定されている化合物については、製造、輸入、使用は原則として禁止されています。
但し、試験研究用に便用する場合に限り、使用することができます。
『化学物質の審査及び製造等の規制に関する法律（略称：化審法）』に指定されている第一種特定化学物質に該当する本カタログ掲載製品は、該当製品欄に記号を表示しています。記号の内容は下記をご確認ください。

この為、使用目的等を明記した『用途確認書』を弊社宛に提出頂き次第、販売致します。
巻末に『用途確認書』を 資料として掲載していますので、ご活用ください。

用 **用途確認書の提出が必要となる製品**
用 **令和8年11月22日以降、用途確認書の提出が必要となる製品**

NEW

10種 PFAS 混合標準品

PFBA
PFNA
PFPeA
HFPO-DA
PFHxA
L-PFBS
PFHpA
L-PFHxS
PFOA
L-PFOS

環境省通知 水環境向け「水環境中の要調査項目」、水道水質向け「水道水質中の要検討項目」においてＰＦＡＳ類１０種類の物質に対する測定に関する指針が定められました。これらに準した新たな Wellington Laboratories Inc. 製混合標準品を新発売致します。

Catalogue Number	Product (methanol solution)	Qty/Conc	
PFAS-MXK	Native PFCA, PFSA and HFPO-DA (GenX) Solution/Mixture	1.2 mL	→*P.13*
MPFAS-MXK	Mass-Labelled PFCA,PFSA and HFPO-DA (GenX) Solution/Mixture	1.2 mL	→*P.15*

※国内在庫品

高精度な標準品で確かな分析を

ウエリントンラボラトリーズ社は、インターテック（Intertek）よりISO9001の最新版への登録を受けており、カナダ試験所認定協会（CALA；A1226）よりISO/IEC17025の最新版、およびANSI国家認定委員会（ANAB；AR-1523）よりISO17034の認定を受けています。ウエリントンラボラトリーズ社の全製品に対する分析試験は、ウエリントンラボラトリーズ社の認定範囲に関連するISO/IEC17025の要件に従って実施されています。これにより、ISO認証を受けた確実な製品で高精度な分析が可能です。

WELLINGTON LABORATORIES

PFC-CVS-C

Catalogue Number	Product (methanol solution)	Qty/Conc
用 PFC-CVS-C	PFC-CVS-C Calibration Solutions CS1-CS5	1 kit (5 ampoules)
用 PFC-C-CS1	CS1	200 µL
用 PFC-C-CS2	CS2	200 µL
用 PFC-C-CS3	CS3	200 µL
用 PFC-C-CS4	CS4	200 µL
用 PFC-C-CS5	CS5	200 µL

NATIVE PFCs		PFC-C-CS1 (ng/mL)	PFC-C-CS2 (ng/mL)	PFC-C-CS3 (ng/mL)	PFC-C-CS4 (ng/mL)	PFC-C-CS5 (ng/mL)
Perfluoro-n-butanoic acid	PFBA	2.00	10.0	50.0	200	1000
Perfluoro-n-pentanoic acid	PFPeA	2.00	10.0	50.0	200	1000
Perfluoro-n-hexanoic acid	PFHxA	2.00	10.0	50.0	200	1000
Perfluoro-n-heptanoic acid	PFHpA	2.00	10.0	50.0	200	1000
Perfluoro-n-octanoic acid	PFOA	2.00	10.0	50.0	200	1000
Perfluoro-n-nonanoic acid	PFNA	2.00	10.0	50.0	200	1000
Perfluoro-n-decanoic acid	PFDA	2.00	10.0	50.0	200	1000
Perfluoro-n-undecanoic acid	PFUdA	2.00	10.0	50.0	200	1000
Perfluoro-n-dodecanoic acid	PFDoA	2.00	10.0	50.0	200	1000
Perfluoro-n-tridecanoic acid	PFTrDA	2.00	10.0	50.0	200	1000
Perfluoro-n-tetradecanoic acid	PFTeDA	2.00	10.0	50.0	200	1000
Perfluoro-n-hexadecanoic acid	PFHxDA	2.00	10.0	50.0	200	1000
Perfluoro-n-octadecanoic acid	PFODA	2.00	10.0	50.0	200	1000
Potassium perfluoro-1-butanesulfonate	L-PFBS	2.00	10.0	50.0	200	1000
Sodium perfluoro-1-pentanesulfonate	L-PFPeS	2.00	10.0	50.0	200	1000
Sodium perfluoro-1-hexanesulfonate	L-PFHxS	2.00	10.0	50.0	200	1000
Sodium perfluoro-1-heptanesulfonate	L-PFHpS	2.00	10.0	50.0	200	1000
Sodium perfluoro-1-octanesulfonate	L-PFOS	2.00	10.0	50.0	200	1000
Sodium perfluoro-1-nonanesulfonate	L-PFNS	2.00	10.0	50.0	200	1000
Sodium perfluoro-1-decanesulfonate	L-PFDS	2.00	10.0	50.0	200	1000
Sodium perfluoro-1-dodecanesulfonate	L-PFDoS	2.00	10.0	50.0	200	1000
MASS-LABELLED PFC EXTRACTION STANDARDS						
Perfluoro-n-($^{13}C_4$)butanoic acid	MPFBA	50.0	50.0	50.0	50.0	50.0
Perfluoro-n-($^{13}C_5$)pentanoic acid	M5PFPeA	50.0	50.0	50.0	50.0	50.0
Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid	M5PFHxA	50.0	50.0	50.0	50.0	50.0
Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid	M4PFHpA	50.0	50.0	50.0	50.0	50.0
Perfluoro-n-($^{13}C_8$)octanoic acid	M8PFOA	50.0	50.0	50.0	50.0	50.0
Perfluoro-n-($^{13}C_9$)nonanoic acid	M9PFNA	50.0	50.0	50.0	50.0	50.0
Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid	M6PFDA	50.0	50.0	50.0	50.0	50.0
Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid	M7PFUdA	50.0	50.0	50.0	50.0	50.0
Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid	MPFDoA	50.0	50.0	50.0	50.0	50.0
Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid	M2PFTeDA	50.0	50.0	50.0	50.0	50.0
Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate	M3PFBS	50.0	50.0	50.0	50.0	50.0
Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate	M3PFHxS	50.0	50.0	50.0	50.0	50.0
Sodium perfluoro-1-($^{13}C_8$)octanesulfonate	M8PFOS	50.0	50.0	50.0	50.0	50.0
MASS-LABELLED PFC INJECTION STANDARDS						
Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid	M3PFBA	50.0	50.0	50.0	50.0	50.0
Perfluoro-n-(1,2-$^{13}C_2$)octanoic acid	M2PFOA	50.0	50.0	50.0	50.0	50.0
Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid	MPFDA	50.0	50.0	50.0	50.0	50.0
Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate	MPFOS	50.0	50.0	50.0	50.0	50.0

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

Catalogue Number	Product (methanol solution)	Qty/Conc
用 MPFAC-C-ES	Mass-Labelled PFAS Extraction Standards Solution	1.2 mL
用 MPFAC-C-IS	Mass-Labelled PFAS Injection Standards Solution	1.2 mL
用 PFAC-MXC	Native PFAS Stock Solution	1.2 mL

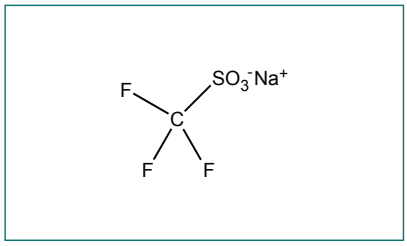
NATIVE PFCs		MPFAC-C-ES (ng/mL)	MPFAC-C-IS (ng/mL)	PFAC-MXC (ng/mL)
Perfluoro-n-butanoic acid	PFBA	—	—	2000
Perfluoro-n-pentanoic acid	PFPeA	—	—	2000
Perfluoro-n-hexanoic acid	PFHxA	—	—	2000
Perfluoro-n-heptanoic acid	PFHpA	—	—	2000
Perfluoro-n-octanoic acid	PFOA	—	—	2000
Perfluoro-n-nonanoic acid	PFNA	—	—	2000
Perfluoro-n-decanoic acid	PFDA	—	—	2000
Perfluoro-n-undecanoic acid	PFUdA	—	—	2000
Perfluoro-n-dodecanoic acid	PFDoA	—	—	2000
Perfluoro-n-tridecanoic acid	PFTrDA	—	—	2000
Perfluoro-n-tetradecanoic acid	PFTeDA	—	—	2000
Perfluoro-n-hexadecanoic acid	PFHxDA	—	—	2000
Perfluoro-n-octadecanoic acid	PFODA	—	—	2000
Potassium perfluoro-1-butanesulfonate	L-PFBS	—	—	2000
Sodium perfluoro-1-pentanesulfonate	L-PFPeS	—	—	2000
Sodium perfluoro-1-hexanesulfonate	L-PFHxS	—	—	2000
Sodium perfluoro-1-heptanesulfonate	L-PFHpS	—	—	2000
Sodium perfluoro-1-octanesulfonate	L-PFOS	—	—	2000
Sodium perfluoro-1-nonanesulfonate	L-PFNS	—	—	2000
Sodium perfluoro-1-decanesulfonate	L-PFDS	—	—	2000
Sodium perfluoro-1-dodecanesulfonate	L-PFDoS	—	—	2000
MASS-LABELLED PFC EXTRACTION STANDARDS				
Perfluoro-n-($^{13}C_4$)butanoic acid	MPFBA	2000	—	—
Perfluoro-n-($^{13}C_5$)pentanoic acid	M5PFPeA	2000	—	—
Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid	M5PFHxA	2000	—	—
Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid	M4PFHpA	2000	—	—
Perfluoro-n-($^{13}C_8$)octanoic acid	M8PFOA	2000	—	—
Perfluoro-n-($^{13}C_9$)nonanoic acid	M9PFNA	2000	—	—
Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid	M6PFDA	2000	—	—
Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid	M7PFUdA	2000	—	—
Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid	MPFDoA	2000	—	—
Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid	M2PFTeDA	2000	—	—
Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate	M3PFBS	2000	—	—
Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate	M3PFHxS	2000	—	—
Sodium perfluoro-1-($^{13}C_8$)octanesulfonate	M8PFOS	2000	—	—
MASS-LABELLED PFC INJECTION STANDARDS				
Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid	M3PFBA	—	2000	—
Perfluoro-n-(1,2-$^{13}C_2$)octanoic acid	M2PFOA	—	2000	—
Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid	MPFDA	—	2000	—
Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate	MPFOS	—	2000	—

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

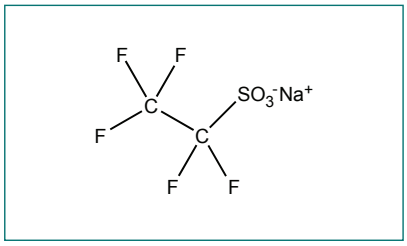
用 第一種特定化学物質

NATIVE LINEAR PERFLUOROALKANESULFONATES (PFSA)

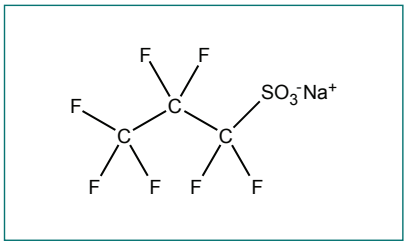
Catalogue Number	Product (methanol solution)	Qty/Conc	
PFMeS	Sodium trifluoromethanesulfonate	1.2 mL	50.0 µg/mL
PFEtS	Sodium perfluoroethanesulfonate	1.2 mL	50.0 µg/mL
L-PFPrS	Sodium perfluoro-1-propanesulfonate	1.2 mL	50.0 µg/mL
L-PFBS	Potassium perfluoro-1-butanesulfonate	1.2 mL	50.0 µg/mL
L-PFPeS	Sodium perfluoro-1-pentanesulfonate	1.2 mL	50.0 µg/mL
用 L-PFHxS	Sodium perfluoro-1-hexanesulfonate	1.2 mL	50.0 µg/mL
L-PFHpS	Sodium perfluoro-1-heptanesulfonate	1.2 mL	50.0 µg/mL
用 L-PFOS	Sodium perfluoro-1-octanesulfonate	1.2 mL	50.0 µg/mL
用 L-PFOSK	Potassium perfluoro-1-octanesulfonate	1.2 mL	50.0 µg/mL
L-PFNS	Sodium perfluoro-1-nonanesulfonate	1.2 mL	50.0 µg/mL
L-PFDS	Sodium perfluoro-1-decanesulfonate	1.2 mL	50.0 µg/mL
L-PFUdS	Sodium perfluoro-1-undecanesulfonate	1.2 mL	50.0 µg/mL
L-PFDoS	Sodium perfluoro-1-dodecanesulfonate	1.2 mL	50.0 µg/mL
L-PFTrDS	Sodium perfluoro-1-tridecanesulfonate	1.2 mL	50.0 µg/mL



PFMeS



PFEtS



L-PFPrS

NATIVE PERFLUOROALKANESULFONATES: SOLUTION/MIXTURE

Catalogue Number	Product (methanol solution)		Qty/Conc
用 PFS-MXA	Native PFAS Solution/Mixture		1.2 mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	2.00 µg/mL
Sodium perfluoro-1-hexanesulfonate		L-PFHxS	2.00 µg/mL
Sodium perfluoro-1-heptanesulfonate		L-PFHpS	2.00 µg/mL
Sodium perfluoro-1-octanesulfonate		L-PFOS	2.00 µg/mL
Sodium perfluoro-1-decanesulfonate		L-PFDS	2.00 µg/mL

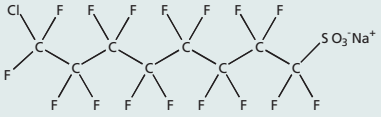
NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

NATIVE PERFLUOROETHYLCYCLOHEXANESULFONATE (PFECHS)

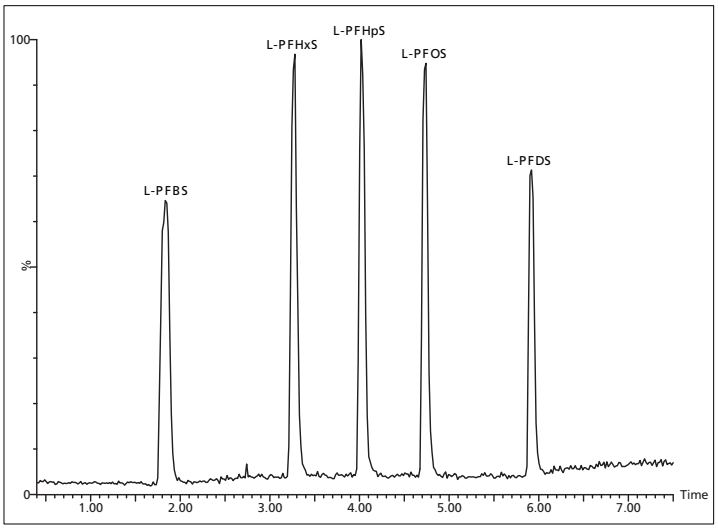
Catalogue Number	Product (methanol solution)	Qty/Conc	
PFECHS	Perfluoro-4-ethylcyclohexanesulfonate (isomeric mixture)	1.2 mL	50.0 µg/mL

NATIVE CHLORO-PERFLUOROALKANESULFONATE

Catalogue Number		Product
8Cl-PFOS		Sodium 8-chloroperfluoro-1-octanesulfonate 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol

NATIVE BRANCHED PERFLUOROALKANESULFONATES

Catalogue Number	Product (methanol solution)	Qty/Conc	
用 br-PFHxSK	L-PFHxS with branched isomers (Potassium Salt)	1.2 mL	50.0 µg/mL
用 br-PFOSK	L-PFOSK with branched isomers (Potassium Salt)	1.2 mL	50.0 µg/mL
用 T-PFOS	Potassium perfluorooctanesulfonate (Technical Grade)	1.2 mL	50.0 µg/mL
NaP3MHpS	Sodium perfluoro-3-methylheptanesulfonate	1.2 mL	50.0 µg/mL
NaP6MHpS	Sodium perfluoro-6-methylheptanesulfonate	1.2 mL	50.0 µg/mL
ipPFNS	Sodium perfluoro-7-methyloctanesulfonate	1.2 mL	50.0 µg/mL

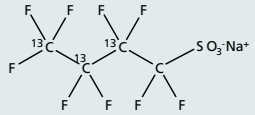
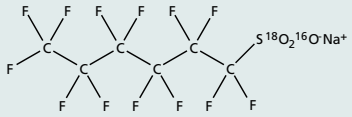
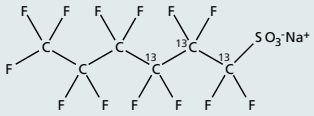
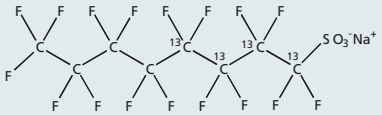
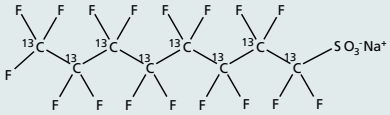


LC/MS Data for PFS-MXA on an Acquity UPLC BEH Shield RP_{18} column.

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

MASS-LABELLED PERFLUOROALKANESULFONATES

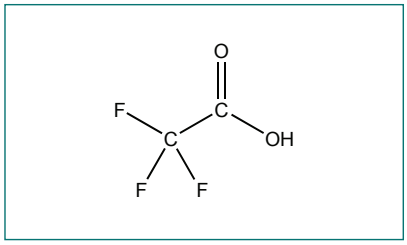
Catalogue Number		Product
M3PFBS		Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 2,3,4-$^{13}C_3$
用 MPFHxS		Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; 94% $^{18}O_2$
用 M3PFHxS		Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2,3-$^{13}C_3$
用 MPFOS		Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2,3,4-$^{13}C_4$
用 M8PFOS		Sodium perfluoro-1-($^{13}C_8$)octanesulfonate 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% $^{13}C_8$

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

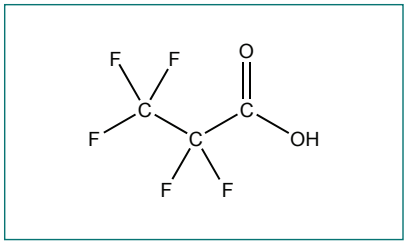
用 第一種特定化学物質

NATIVE LINEAR PERFLUOROALKYLCARBOXYLIC ACIDS (PFCA)

Catalogue Number	Product (methanol solution)	Qty/Conc
TFA	Trifluoroacetic acid	1.2 mL 50.0 µg/mL
PFPrA	Perfluoropropanoic acid	1.2 mL 50.0 µg/mL
PFBA	Perfluoro-n-butanoic acid	1.2 mL 50.0 µg/mL
PFPeA	Perfluoro-n-pentanoic acid	1.2 mL 50.0 µg/mL
PFHxA	Perfluoro-n-hexanoic acid	1.2 mL 50.0 µg/mL
PFHpA	Perfluoro-n-heptanoic acid	1.2 mL 50.0 µg/mL
用 PFOA	Perfluoro-n-octanoic acid	1.2 mL 50.0 µg/mL
用 PFNA	Perfluoro-n-nonanoic acid	1.2 mL 50.0 µg/mL
用 PFDA	Perfluoro-n-decanoic acid	1.2 mL 50.0 µg/mL
用 PFUdA	Perfluoro-n-undecanoic acid	1.2 mL 50.0 µg/mL
用 PFDoA	Perfluoro-n-dodecanoic acid	1.2 mL 50.0 µg/mL
用 PFTrDA	Perfluoro-n-tridecanoic acid	1.2 mL 50.0 µg/mL
用 PFTeDA	Perfluoro-n-tetradecanoic acid	1.2 mL 50.0 µg/mL
用 PFHxDA	Perfluoro-n-hexadecanoic acid	1.2 mL 50.0 µg/mL
用 PFODA	Perfluoro-n-octadecanoic acid	1.2 mL 50.0 µg/mL



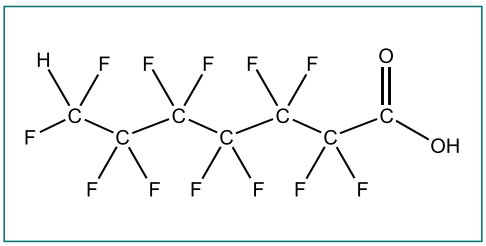
TFA



PFPrA

NATIVE POLYFLUOROALKYLCARBOXYLIC ACID

Catalogue Number	Product (methanol solution)	Qty/Conc
NEW 7H-PFHpA	7H-Perfluoroheptanoic acid	1.2 mL 50.0 µg/mL



7H-PFHpA

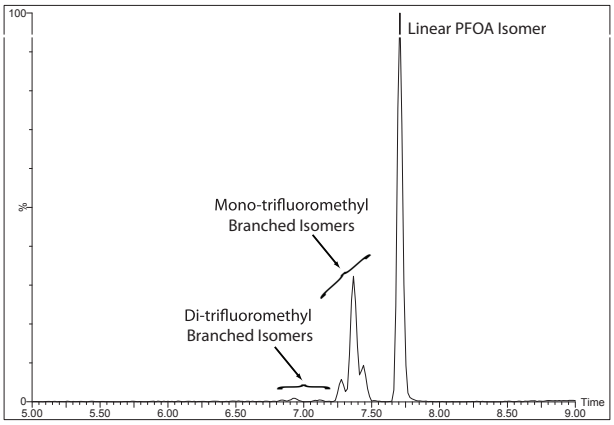
用 第一種特定化学物質

NATIVE PERFLUOROALKYLCARBOXYLIC ACIDS: SOLUTION/MIXTURE

Catalogue Number	Product (methanol solution)		Qty/Conc
用 PFC-MXA	Native PFCA Solution/Mixture		1.2 mL
	Perfluoro-n-butanoic acid	PFBA	2.00 µg/mL
	Perfluoro-n-pentanoic acid	PFPeA	2.00 µg/mL
	Perfluoro-n-hexanoic acid	PFHxA	2.00 µg/mL
	Perfluoro-n-heptanoic acid	PFHpA	2.00 µg/mL
	Perfluoro-n-octanoic acid	PFOA	2.00 µg/mL
	Perfluoro-n-nonanoic acid	PFNA	2.00 µg/mL
	Perfluoro-n-decanoic acid	PFDA	2.00 µg/mL
	Perfluoro-n-undecanoic acid	PFUdA	2.00 µg/mL
	Perfluoro-n-dodecanoic acid	PFDoA	2.00 µg/mL
	Perfluoro-n-tridecanoic acid	PFTrDA	2.00 µg/mL
	Perfluoro-n-tetradecanoic acid	PFTeDA	2.00 µg/mL

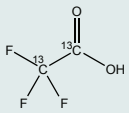
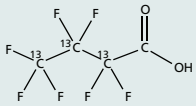
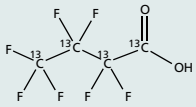
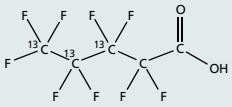
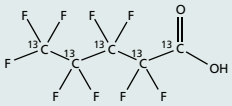
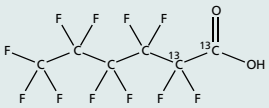
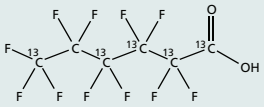
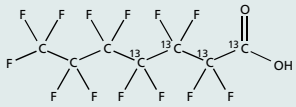
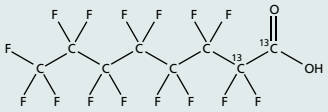
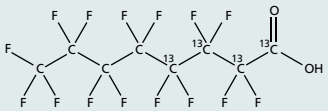
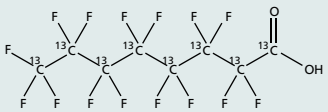
NATIVE BRANCHED PERFLUOROALKYLCARBOXYLIC ACIDS

Catalogue Number	Product (methanol solution)	Qty/Conc	
用 br-PFOA	Perfluorooctanoic acid with branched isomers	1.2 mL	50.0 µg/mL
用 T-PFOA	Ammonium perfluorooctanoate (Technical Grade)	1.2 mL	50.0 µg/mL
用 P3MHpA	Perfluoro-3-methylheptanoic acid	1.2 mL	50.0 µg/mL
用 br-PFNA	Perfluorononanoic acid with branched isomers	1.2 mL	50.0 µg/mL
P4MOA	Perfluoro-4-methyloctanoic acid	1.2 mL	50.0 µg/mL
ipPFNA	Perfluoro-7-methyloctanoic acid	1.2 mL	50.0 µg/mL
P355TMHxA	Perfluoro-3,5,5-trimethylhexanoic acid	1.2 mL	50.0 µg/mL
P37DMOA	Perfluoro-3,7-dimethyloctanoic acid	1.2 mL	50.0 µg/mL



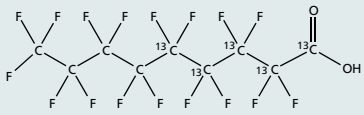
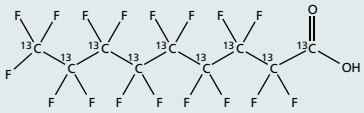
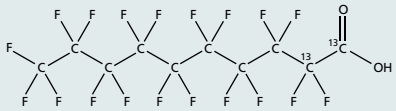
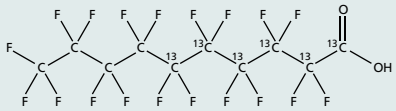
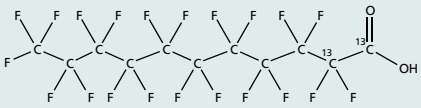
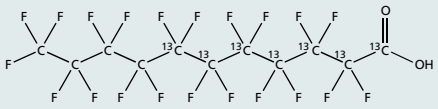
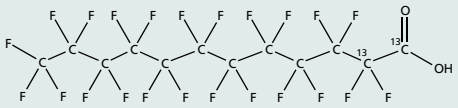
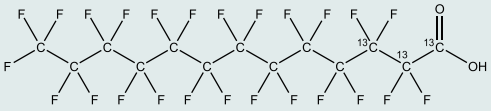
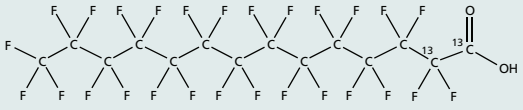
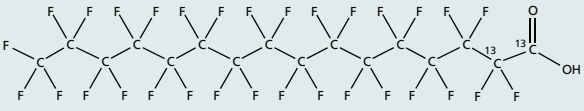
用 第一種特定化学物質

MASS-LABELLED PERFLUOROALKYLCARBOXYLIC ACIDS

Catalogue Number		Product
M2TFA		Trifluoro($^{13}C_2$)acetic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% $^{13}C_2$
M3PFBA		Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 2,3,4-$^{13}C_3$
MPFBA		Perfluoro-n-($^{13}C_4$)butanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% $^{13}C_4$
M3PFPeA		Perfluoro-n-(3,4,5-$^{13}C_3$)pentanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 3,4,5-$^{13}C_3$
M5PFPeA		Perfluoro-n-($^{13}C_5$)pentanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% $^{13}C_5$
MPFHxA		Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2-$^{13}C_2$
M5PFHxA		Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2,3,4,6-$^{13}C_5$
M4PFHpA		Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2,3,4-$^{13}C_4$
用 M2PFOA		Perfluoro-n-(1,2-$^{13}C_2$)octanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2-$^{13}C_2$
用 MPFOA		Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2,3,4-$^{13}C_4$
用 M8PFOA		Perfluoro-n-($^{13}C_8$)octanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >98% $^{13}C_8$ and 1.0% $^{13}C_4$

用 第一種特定化学物質

MASS-LABELLED PERFLUOROALKYLCARBOXYLIC ACIDS

Catalogue Number		Product
用 **MPFNA**		Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2,3,4,5-$^{13}C_5$
用 **M9PFNA**		Perfluoro-n-($^{13}C_9$)nonanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% $^{13}C_9$
用 **MPFDA**		Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2-$^{13}C_2$
用 **M6PFDA**		Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2,3,4,5,6-$^{13}C_6$
用 **MPFUdA**		Perfluoro-n-(1,2-$^{13}C_2$)undecanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2-$^{13}C_2$
用 **M7PFUdA**		Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2,3,4,5,6,7-$^{13}C_7$
用 **MPFDoA**		Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2-$^{13}C_2$
NEW 用 **M3PFTrDA**		Perfluoro-n-(1,2,3-$^{13}C_3$)tridecanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2,3-$^{13}C_3$
用 **M2PFTeDA**		Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2-$^{13}C_2$
用 **M2PFHxDA**		Perfluoro-n-(1,2-$^{13}C_2$)hexadecanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; >99% 1,2-$^{13}C_2$

Catalogue Number	Product (methanol solution)		Qty/Conc
用 PFAS-3PAR 在	Native PFAS Precision and Recovery Standard Solution		1.2 mL
Perfluoro-n-octanoic acid		PFOA	2000 ng/mL
Sodium perfluoro-1-hexanesulfonate		L-PFHxS	2000 ng/mL
Sodium perfluoro-1-octanesulfonate		L-PFOS	2000 ng/mL
用 MPFAS-3ES 在	Mass-Labelled PFAS Extraction Standard Solution		1.2 mL
Perfluoro-n-($^{13}C_8$)octanoic acid		M8PFOA	2000 ng/mL
Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate		M3PFHxS	2000 ng/mL
Sodium perfluoro-1-($^{13}C_8$)octanesulfonate		M8PFOS	2000 ng/mL
用 PFAC-MXA	Native PFCA and PFSA Solution/Mixture		1.2 mL
Perfluoro-n-butanoic acid		PFBA	5.00 µg/mL
Perfluoro-n-pentanoic acid		PFPeA	5.00 µg/mL
Perfluoro-n-hexanoic acid		PFHxA	5.00 µg/mL
Perfluoro-n-heptanoic acid		PFHpA	5.00 µg/mL
Perfluoro-n-octanoic acid		PFOA	5.00 µg/mL
Perfluoro-n-nonanoic acid		PFNA	5.00 µg/mL
Perfluoro-n-decanoic acid		PFDA	5.00 µg/mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	5.00 µg/mL
Sodium perfluoro-1-hexanesulfonate		L-PFHxS	5.00 µg/mL
Sodium perfluoro-1-octanesulfonate		L-PFOS	5.00 µg/mL
用 PFAC-MXB	Native PFCA and PFSA Solution/Mixture		1.2 mL
Perfluoro-n-butanoic acid		PFBA	2000 ng/mL
Perfluoro-n-pentanoic acid		PFPeA	2000 ng/mL
Perfluoro-n-hexanoic acid		PFHxA	2000 ng/mL
Perfluoro-n-heptanoic acid		PFHpA	2000 ng/mL
Perfluoro-n-octanoic acid		PFOA	2000 ng/mL
Perfluoro-n-nonanoic acid		PFNA	2000 ng/mL
Perfluoro-n-decanoic acid		PFDA	2000 ng/mL
Perfluoro-n-undecanoic acid		PFUdA	2000 ng/mL
Perfluoro-n-dodecanoic acid		PFDoA	2000 ng/mL
Perfluoro-n-tridecanoic acid		PFTrDA	2000 ng/mL
Perfluoro-n-tetradecanoic acid		PFTeDA	2000 ng/mL
Perfluoro-n-hexadecanoic acid		PFHxDA	2000 ng/mL
Perfluoro-n-octadecanoic acid		PFODA	2000 ng/mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	2000 ng/mL
Sodium perfluoro-1-hexanesulfonate		L-PFHxS	2000 ng/mL
Sodium perfluoro-1-octanesulfonate		L-PFOS	2000 ng/mL
Sodium perfluoro-1-decanesulfonate		L-PFDS	2000 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質
在…国内在庫品

MIXED NATIVE PFAS: SOLUTION/MIXTURES

Catalogue Number	Product (methanol solution)		Qty/Conc
用 **PFAC-MXE**	Native PFCA, PFSA and HFPO-DA (GenX) Solution/Mixture		1.2 mL
	Perfluoro-n-butanoic acid	PFBA	1000 ng/mL
	Perfluoro-n-pentanoic acid	PFPeA	1000 ng/mL
	Perfluoro-n-hexanoic acid	PFHxA	1000 ng/mL
	Perfluoro-n-heptanoic acid	PFHpA	1000 ng/mL
	Perfluoro-n-octanoic acid	PFOA	1000 ng/mL
	Perfluoro-n-nonanoic acid	PFNA	1000 ng/mL
	Perfluoro-n-decanoic acid	PFDA	1000 ng/mL
	Perfluoro-n-undecanoic acid	PFUdA	1000 ng/mL
	Perfluoro-n-dodecanoic acid	PFDoA	1000 ng/mL
	Perfluoro-n-tridecanoic acid	PFTrDA	1000 ng/mL
	Perfluoro-n-tetradecanoic acid	PFTeDA	1000 ng/mL
	Perfluoro-n-hexadecanoic acid	PFHxDA	1000 ng/mL
	Perfluoro-n-octadecanoic acid	PFODA	1000 ng/mL
	2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid	HFPO-DA	1000 ng/mL
	Potassium perfluoro-1-butanesulfonate	L-PFBS	1000 ng/mL
	Sodium perfluoro-1-pentanesulfonate	L-PFPeS	1000 ng/mL
	Sodium perfluoro-1-hexanesulfonate	L-PFHxS	1000 ng/mL
	Sodium perfluoro-1-heptanesulfonate	L-PFHpS	1000 ng/mL
	Sodium perfluoro-1-octanesulfonate	L-PFOS	1000 ng/mL
	Sodium perfluoro-1-nonanesulfonate	L-PFNS	1000 ng/mL
	Sodium perfluoro-1-decanesulfonate	L-PFDS	1000 ng/mL
	Sodium perfluoro-1-dodecanesulfonate	L-PFDoS	1000 ng/mL
PFAC-MXF	Native Replacement PFAS Solution/Mixture		1.2 mL
	2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid	HFPO-DA	2000 ng/mL
	Sodium dodecafluoro-3H-4,8-dioxanonanoate	NaDONA	2000 ng/mL
	Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate	9Cl-PF3ONS	2000 ng/mL
	Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate	11Cl-PF3OUdS	2000 ng/mL
PFAC-MXG	Native Perfluoroalkyl Ether Carboxylic Acids and Sulfonate Solution/Mixture		1.2 mL
	Perfluoro-4-oxapentanoic acid	PF4OPeA	2000 ng/mL
	Perfluoro-5-oxahexanoic acid	PF5OHxA	2000 ng/mL
	Perfluoro-3,6-dioxaheptanoic acid	3,6-OPFHpA	2000 ng/mL
	Potassium perfluoro(2-ethoxyethane)sulfonate	PFEESA	2000 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

Catalogue Number	Product (methanol solution)		Qty/Conc
用 PFAC-MXH	Native PFAS Solution/Mixture		1.2 mL
Perfluoro-n-butanoic acid		PFBA	4000 ng/mL
Perfluoro-n-pentanoic acid		PFPeA	2000 ng/mL
Perfluoro-n-hexanoic acid		PFHxA	1000 ng/mL
Perfluoro-n-heptanoic acid		PFHpA	1000 ng/mL
Perfluoro-n-octanoic acid		PFOA	1000 ng/mL
Perfluoro-n-nonanoic acid		PFNA	1000 ng/mL
Perfluoro-n-decanoic acid		PFDA	1000 ng/mL
Perfluoro-n-undecanoic acid		PFUdA	1000 ng/mL
Perfluoro-n-dodecanoic acid		PFDoA	1000 ng/mL
Perfluoro-n-tridecanoic acid		PFTrDA	1000 ng/mL
Perfluoro-n-tetradecanoic acid		PFTeDA	1000 ng/mL
Perfluoro-1-octanesulfonamide		FOSA	1000 ng/mL
N-Methylperfluorooctanesulfonamidoacetic acid (linear and branched isomers)		br-NMeFOSAA	1000 ng/mL
N-Ethylperfluorooctanesulfonamidoacetic acid (linear and branched isomers)		br-NEtFOSAA	1000 ng/mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	1000 ng/mL
Sodium perfluoro-1-pentanesulfonate		L-PFPeS	1000 ng/mL
Potassium perfluorohexanesulfonate (linear and branched isomers)		br-PFHxSK	1000 ng/mL
Sodium perfluoro-1-heptanesulfonate		L-PFHpS	1000 ng/mL
Potassium perfluorooctanesulfonate (linear and branched isomers)		br-PFOSK	1000 ng/mL
Sodium perfluoro-1-nonanesulfonate		L-PFNS	1000 ng/mL
Sodium perfluoro-1-decanesulfonate		L-PFDS	1000 ng/mL
Sodium perfluoro-1-dodecanesulfonate		L-PFDoS	1000 ng/mL
Sodium 1H,1H,2H,2H-perfluorohexanesulfonate		4:2FTS	4000 ng/mL
Sodium 1H,1H,2H,2H-perfluorooctanesulfonate		6:2FTS	4000 ng/mL
Sodium 1H,1H,2H,2H-perfluorodecanesulfonate		8:2FTS	4000 ng/mL
PFAC-MXI			1.2 mL
N-Methylperfluoro-1-octanesulfonamide		N-MeFOSA	1.00 µg/mL
N-Ethylperfluoro-1-octanesulfonamide		N-EtFOSA	1.00 µg/mL
2-(N-Methylperfluoro-1-octanesulfonamido)ethanol		N-MeFOSE	10.0 µg/mL
2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol		N-EtFOSE	10.0 µg/mL
PFAC-MXJ	Native X:3 Fluorotelomer Carboxylic Acid Solution/Mixture		1.2 mL
3-Perfluoropropyl propanoic acid		FPrPA	4.00 µg/mL
3-Perfluoropentyl propanoic acid		FPePA	20.0 µg/mL
3-Perfluoroheptyl propanoic acid		FHpPA	20.0 µg/mL
用 PFAS-MXK 在	Native PFCA, PFSA and HFPO-DA (GenX) Solution/Mixture		1.2 mL
Perfluoro-n-butanoic acid		PFBA	2000 ng/mL
Perfluoro-n-pentanoic acid		PFPeA	2000 ng/mL
Perfluoro-n-hexanoic acid		PFHxA	2000 ng/mL
Perfluoro-n-heptanoic acid		PFHpA	2000 ng/mL
Perfluoro-n-octanoic acid		PFOA	2000 ng/mL
Perfluoro-n-nonanoic acid		PFNA	2000 ng/mL
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid		HFPO-DA	2000 ng/mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	2000 ng/mL
Sodium perfluoro-1-hexanesulfonate		L-PFHxS	2000 ng/mL
Sodium perfluoro-1-octanesulfonate		L-PFOS	2000 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質
在…国内在庫品

MIXED MASS-LABELLED PFAS: SOLUTION/MIXTURES

Catalogue Number	Product (methanol solution)		Qty/Conc
用 **MPFAC-HIF-ES**	Mass-Labelled PFAS Extraction Standard Solution/Mixture		1.2 mL
	Perfluoro-n-($^{13}C_4$)butanoic acid	MPFBA	2000 ng/mL
	Perfluoro-n-($^{13}C_5$)pentanoic acid	M5PFPeA	1000 ng/mL
	Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid	M5PFHxA	500 ng/mL
	Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid	M4PFHpA	500 ng/mL
	Perfluoro-n-($^{13}C_8$)octanoic acid	M8PFOA	500 ng/mL
	Perfluoro-n-($^{13}C_9$)nonanoic acid	M9PFNA	250 ng/mL
	Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid	M6PFDA	250 ng/mL
	Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid	M7PFUdA	250 ng/mL
	Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid	MPFDoA	250 ng/mL
	Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid	M2PFTeDA	250 ng/mL
	Perfluoro-1-($^{13}C_8$)octanesulfonamide	M8FOSA	500 ng/mL
	N-Methyl-d_3-perfluoro-1-octanesulfonamide	d-N-MeFOSA	500 ng/mL
	N-Ethyl-d_5-perfluoro-1-octanesulfonamide	d-N-EtFOSA	500 ng/mL
	N-Methyl-d_3-perfluoro-1-octanesulfonamidoacetic acid	d3-N-MeFOSAA	1000 ng/mL
	N-Ethyl-d_5-perfluoro-1-octanesulfonamidoacetic acid	d5-N-EtFOSAA	1000 ng/mL
	2-(N-Methyl-d_3-perfluoro-1-octanesulfonamido)ethan-d_4-ol	d7-N-MeFOSE	5000 ng/mL
	2-(N-Ethyl-d_5-perfluoro-1-octanesulfonamido)ethan-d_4-ol	d9-N-EtFOSE	5000 ng/mL
	2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid	M3HFPO-DA	2000 ng/mL
	Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate	M3PFBS	500 ng/mL
	Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate	M3PFHxS	500 ng/mL
	Sodium perfluoro-1-($^{13}C_8$)octanesulfonate	M8PFOS	500 ng/mL
	Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate	M2-4:2FTS	1000 ng/mL
	Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate	M2-6:2FTS	1000 ng/mL
	Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate	M2-8:2FTS	1000 ng/mL
用 **MPFAC-HIF-IS**	Mass-Labelled PFAS Injection Standard Solution/Mixture		1.2 mL
	Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid	M3PFBA	1000 ng/mL
	Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid	MPFHxA	500 ng/mL
	Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid	MPFOA	500 ng/mL
	Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid	MPFNA	250 ng/mL
	Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid	MPFDA	250 ng/mL
	Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate	MPFHxS	500 ng/mL
	Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate	MPFOS	500 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

Catalogue Number	Product (methanol solution)		Qty/Conc
用 **MPFAC-MXA**	Mass-Labelled PFCA and PFSA Solution/Mixture		1.2 mL
Perfluoro-n-($^{13}C_4$)butanoic acid		MPFBA	2000 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid		MPFHxA	2000 ng/mL
Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid		MPFOA	2000 ng/mL
Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid		MPFNA	2000 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid		MPFDA	2000 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)undecanoic acid		MPFUdA	2000 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid		MPFDoA	2000 ng/mL
Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate		MPFHxS	2000 ng/mL
Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate		MPFOS	2000 ng/mL
用 **MPFAC-MXE**	Mass-Labelled PFCA, PFSA and HFPO-DA (GenX) Solution/Mixture		1.2 mL
Perfluoro-n-($^{13}C_4$)butanoic acid		MPFBA	1000 ng/mL
Perfluoro-n-($^{13}C_5$)pentanoic acid		M5PFPeA	1000 ng/mL
Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid		M5PFHxA	1000 ng/mL
Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid		M4PFHpA	1000 ng/mL
Perfluoro-n-($^{13}C_8$)octanoic acid		M8PFOA	1000 ng/mL
Perfluoro-n-($^{13}C_9$)nonanoic acid		M9PFNA	1000 ng/mL
Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid		M6PFDA	1000 ng/mL
Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid		M7PFUdA	1000 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid		MPFDoA	1000 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid		M2PFTeDA	1000 ng/mL
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid		M3HFPO-DA	1000 ng/mL
Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate		M3PFBS	1000 ng/mL
Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate		M3PFHxS	1000 ng/mL
Sodium perfluoro-1-($^{13}C_8$)octanesulfonate		M8PFOS	1000 ng/mL
用 **MPFAS-MXK** 在	Mass-Labelled PFCA, PFSA and HFPO-DA (GenX) Solution/Mixture		1.2 mL
Perfluoro-n-($^{13}C_4$)butanoic acid		MPFBA	2000 ng/mL
Perfluoro-n-($^{13}C_5$)pentanoic acid		M5PFPeA	2000 ng/mL
Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid		M5PFHxA	2000 ng/mL
Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid		M4PFHpA	2000 ng/mL
Perfluoro-n-($^{13}C_8$)octanoic acid		M8PFOA	2000 ng/mL
Perfluoro-n-($^{13}C_9$)nonanoic acid		M9PFNA	2000 ng/mL
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid		M3HFPO-DA	2000 ng/mL
Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate		M3PFBS	2000 ng/mL
Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate		M3PFHxS	2000 ng/mL
Sodium perfluoro-($^{13}C_8$)octanesulfonate		M8PFOS	2000 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質
在…国内在庫品

MIXED MASS-LABELLED PFAS: SOLUTION/MIXTURES

Catalogue Number	Product (methanol solution)	Qty/Conc
用 EPA-1633STK	U.S. EPA Method 1633 Native PFAS Stock Solution/Mixture	1.2 mL
NEW 用 EPA-1633MXA	U.S. EPA Method 1633 Native PFAS Stock Solution/Mixture	1.2 mL

		EPA-1633STK (ng/mL)	EPA-1633MXA (ng/mL)
Perfluoro-n-butanoic acid	PFBA	1000	1000
Perfluoro-n-pentanoic acid	PFPeA	500	1000
Perfluoro-n-hexanoic acid	PFHxA	250	1000
Perfluoro-n-heptanoic acid	PFHpA	250	1000
Perfluorooctanoic acid (linear and branched isomers)	br-PFOA	250	1000
Perfluorononanoic acid (linear and branched isomers)	br-PFNA	250	1000
Perfluoro-n-decanoic acid	PFDA	250	1000
Perfluoro-n-undecanoic acid	PFUdA	250	1000
Perfluoro-n-dodecanoic acid	PFDoA	250	1000
Perfluoro-n-tridecanoic acid	PFTrDA	250	1000
Perfluoro-n-tetradecanoic acid	PFTeDA	250	1000
Perfluorooctanesulfonamide (linear and branched isomers)	br-FOSA	250	1000
N-Methylperfluorooctanesulfonamide (linear and branched isomers)	br-NMeFOSA	250	1000
N-Ethylperfluorooctanesulfonamide (linear and branched isomers)	br-NEtFOSA	250	1000
N-Methylperfluorooctanesulfonamidoacetic acid (linear and branched isomers)	br-NMeFOSAA	250	1000
N-Ethylperfluorooctanesulfonamidoacetic acid (linear and branched isomers)	br-NEtFOSAA	250	1000
2-(N-Methylperfluorooctanesulfonamido)ethanol (linear and branched isomers)	br-NMeFOSE	2500	1000
2-(N-Ethylperfluorooctanesulfonamido)ethanol (linear and branched isomers)	br-NEtFOSE	2500	1000
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid	HFPO-DA	1000	1000
Perfluoro-4-oxapentanoic acid	PF4OPeA	500	1000
Perfluoro-5-oxahexanoic acid	PF5OHxA	500	1000
Perfluoro-3,6-dioxaheptanoic acid	3,6-OPFHpA	500	1000
3-Perfluoropropyl propanoic acid	FPrPA	1250	1000
3-Perfluoropentyl propanoic acid	FPePA	6250	1000
3-Perfluoroheptyl propanoic acid	FHpPA	6250	1000
Potassium perfluoro-1-butanesulfonate	L-PFBS	250	1000
Sodium perfluoro-1-pentanesulfonate	L-PFPeS	250	1000
Potassium perfluorohexanesulfonate (linear and branched isomers)	br-PFHxSK	250	1000
Sodium perfluoro-1-heptanesulfonate	L-PFHpS	250	1000
Potassium perfluorooctanesulfonate (linear and branched isomers)	br-PFOSK	250	1000
Sodium perfluoro-1-nonanesulfonate	L-PFNS	250	1000
Sodium perfluoro-1-decanesulfonate	L-PFDS	250	1000
Sodium perfluoro-1-dodecanesulfonate	L-PFDoS	250	1000
Sodium 1H,1H,2H,2H-perfluorohexanesulfonate	4:2FTS	1000	1000
Sodium 1H,1H,2H,2H-perfluorooctanesulfonate	6:2FTS	1000	1000
Sodium 1H,1H,2H,2H-perfluorodecanesulfonate	8:2FTS	1000	1000
Sodium dodecafluoro-3H-4,8-dioxanonanoate	NaDONA	1000	1000
Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate	9Cl-PF3ONS	1000	1000
Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate	11Cl-PF3OUdS	1000	1000
Potassium perfluoro(2-ethoxyethane)sulfonate	PFEESA	500	1000

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

MIXED NATIVE PFAS: SOLUTION/MIXTURE

Catalogue Number	Product (methanol solution)		Qty/Conc
用 EU-5813-NSS	5813/20 PFAS Native Solution/Mixture		1.2 mL
Perfluoro-n-butanoic acid		PFBA	2000 ng/mL
Perfluoro-n-pentanoic acid		PFPeA	2000 ng/mL
Perfluoro-n-hexanoic acid		PFHxA	2000 ng/mL
Perfluoro-n-heptanoic acid		PFHpA	2000 ng/mL
Perfluoro-n-octanoic acid		PFOA	2000 ng/mL
Perfluoro-n-nonanoic acid		PFNA	2000 ng/mL
Perfluoro-n-decanoic acid		PFDA	2000 ng/mL
Perfluoro-n-undecanoic acid		PFUdA	2000 ng/mL
Perfluoro-n-dodecanoic acid		PFDoA	2000 ng/mL
Perfluoro-n-tridecanoic acid		PFTrDA	2000 ng/mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	2000 ng/mL
Sodium perfluoro-1-pentanesulfonate		L-PFPeS	2000 ng/mL
Sodium perfluoro-1-hexanesulfonate		L-PFHxS	2000 ng/mL
Sodium perfluoro-1-heptanesulfonate		L-PFHpS	2000 ng/mL
Sodium perfluoro-1-octanesulfonate		L-PFOS	2000 ng/mL
Sodium perfluoro-1-nonanesulfonate		L-PFNS	2000 ng/mL
Sodium perfluoro-1-decanesulfonate		L-PFDS	2000 ng/mL
Sodium perfluoro-1-undecanesulfonate		L-PFUdS	2000 ng/mL
Sodium perfluoro-1-dodecanesulfonate		L-PFDoS	2000 ng/mL
Sodium perfluoro-1-tridecanesulfonate		L-PFTrDS	2000 ng/mL

MIXED NATIVE PFAS: SOLUTION/MIXTURE

Catalogue Number	Product (methanol solution)		Qty/Conc
用 PFAC-24PAR	Native PFAS Precision and Recovery Standard Solution		1.2 mL
Perfluoro-n-butanoic acid		PFBA	2000 ng/mL
Perfluoro-n-pentanoic acid		PFPeA	2000 ng/mL
Perfluoro-n-hexanoic acid		PFHxA	2000 ng/mL
Perfluoro-n-heptanoic acid		PFHpA	2000 ng/mL
Perfluoro-n-octanoic acid		PFOA	2000 ng/mL
Perfluoro-n-nonanoic acid		PFNA	2000 ng/mL
Perfluoro-n-decanoic acid		PFDA	2000 ng/mL
Perfluoro-n-undecanoic acid		PFUdA	2000 ng/mL
Perfluoro-n-dodecanoic acid		PFDoA	2000 ng/mL
Perfluoro-n-tridecanoic acid		PFTrDA	2000 ng/mL
Perfluoro-n-tetradecanoic acid		PFTeDA	2000 ng/mL
Perfluoro-1-octanesulfonamide		FOSA	2000 ng/mL
N-Methylperfluoro-1-octanesulfonamidoacetic acid		N-MeFOSAA	2000 ng/mL
N-Ethylperfluoro-1-octanesulfonamidoacetic acid		N-EtFOSAA	2000 ng/mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	2000 ng/mL
Sodium perfluoro-1-pentanesulfonate		L-PFPeS	2000 ng/mL
Potassium perfluorohexanesulfonate (linear and branched isomers)		br-PFHxSK	2000 ng/mL
Sodium perfluoro-1-heptanesulfonate		L-PFHpS	2000 ng/mL
Potassium perfluorooctanesulfonate (linear and branched isomers)		br-PFOSK	2000 ng/mL
Sodium perfluoro-1-nonanesulfonate		L-PFNS	2000 ng/mL
Sodium perfluoro-1-decanesulfonate		L-PFDS	2000 ng/mL
Sodium 1H,1H,2H,2H-perfluorohexanesulfonate		4:2FTS	2000 ng/mL
Sodium 1H,1H,2H,2H-perfluorooctanesulfonate		6:2FTS	2000 ng/mL
Sodium 1H,1H,2H,2H-perfluorodecanesulfonate		8:2FTS	2000 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

MIXED PFAS: SOLUTION/MIXTURE

Catalogue Number	Product (methanol solution)		Qty/Conc
用 **FDA-30MX**	Native PFAS Solution/Mixture		1.2 mL
Perfluoro-n-butanoic acid		PFBA	1000 ng/mL
Perfluoro-n-pentanoic acid		PFPeA	1000 ng/mL
Perfluoro-n-hexanoic acid		PFHxA	1000 ng/mL
Perfluoro-n-heptanoic acid		PFHpA	1000 ng/mL
Perfluoro-n-octanoic acid		PFOA	1000 ng/mL
Perfluoro-n-nonanoic acid		PFNA	1000 ng/mL
Perfluoro-n-decanoic acid		PFDA	1000 ng/mL
Perfluoro-n-undecanoic acid		PFUdA	1000 ng/mL
Perfluoro-n-dodecanoic acid		PFDoA	1000 ng/mL
Perfluoro-n-tridecanoic acid		PFTrDA	1000 ng/mL
Perfluoro-n-tetradecanoic acid		PFTeDA	1000 ng/mL
Perfluoro-1-octanesulfonamide		FOSA	1000 ng/mL
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid		HFPO-DA	1000 ng/mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	1000 ng/mL
Sodium perfluoro-1-pentanesulfonate		L-PFPeS	1000 ng/mL
Sodium perfluoro-1-hexanesulfonate		L-PFHxS	1000 ng/mL
Sodium perfluoro-1-heptanesulfonate		L-PFHpS	1000 ng/mL
Potassium perfluorooctanesulfonate (linear and branched isomers)		br-PFOSK	1000 ng/mL
Sodium perfluoro-1-nonanesulfonate		L-PFNS	1000 ng/mL
Sodium perfluoro-1-decanesulfonate		L-PFDS	1000 ng/mL
Sodium perfluoro-1-undecanesulfonate		L-PFUdS	1000 ng/mL
Sodium perfluoro-1-dodecanesulfonate		L-PFDoS	1000 ng/mL
Sodium perfluoro-1-tridecanesulfonate		L-PFTrDS	1000 ng/mL
Sodium 1H,1H,2H,2H-perfluorohexanesulfonate		4:2FTS	1000 ng/mL
Sodium 1H,1H,2H,2H-perfluorooctanesulfonate		6:2FTS	1000 ng/mL
Sodium 1H,1H,2H,2H-perfluorodecanesulfonate		8:2FTS	1000 ng/mL
Sodium 1H,1H,2H,2H-perfluorododecanesulfonate		10:2FTS	1000 ng/mL
Sodium dodecafluoro-3H-4,8-dioxanonanoate		NaDONA	1000 ng/mL
Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate		9Cl-PF3ONS	1000 ng/mL
Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate		11Cl-PF3OUdS	1000 ng/mL
用 **FDA-12MPFAS**	Mass-Labelled PFAS Solution/Mixture		1.2 mL
Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid		M3PFBA	2000 ng/mL
Perfluoro-n-(3,4,5-$^{13}C_3$)pentanoic acid		M3PFPeA	2000 ng/mL
Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid		M5PFHxA	2000 ng/mL
Perfluoro-n-($^{13}C_8$)octanoic acid		M8PFOA	2000 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)undecanoic acid		MPFUdA	2000 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid		MPFDoA	2000 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid		M2PFTeDA	2000 ng/mL
Perfluoro-1-($^{13}C_8$)octanesulfonamide		M8FOSA	2000 ng/mL
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid		M3HFPO-DA	2000 ng/mL
Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate		M3PFBS	2000 ng/mL
Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate		M3PFHxS	2000 ng/mL
Sodium perfluoro-1-($^{13}C_8$)octanesulfonate		M8PFOS	2000 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

MIXED MASS-LABELLED PFAS: SOLUTION/MIXTURE

Catalogue Number	Product (methanol solution)		Qty/Conc
用 **EPA-8327STK**	EPA Method 8327 Native PFAS Precision and Recovery Standard Stock		1.2 mL
	Perfluoro-n-butanoic acid	PFBA	2000 ng/mL
	Perfluoro-n-pentanoic acid	PFPeA	2000 ng/mL
	Perfluoro-n-hexanoic acid	PFHxA	2000 ng/mL
	Perfluoro-n-heptanoic acid	PFHpA	2000 ng/mL
	Perfluorooctanoic acid (linear and branched isomers)	br-PFOA	2000 ng/mL
	Perfluorononanoic acid (linear and branched isomers)	br-PFNA	2000 ng/mL
	Perfluoro-n-decanoic acid	PFDA	2000 ng/mL
	Perfluoro-n-undecanoic acid	PFUdA	2000 ng/mL
	Perfluoro-n-dodecanoic acid	PFDoA	2000 ng/mL
	Perfluoro-n-tridecanoic acid	PFTrDA	2000 ng/mL
	Perfluoro-n-tetradecanoic acid	PFTeDA	2000 ng/mL
	Perfluorooctanesulfonamide (linear and branched isomers)	br-FOSA	2000 ng/mL
	N-Methylperfluorooctanesulfonamidoacetic acid (linear and branched isomers)	br-NMeFOSAA	2000 ng/mL
	N-Ethylperfluorooctanesulfonamidoacetic acid (linear and branched isomers)	br-NEtFOSAA	2000 ng/mL
	Potassium perfluoro-1-butanesulfonate	L-PFBS	2000 ng/mL
	Sodium perfluoro-1-pentanesulfonate	L-PFPeS	2000 ng/mL
	Potassium perfluorohexanesulfonate (linear and branched isomers)	br-PFHxSK	2000 ng/mL
	Sodium perfluoro-1-heptanesulfonate	L-PFHpS	2000 ng/mL
	Potassium perfluorooctanesulfonate (linear and branched isomers)	br-PFOSK	2000 ng/mL
	Sodium perfluoro-1-nonanesulfonate	L-PFNS	2000 ng/mL
	Sodium perfluoro-1-decanesulfonate	L-PFDS	2000 ng/mL
	Sodium 1H,1H,2H,2H-perfluorohexanesulfonate	4:2FTS	2000 ng/mL
	Sodium 1H,1H,2H,2H-perfluorooctanesulfonate	6:2FTS	2000 ng/mL
	Sodium 1H,1H,2H,2H-perfluorodecanesulfonate	8:2FTS	2000 ng/mL
用 **MPFAC-24ES**	Mass-Labelled PFAS Extraction Standard Solution		1.2 mL
	Perfluoro-n-($^{13}C_4$)butanoic acid	MPFBA	1000 ng/mL
	Perfluoro-n-($^{13}C_5$)pentanoic acid	M5PFPeA	1000 ng/mL
	Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid	M5PFHxA	1000 ng/mL
	Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid	M4PFHpA	1000 ng/mL
	Perfluoro-n-($^{13}C_8$)octanoic acid	M8PFOA	1000 ng/mL
	Perfluoro-n-($^{13}C_9$)nonanoic acid	M9PFNA	1000 ng/mL
	Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid	M6PFDA	1000 ng/mL
	Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid	M7PFUdA	1000 ng/mL
	Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid	MPFDoA	1000 ng/mL
	Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid	M2PFTeDA	1000 ng/mL
	Perfluoro-1-($^{13}C_8$)octanesulfonamide	M8FOSA	1000 ng/mL
	N-Methyl-d_3-perfluoro-1-octanesulfonamidoacetic acid	d3-N-MeFOSAA	1000 ng/mL
	N-Ethyl-d_5-perfluoro-1-octanesulfonamidoacetic acid	d5-N-EtFOSAA	1000 ng/mL
	Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate	M3PFBS	1000 ng/mL
	Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate	M3PFHxS	1000 ng/mL
	Sodium perfluoro-1-($^{13}C_8$)octanesulfonate	M8PFOS	1000 ng/mL
	Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate	M2-4:2FTS	1000 ng/mL
	Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate	M2-6:2FTS	1000 ng/mL
	Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate	M2-8:2FTS	1000 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

MIXED NATIVE PFAS: SOLUTION/MIXTURE

Catalogue Number	Product (methanol solution)		Qty/Conc
用 **PFAC30PAR**	Native PFAS Precision and Recovery Standard Solution		1.2 mL
Perfluoro-n-butanoic acid		PFBA	1000 ng/mL
Perfluoro-n-pentanoic acid		PFPeA	1000 ng/mL
Perfluoro-n-hexanoic acid		PFHxA	1000 ng/mL
Perfluoro-n-heptanoic acid		PFHpA	1000 ng/mL
Perfluoro-n-octanoic acid		PFOA	1000 ng/mL
Perfluoro-n-nonanoic acid		PFNA	1000 ng/mL
Perfluoro-n-decanoic acid		PFDA	1000 ng/mL
Perfluoro-n-undecanoic acid		PFUdA	1000 ng/mL
Perfluoro-n-dodecanoic acid		PFDoA	1000 ng/mL
Perfluoro-n-tridecanoic acid		PFTrDA	1000 ng/mL
Perfluoro-n-tetradecanoic acid		PFTeDA	1000 ng/mL
Perfluoro-1-butanesulfonamide		FBSA	1000 ng/mL
Perfluoro-1-hexanesulfonamide		FHxSA	1000 ng/mL
Perfluoro-1-octanesulfonamide		FOSA	1000 ng/mL
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid		HFPO-DA	1000 ng/mL
N-Methylperfluorooctanesulfonamidoacetic acid (linear and branched isomers)		br-NMeFOSAA	1000 ng/mL
N-Ethylperfluorooctanesulfonamidoacetic acid (linear and branched isomers)		br-NEtFOSAA	1000 ng/mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	1000 ng/mL
Sodium perfluoro-1-pentanesulfonate		L-PFPeS	1000 ng/mL
Potassium perfluorohexanesulfonate (linear and branched isomers)		br-PFHxSK	1000 ng/mL
Sodium perfluoro-1-heptanesulfonate		L-PFHpS	1000 ng/mL
Potassium perfluorooctanesulfonate (linear and branched isomers)		br-PFOSK	1000 ng/mL
Sodium perfluoro-1-nonanesulfonate		L-PFNS	1000 ng/mL
Sodium perfluoro-1-decanesulfonate		L-PFDS	1000 ng/mL
Sodium 1H,1H,2H,2H-perfluorohexanesulfonate		4:2FTS	1000 ng/mL
Sodium 1H,1H,2H,2H-perfluorooctanesulfonate		6:2FTS	1000 ng/mL
Sodium 1H,1H,2H,2H-perfluorodecanesulfonate		8:2FTS	1000 ng/mL
Sodium dodecafluoro-3H-4,8-dioxanonanoate		NaDONA	1000 ng/mL
Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate		9Cl-PF3ONS	1000 ng/mL
Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate		11Cl-PF3OUdS	1000 ng/mL

EPA METHOD 537.1 SOLUTION/MIXTURES

Catalogue Number	Product (methanol solution)		Qty/Conc
用 **EPA-537SS-R1**	EPA Method 537.1 Surrogate Primary Dilution Standard (SUR PDS)		1.2 mL
Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid		MPFHxA	1000 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid		MPFDA	1000 ng/mL
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid		M3HFPO-DA	1000 ng/mL
N-Ethyl-d_5-perfluoro-1-octanesulfonamidoacetic acid		d5-N-EtFOSAA	4000 ng/mL
用 **EPA-537IS**	EPA Method 537.1 Internal Standard Primary Dilution Standard (IS PDS)		1.2 mL
Perfluoro-n-(1,2-$^{13}C_2$)octanoic acid		M2PFOA	1000 ng/mL
N-Methyl-d_3-perfluoro-1-octanesulfonamidoacetic acid		d3-N-MeFOSAA	4000 ng/mL
Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate		MPFOS	3000 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

Catalogue Number	Product (methanol solution)		Qty/Conc
用 EPA-537PDS-R1	EPA Method 537.1 Analyte Primary Dilution Standard (branched/linear mix)		1.2 mL
Perfluoro-n-hexanoic acid		PFHxA	2000 ng/mL
Perfluoro-n-heptanoic acid		PFHpA	2000 ng/mL
Perfluoro-n-octanoic acid		PFOA	2000 ng/mL
Perfluoro-n-nonanoic acid		PFNA	2000 ng/mL
Perfluoro-n-decanoic acid		PFDA	2000 ng/mL
Perfluoro-n-undecanoic acid		PFUdA	2000 ng/mL
Perfluoro-n-dodecanoic acid		PFDoA	2000 ng/mL
Perfluoro-n-tridecanoic acid		PFTrDA	2000 ng/mL
Perfluoro-n-tetradecanoic acid		PFTeDA	2000 ng/mL
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid		HFPO-DA	2000 ng/mL
N-Methylperfluorooctanesulfonamidoacetic acid (linear and branched isomers)		br-NMeFOSAA	2000 ng/mL
N-Ethylperfluorooctanesulfonamidoacetic acid (linear and branched isomers)		br-NEtFOSAA	2000 ng/mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	2000 ng/mL
Potassium perfluorohexanesulfonate (linear and branched isomers)		br-PFHxSK	2000 ng/mL
Potassium perfluorooctanesulfonate (linear and branched isomers)		br-PFOSK	2000 ng/mL
Sodium dodecafluoro-3H-4,8-dioxanonanoate		NaDONA	2000 ng/mL
Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate		9Cl-PF3ONS	2000 ng/mL
Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate		11Cl-PF3OUdS	2000 ng/mL
用 EPA-537PDSL-R1	EPA Method 537.1 Analyte Primary Dilution Standard (linear isomers only)		1.2 mL
Perfluoro-n-hexanoic acid		PFHxA	2000 ng/mL
Perfluoro-n-heptanoic acid		PFHpA	2000 ng/mL
Perfluoro-n-octanoic acid		PFOA	2000 ng/mL
Perfluoro-n-nonanoic acid		PFNA	2000 ng/mL
Perfluoro-n-decanoic acid		PFDA	2000 ng/mL
Perfluoro-n-undecanoic acid		PFUdA	2000 ng/mL
Perfluoro-n-dodecanoic acid		PFDoA	2000 ng/mL
Perfluoro-n-tridecanoic acid		PFTrDA	2000 ng/mL
Perfluoro-n-tetradecanoic acid		PFTeDA	2000 ng/mL
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid		HFPO-DA	2000 ng/mL
N-Methylperfluoro-1-octanesulfonamidoacetic acid		N-MeFOSAA	2000 ng/mL
N-Ethylperfluoro-1-octanesulfonamidoacetic acid		N-EtFOSAA	2000 ng/mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	2000 ng/mL
Sodium perfluoro-1-hexanesulfonate		L-PFHxS	2000 ng/mL
Sodium perfluoro-1-octanesulfonate		L-PFOS	2000 ng/mL
Sodium dodecafluoro-3H-4,8-dioxanonanoate		NaDONA	2000 ng/mL
Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate		9Cl-PF3ONS	2000 ng/mL
Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate		11Cl-PF3OUdS	2000 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

EPA METHOD 537.1 SOLUTION/MIXTURES

Catalogue Number	Product (methanol solution)		Qty/Conc
用 EPA-537APDS	EPA Method 537.1 Native Analyte Primary Dilution Standard (br/linear mix)		1.2 mL
Perfluoro-n-hexanoic acid		PFHxA	2000 ng/mL
Perfluoro-n-heptanoic acid		PFHpA	2000 ng/mL
Perfluorooctanoic acid (linear and branched isomers)		br-PFOA	2000 ng/mL
Perfluorononanoic acid (linear and branched isomers)		br-PFNA	2000 ng/mL
Perfluoro-n-decanoic acid		PFDA	2000 ng/mL
Perfluoro-n-undecanoic acid		PFUdA	2000 ng/mL
Perfluoro-n-dodecanoic acid		PFDoA	2000 ng/mL
Perfluoro-n-tridecanoic acid		PFTrDA	2000 ng/mL
Perfluoro-n-tetradecanoic acid		PFTeDA	2000 ng/mL
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid		HFPO-DA	2000 ng/mL
N-Methylperfluorooctanesulfonamidoacetic acid (linear and branched isomers)		br-NMeFOSAA	2000 ng/mL
N-Ethylperfluorooctanesulfonamidoacetic acid (linear and branched isomers)		br-NEtFOSAA	2000 ng/mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	2000 ng/mL
Potassium perfluorohexanesulfonate (linear and branched isomers)		br-PFHxSK	2000 ng/mL
Potassium perfluorooctanesulfonate (linear and branched isomers)		br-PFOSK	2000 ng/mL
Sodium dodecafluoro-3H-4,8-dioxanonanoate		NaDONA	2000 ng/mL
Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate		9Cl-PF3ONS	2000 ng/mL
Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate		11Cl-PF3OUdS	2000 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

Catalogue Number	Product (methanol solution)		Qty/Conc
用 ISO 21675-NSS	ISO 21675:2019 Native Stock Solution		1.2 mL
Perfluoro-n-butanoic acid		PFBA	100 ng/mL
Perfluoro-n-pentanoic acid		PFPeA	100 ng/mL
Perfluoro-n-hexanoic acid		PFHxA	100 ng/mL
Perfluoro-n-heptanoic acid		PFHpA	100 ng/mL
Perfluoro-n-octanoic acid		PFOA	100 ng/mL
Perfluoro-n-nonanoic acid		PFNA	100 ng/mL
Perfluoro-n-decanoic acid		PFDA	100 ng/mL
Perfluoro-n-undecanoic acid		PFUdA	100 ng/mL
Perfluoro-n-dodecanoic acid		PFDoA	100 ng/mL
Perfluoro-n-tridecanoic acid		PFTrDA	100 ng/mL
Perfluoro-n-tetradecanoic acid		PFTeDA	100 ng/mL
Perfluoro-n-hexadecanoic acid		PFHxDA	100 ng/mL
Perfluoro-n-octadecanoic acid		PFODA	100 ng/mL
Perfluoro-1-octanesulfonamide		FOSA	100 ng/mL
N-Methylperfluoro-1-octanesulfonamide		N-MeFOSA	100 ng/mL
N-Ethylperfluoro-1-octanesulfonamide		N-EtFOSA	100 ng/mL
N-Methylperfluoro-1-octanesulfonamidoacetic acid		N-MeFOSAA	100 ng/mL
N-Ethylperfluoro-1-octanesulfonamidoacetic acid		N-EtFOSAA	100 ng/mL
2H-Perfluoro-2-decenoic acid		FOUEA	100 ng/mL
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid		HFPO-DA	100 ng/mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	100 ng/mL
Sodium perfluoro-1-hexanesulfonate		L-PFHxS	100 ng/mL
Sodium perfluoro-1-heptanesulfonate		L-PFHpS	100 ng/mL
Sodium perfluoro-1-octanesulfonate		L-PFOS	100 ng/mL
Sodium perfluoro-1-decanesulfonate		L-PFDS	100 ng/mL
Sodium 1H,1H,2H,2H-perfluorooctanesulfonate		6:2FTS	100 ng/mL
Sodium 1H,1H,2H,2H-perfluorodecanesulfonate		8:2FTS	100 ng/mL
Sodium dodecafluoro-3H-4,8-dioxanonanoate		NaDONA	100 ng/mL
Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate		9Cl-PF3ONS	100 ng/mL
Sodium bis(1H,1H,2H,2H-perfluorodecyl) phosphate		8:2diPAP	100 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

ISO 21675:2019 SOLUTION/MIXTURES

Catalogue Number	Product (methanol solution)		Qty/Conc
用 **ISO 21675-LSS**	ISO 21675:2019 Labelled Stock Solution		1.2 mL
Perfluoro-n-($^{13}C_4$)butanoic acid		MPFBA	100 ng/mL
Perfluoro-n-($^{13}C_5$)pentanoic acid		M5PFPeA	100 ng/mL
Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid		M5PFHxA	100 ng/mL
Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid		M4PFHpA	100 ng/mL
Perfluoro-n-($^{13}C_8$)octanoic acid		M8PFOA	100 ng/mL
Perfluoro-n-($^{13}C_9$)nonanoic acid		M9PFNA	100 ng/mL
Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid		M6PFDA	100 ng/mL
Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid		M7PFUdA	100 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid		MPFDoA	100 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid		M2PFTeDA	100 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)hexadecanoic acid		M2PFHxDA	100 ng/mL
Perfluoro-1-($^{13}C_8$)octanesulfonamide		M8FOSA	100 ng/mL
N-Methyl-d_3-perfluoro-1-octanesulfonamide		d-N-MeFOSA	100 ng/mL
N-Ethyl-d_5-perfluoro-1-octanesulfonamide		d-N-EtFOSA	100 ng/mL
N-Methyl-d_3-perfluoro-1-octanesulfonamidoacetic acid		d3-N-MeFOSAA	100 ng/mL
N-Ethyl-d_5-perfluoro-1-octanesulfonamidoacetic acid		d5-N-EtFOSAA	100 ng/mL
2H-Perfluoro-(1,2-$^{13}C_2$)-2-decenoic acid		MFOUEA	100 ng/mL
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid		M3HFPO-DA	100 ng/mL
Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate		M3PFBS	100 ng/mL
Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate		M3PFHxS	100 ng/mL
Sodium perfluoro-1-($^{13}C_8$)octanesulfonate		M8PFOS	100 ng/mL
Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate		M2-6:2FTS	100 ng/mL
Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate		M2-8:2FTS	100 ng/mL
Sodium bis[1H,1H,2H,2H-(1,2-$^{13}C_2$)perfluorodecyl] phosphate		M4-8:2diPAP	100 ng/mL
用 **ISO 21675-LSSA**	ISO 21675:2019 Labelled Stock Solution Additional Analytes		1.2 mL
Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid		MPFHxA	100 ng/mL
Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid		MPFOA	100 ng/mL
Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid		MPFNA	100 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid		MPFDA	100 ng/mL
Perfluoro-n-(1,2-$^{13}C_2$)undecanoic acid		MPFUdA	100 ng/mL
Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate		MPFHxS	100 ng/mL
Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate		MPFOS	100 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

Catalogue Number	Product (methanol solution)		Qty/Conc
用 EPA-533ES	EPA Method 533 Isotope Dilution Standard PDS		1.2 mL
	Perfluoro-n-($^{13}C_4$)butanoic acid	MPFBA	500 ng/mL
	Perfluoro-n-($^{13}C_5$)pentanoic acid	M5PFPeA	500 ng/mL
	Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid	M5PFHxA	500 ng/mL
	Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid	M4PFHpA	500 ng/mL
	Perfluoro-n-($^{13}C_8$)octanoic acid	M8PFOA	500 ng/mL
	Perfluoro-n-($^{13}C_9$)nonanoic acid	M9PFNA	500 ng/mL
	Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid	M6PFDA	500 ng/mL
	Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid	M7PFUdA	500 ng/mL
	Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid	MPFDoA	500 ng/mL
	2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid	M3HFPO-DA	500 ng/mL
	Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate	M3PFBS	500 ng/mL
	Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate	M3PFHxS	500 ng/mL
	Sodium perfluoro-1-($^{13}C_8$)octanesulfonate	M8PFOS	500 ng/mL
	Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate	M2-4:2FTS	2000 ng/mL
	Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate	M2-6:2FTS	2000 ng/mL
	Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate	M2-8:2FTS	2000 ng/mL
用 EPA-533IS	EPA Method 533 Isotope Performance Standard (IS PDS)		1.2 mL
	Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid	M3PFBA	1000 ng/mL
	Perfluoro-n-(1,2-$^{13}C_2$)octanoic acid	M2PFOA	1000 ng/mL
	Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate	MPFOS	3000 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

EPA METHOD 533 SOLUTION/MIXTURES

Catalogue Number	Product (methanol solution)		Qty/Conc
用 EPA-533PAR	EPA Method 533 Native Analyte Primary Dilution Standard (br/linear mix)		1.2 mL
Perfluoro-n-butanoic acid		PFBA	500 ng/mL
Perfluoro-n-pentanoic acid		PFPeA	500 ng/mL
Perfluoro-n-hexanoic acid		PFHxA	500 ng/mL
Perfluoro-n-heptanoic acid		PFHpA	500 ng/mL
Perfluoro-n-octanoic acid		PFOA	500 ng/mL
Perfluoro-n-nonanoic acid		PFNA	500 ng/mL
Perfluoro-n-decanoic acid		PFDA	500 ng/mL
Perfluoro-n-undecanoic acid		PFUdA	500 ng/mL
Perfluoro-n-dodecanoic acid		PFDoA	500 ng/mL
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid		HFPO-DA	500 ng/mL
Perfluoro-4-oxapentanoic acid		PF4OPeA	500 ng/mL
Perfluoro-5-oxahexanoic acid		PF5OHxA	500 ng/mL
Perfluoro-3,6-dioxaheptanoic acid		3,6-OPFHpA	500 ng/mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	500 ng/mL
Sodium perfluoro-1-pentanesulfonate		L-PFPeS	500 ng/mL
Potassium perfluorohexanesulfonate (linear and branched isomers)		br-PFHxSK	500 ng/mL
Sodium perfluoro-1-heptanesulfonate		L-PFHpS	500 ng/mL
Potassium perfluorooctanesulfonate (linear and branched isomers)		br-PFOSK	500 ng/mL
Sodium 1H,1H,2H,2H-perfluorohexanesulfonate		4:2FTS	500 ng/mL
Sodium 1H,1H,2H,2H-perfluorooctanesulfonate		6:2FTS	500 ng/mL
Sodium 1H,1H,2H,2H-perfluorodecanesulfonate		8:2FTS	500 ng/mL
Sodium dodecafluoro-3H-4,8-dioxanonanoate		NaDONA	500 ng/mL
Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate		9Cl-PF3ONS	500 ng/mL
Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate		11Cl-PF3OUdS	500 ng/mL
Potassium perfluoro(2-ethoxyethane)sulfonate		PFEESA	500 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

用 第一種特定化学物質

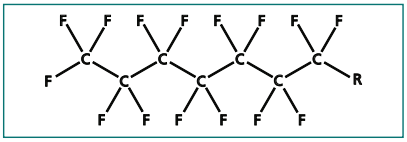
Catalogue Number	Product (methanol solution)		Qty/Conc
用 EPA-533APDS	EPA Method 533 Native Analyte Primary Dilution Standard (br/linear mix)		1.2 mL
Perfluoro-n-butanoic acid		PFBA	500 ng/mL
Perfluoro-n-pentanoic acid		PFPeA	500 ng/mL
Perfluoro-n-hexanoic acid		PFHxA	500 ng/mL
Perfluoro-n-heptanoic acid		PFHpA	500 ng/mL
Perfluorooctanoic acid (linear and branched isomers)		br-PFOA	500 ng/mL
Perfluorononanoic acid (linear and branched isomers)		br-PFNA	500 ng/mL
Perfluoro-n-decanoic acid		PFDA	500 ng/mL
Perfluoro-n-undecanoic acid		PFUdA	500 ng/mL
Perfluoro-n-dodecanoic acid		PFDoA	500 ng/mL
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid		HFPO-DA	500 ng/mL
Perfluoro-4-oxapentanoic acid		PF4OPeA	500 ng/mL
Perfluoro-5-oxahexanoic acid		PF5OHxA	500 ng/mL
Perfluoro-3,6-dioxaheptanoic acid		3,6-OPFHpA	500 ng/mL
Potassium perfluoro-1-butanesulfonate		L-PFBS	500 ng/mL
Sodium perfluoro-1-pentanesulfonate		L-PFPeS	500 ng/mL
Potassium perfluorohexanesulfonate (linear and branched isomers)		br-PFHxSK	500 ng/mL
Sodium perfluoro-1-heptanesulfonate		L-PFHpS	500 ng/mL
Potassium perfluorooctanesulfonate (linear and branched isomers)		br-PFOSK	500 ng/mL
Sodium 1H,1H,2H,2H-perfluorohexanesulfonate		4:2FTS	500 ng/mL
Sodium 1H,1H,2H,2H-perfluorooctanesulfonate		6:2FTS	500 ng/mL
Sodium 1H,1H,2H,2H-perfluorodecanesulfonate		8:2FTS	500 ng/mL
Sodium dodecafluoro-3H-4,8-dioxanonanoate		NaDONA	500 ng/mL
Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate		9Cl-PF3ONS	500 ng/mL
Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate		11Cl-PF3OUdS	500 ng/mL
Potassium perfluoro(2-ethoxyethane)sulfonate		PFEESA	500 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

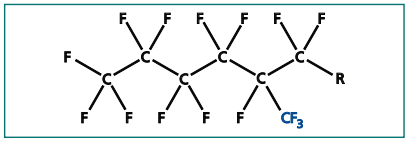
用 第一種特定化学物質

PFOS/PFOA ISOMERS

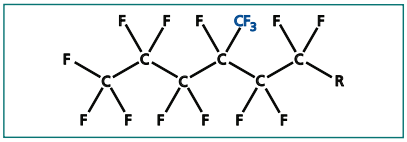
Catalogue Number	Product (methanol solution)	Qty/Anion Conc	
P3MHpS	Sodium Perfluoro-3-methylheptanesulfonate	200 µL	1.00 µg/mL
	Perfluoro-3-methylheptanoic acid		1.90 µg/mL
P4MHpS	Sodium Perfluoro-4-methylheptanesulfonate	200 µL	1.00 µg/mL
	Perfluoro-4-methylheptanoic acid		2.20 µg/mL
P5MHpS	Sodium Perfluoro-5-methylheptanesulfonate	200 µL	1.00 µg/mL
	Perfluoro-5-methylheptanoic acid		1.96 µg/mL
P6MHpS	Sodium Perfluoro-6-methylheptanesulfonate	200 µL	1.00 µg/mL
	Perfluoro-6-methylheptanoic acid		3.10 µg/mL
P55DMHxS	Sodium Perfluoro-5,5-dimethylhexanesulfonate	200 µL	1.00 µg/mL
	Perfluoro-5,5-dimethylhexanoic acid		1.95 µg/mL
P45DMHxS	Sodium Perfluoro-4,5-dimethylhexanesulfonate	200 µL	1.00 µg/mL
	Perfluoro-4,5-dimethylhexanoic acid		1.22 µg/mL
	Sodium Perfluoro-3,5-dimethylhexanesulfonate		0.50 µg/mL
	Perfluoro-3,5-dimethylhexanoic acid		0.60 µg/mL



Linear



Perfluoro-3-methyl-



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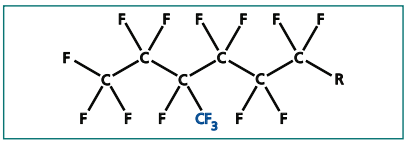
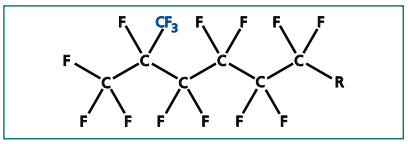
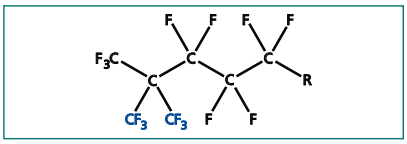


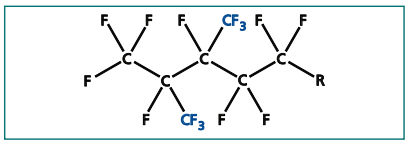
Perfluoro-5-methyl-



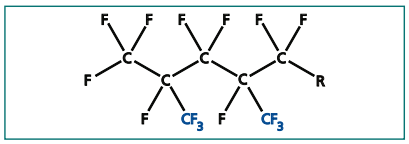
Perfluoro-6-methyl-



Perfluoro-5,5-dimethyl-



Perfluoro-4,5-dimethyl-



Perfluoro-3,5-dimethyl-

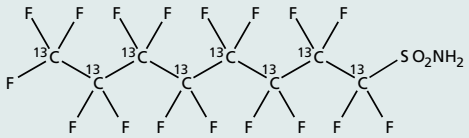
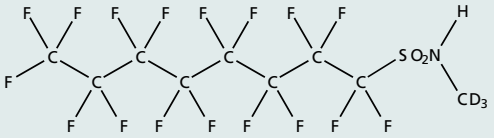
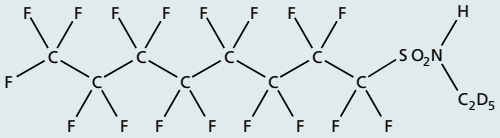
NOTE: R = CO_2^- and $CF_2SO_3^-$

NATIVE PERFLUOROALKANESULFONAMIDES (FASA)

Catalogue Number	Product (isopropanol solution)	Qty/Conc	
FBSA-I	Perfluoro-1-butanesulfonamide	1.2 mL	50.0 µg/mL
FPeSA-I	Perfluoro-1-pentanesulfonamide	1.2 mL	50.0 µg/mL
FHxSA-I	Perfluoro-1-hexanesulfonamide	1.2 mL	50.0 µg/mL
FHpSA-I	Perfluoro-1-heptanesulfonamide	1.2 mL	50.0 µg/mL
FOSA-I	Perfluoro-1-octanesulfonamide	1.2 mL	50.0 µg/mL
br-FOSA	Perfluorooctanesulfonamide (linear and branched isomers)	1.2 mL	50.0 µg/mL
NEW FNSA-I	Perfluoro-1-nonanesulfonamide	1.2 mL	50.0 µg/mL
FDSA-I	Perfluoro-1-decanesulfonamide	1.2 mL	50.0 µg/mL

Catalogue Number	Product (methanol solution)	Qty/Conc	
N-MeFBSA-M	N-Methylperfluoro-1-butanesulfonamide	1.2 mL	50.0 µg/mL
N-EtFBSA-M	N-Ethylperfluoro-1-butanesulfonamide	1.2 mL	50.0 µg/mL
N-MeFOSA-M	N-Methylperfluoro-1-octanesulfonamide	1.2 mL	50.0 µg/mL
br-NMeFOSA	N-Methylperfluoro-1-octanesulfonamide isomeric mixture	1.2 mL	50.0 µg/mL
br-NEtFOSA	N-Ethylperfluorooctanesulfonamide Isomeric mixture	1.2 mL	50.0 µg/mL
N,N-Me2FOSA-M	N,N-Dimethylperfluoro-1-octanesulfonamide	1.2 mL	50.0 µg/mL
N-EtFOSA-M	N-Ethylperfluoro-1-octanesulfonamide	1.2 mL	50.0 µg/mL

MASS-LABELLED PERFLUOROALKANESULFONAMIDES

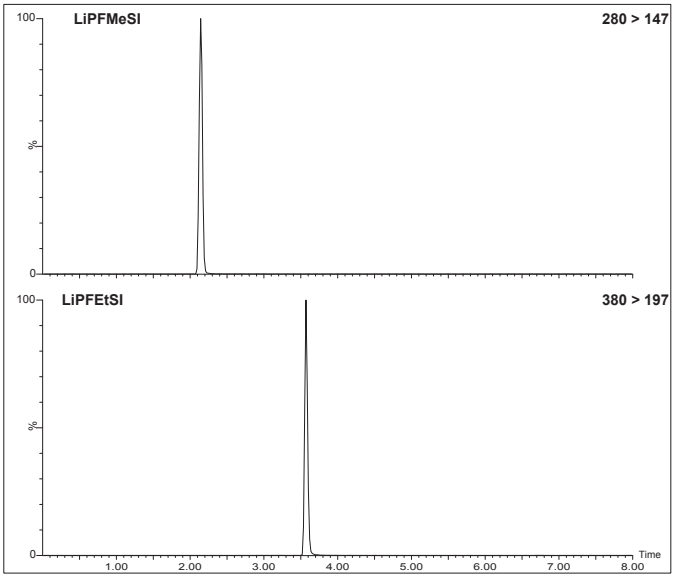
Catalogue Number		Product
M8FOSA-I		Perfluoro-1-($^{13}C_8$)octanesulfonamide 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in isopropanol; >99% linear; >99% $^{13}C_8$
d-N-MeFOSA-M		N-Methyl-d_3-perfluoro-1-octanesulfonamide 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; 98% $^2H_3$
d-N-EtFOSA-M		N-Ethyl-d_5-perfluoro-1-octanesulfonamide 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; 98% $^2H_5$

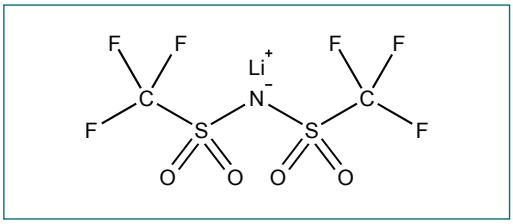
NATIVE PERFLUOROALKANESULFONAMIDOETHANOLS (N-MeFASE and N-EtFASE)

Catalogue Number	Product (methanol solution)	Qty/Conc	
N-MeFBSE-M	2-(N-Methylperfluoro-1-butanesulfonamido)ethanol	1.2 mL	50.0 µg/mL
N-EtFBSE-M	2-(N-Ethylperfluoro-1-butanesulfonamido)ethanol	1.2 mL	50.0 µg/mL
N-MeFOSE-M	2-(N-Methylperfluoro-1-octanesulfonamido)ethanol	1.2 mL	50.0 µg/mL
br-NMeFOSE	2-(N-Methylperfluoro-1-octanesulfonamido)ethanol isomeric mixture	1.2 mL	50.0 µg/mL
N-EtFOSE-M	2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol	1.2 mL	50.0 µg/mL
br-NEtFOSE	2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol isomeric mixture	1.2 mL	50.0 µg/mL

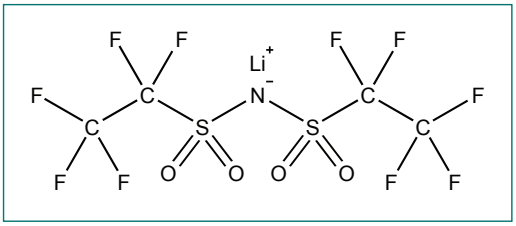
NATIVE LITHIUM BIS(PERFLUOROALKANESULFONYL)IMIDES

Catalogue Number	Product (methanol solution)	Qty/Conc	
LiPFMeSI	Lithium bis(trifluoromethanesulfonyl)imide	1.2 mL	50.0 µg/mL
LiPFEtSI	Lithium bis(pentafluoroethanesulfonyl)imide	1.2 mL	50.0 µg/mL





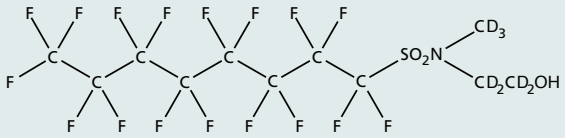
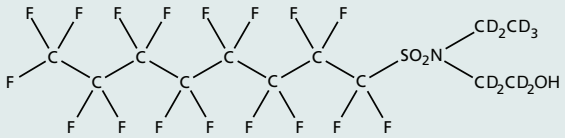
LiPFMeSI



LiPFEtSI

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

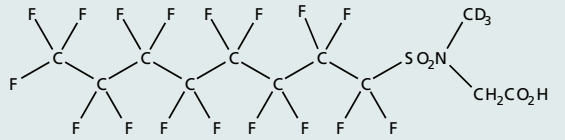
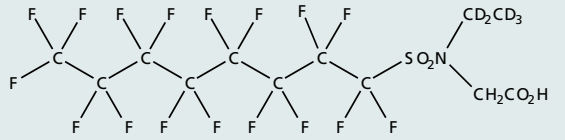
MASS-LABELLED PERFLUOROALKANESULFONAMIDOETHANOLS

Catalogue Number		Product
d7-N-MeFOSE-M		2-(N-Methyl-d_3-perfluoro-1-octane-sulfonamido)ethan-d_4-ol 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; 98% $^2H_7$
d9-N-EtFOSE-M		2-(N-Ethyl-d_5-perfluoro-1-octane-sulfonamido)ethan-d_4-ol 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; 98% $^2H_9$

NATIVE PERFLUOROOCTANESULFONAMIDOACETIC ACIDS (FOSAA)

Catalogue Number	Product (methanol solution)	Qty/Conc	
FOSAA	Perfluoro-1-octanesulfonamidoacetic acid	1.2 mL	50.0 µg/mL
N-MeFOSAA	N-Methylperfluoro-1-octanesulfonamidoacetic acid	1.2 mL	50.0 µg/mL
N-EtFOSAA	N-Ethylperfluoro-1-octanesulfonamidoacetic acid	1.2 mL	50.0 µg/mL
br-NMeFOSAA	N-Methylperfluorooctanesulfonamidoacetic acid isomeric mix	1.2 mL	50.0 µg/mL
br-NEtFOSAA	N-Ethylperfluorooctanesulfonamidoacetic acid isomeric mix	1.2 mL	50.0 µg/mL

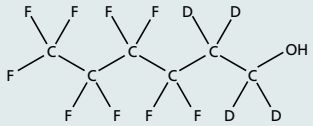
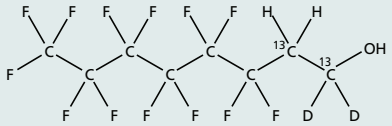
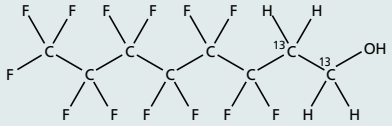
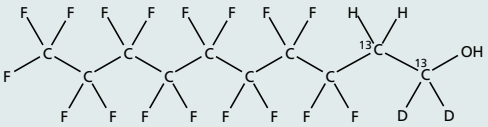
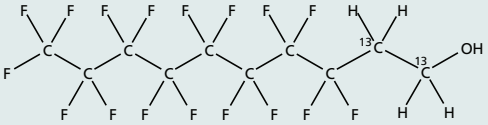
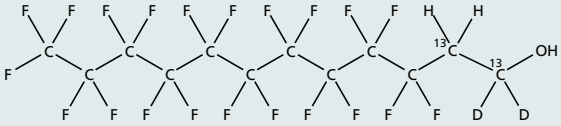
MASS-LABELLED PERFLUOROOCTANESULFONAMIDOACETIC ACIDS

Catalogue Number		Product
d3-N-MeFOSAA		N-Methyl-d_3-perfluoro-1-octane-sulfonamidoacetic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; 98% $^2H_3$
d5-N-EtFOSAA		N-Ethyl-d_5-perfluoro-1-octane-sulfonamidoacetic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% linear; 98% $^2H_5$

NATIVE FLUOROTELOMER ALCOHOLS (X:2FTOH)

Catalogue Number	Product (methanol solution)	Qty/Conc	
FBET	2-Perfluorobutyl ethanol ***(4:2)***	1.2 mL	50.0 µg/mL
5:2sFTOH	1-Perfluoropentyl ethanol ***(5:2 secondary)***	1.2 mL	50.0 µg/mL
FHET	2-Perfluorohexyl ethanol ***(6:2)***	1.2 mL	50.0 µg/mL
7:2sFTOH	1-Perfluoroheptyl ethanol ***(7:2 secondary)***	1.2 mL	50.0 µg/mL
用 FOET	2-Perfluorooctyl ethanol ***(8:2)***	1.2 mL	50.0 µg/mL
FDET	2-Perfluorodecyl ethanol ***(10:2)***	1.2 mL	50.0 µg/mL

MASS-LABELLED FLUOROTELOMER ALCOHOLS

Catalogue Number		Product
MFBET		2-Perfluorobutyl (1,1,2,2-$^{2}H_{4}$)ethanol 1.2 mL; 48.5 µg/mL (±2.4 µg/mL); in methanol; ≥98% 1,1,2,2-$^{2}H_{4}$
MFHET		2-Perfluorohexyl (1,1-$^{2}H_{2}$,1,2-$^{13}C_{2}$)ethanol 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >98% 1,1-$^{2}H_{2}$, >99% 1,2-$^{13}C_{2}$
M2FHET		2-Perfluorohexyl (1,2-$^{13}C_{2}$)ethanol 1.2 mL; 48.0 µg/mL (±2.4 µg/mL); in methanol; ≥99% 1,2-$^{13}C_{2}$
用 MFOET		2-Perfluorooctyl (1,1-$^{2}H_{2}$,1,2-$^{13}C_{2}$)ethanol 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >98% 1,1-$^{2}H_{2}$, >99% 1,2-$^{13}C_{2}$
用 M2FOET		2-Perfluorooctyl (1,2-$^{13}C_{2}$)ethanol 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >98% 1,2-$^{13}C_{2}$
MFDET		2-Perfluorodecyl (1,1-$^{2}H_{2}$,1,2-$^{13}C_{2}$)ethanol 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >98% 1,1-$^{2}H_{2}$, >99% 1,2-$^{13}C_{2}$

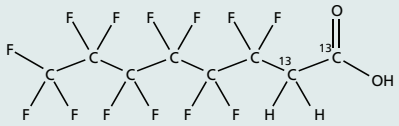
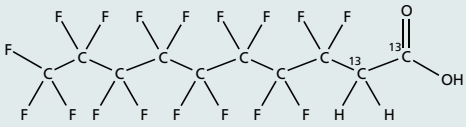
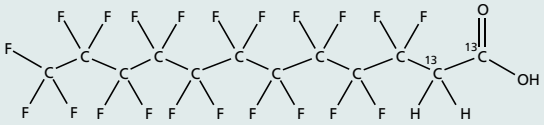
NATIVE FLUOROTELOMER CARBOXYLIC ACIDS (FTCA)

Catalogue Number	Product (isopropanol solution)	Qty/Conc
FHEA	2-Perfluorohexyl ethanoic acid ***(6:2)***	1.2 mL 50.0 µg/mL
用 FOEA	2-Perfluorooctyl ethanoic acid ***(8:2)***	1.2 mL 50.0 µg/mL
FDEA	2-Perfluorodecyl ethanoic acid ***(10:2)***	1.2 mL 50.0 µg/mL
Catalogue Number	**Product (methanol solution)**	**Qty/Conc**
FPrPA	3-Perfluoropropyl propanoic acid ***(3:3)***	1.2 mL 50.0 µg/mL
FPePA	3-Perfluoropentyl propanoic acid ***(5:3)***	1.2 mL 50.0 µg/mL
FHxPA	3-Perfluorohexyl propanoic acid ***(6:3)***	1.2 mL 50.0 µg/mL
FHpPA	3-Perfluoroheptyl propanoic acid ***(7:3)***	1.2 mL 50.0 µg/mL
FOPA	3-Perfluorooctyl propanoic acid ***(8:3)***	1.2 mL 50.0 µg/mL

NATIVE FLUOROTELOMER CARBOXYLIC ACIDS: SOLUTION/MIXTURE

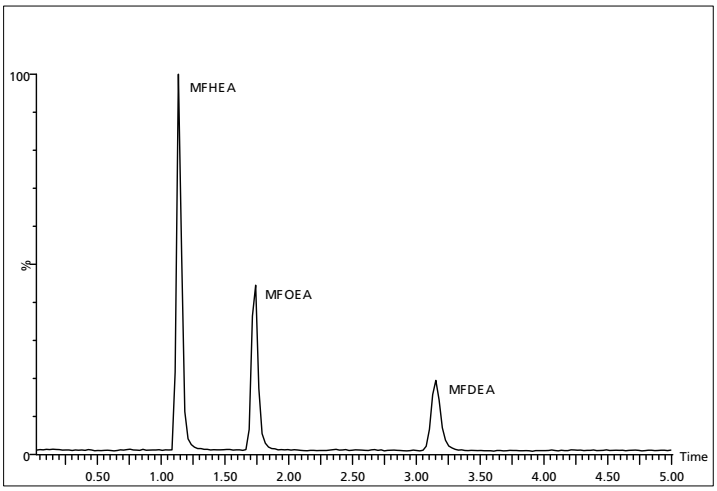
Catalogue Number	Product (isopropanol solution)		Qty/Conc
用 FTA-MXA	Native FTA Solution/Mixture		1.2 mL
2-Perfluorohexyl ethanoic acid ***(6:2)***		FHEA	2.00 µg/mL
2-Perfluorooctyl ethanoic acid ***(8:2)***		FOEA	2.00 µg/mL
2-Perfluorodecyl ethanoic acid ***(10:2)***		FDEA	2.00 µg/mL

MASS-LABELLED FLUOROTELOMER CARBOXYLIC ACIDS

Catalogue Number		Product
MFHEA		2-Perfluorohexyl (1,2-$^{13}C_2$)ethanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in isopropanol; >99% $^{13}C_2$
用 MFOEA		2-Perfluorooctyl (1,2-$^{13}C_2$)ethanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in isopropanol; >99% $^{13}C_2$
MFDEA		2-Perfluorodecyl (1,2-$^{13}C_2$)ethanoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in isopropanol; >99% $^{13}C_2$

MASS-LABELLED FLUOROTELOMER CARBOXYLIC ACIDS: SOLUTION/MIXTURE

Catalogue Number	Product (isopropanol solution)		Qty/Conc
用 MFTA-MXA	Mass-Labelled FTA Solution/Mixture		1.2 mL
2-Perfluorohexyl (1,2-$^{13}C_2$)ethanoic acid ***(6:2)***		MFHEA	2.00 µg/mL
2-Perfluorooctyl (1,2-$^{13}C_2$)ethanoic acid ***(8:2)***		MFOEA	2.00 µg/mL
2-Perfluorodecyl (1,2-$^{13}C_2$)ethanoic acid ***(10:2)***		MFDEA	2.00 µg/mL

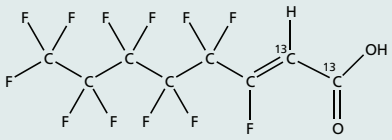
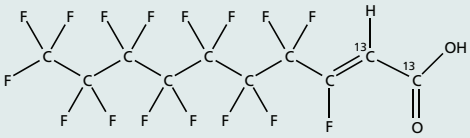
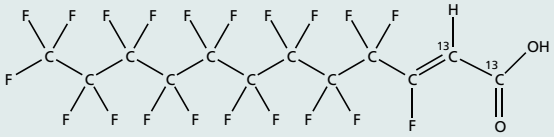


LC/MS Data for MFTA-MXA on an Acquity UPLC BEH Shield RP_{18} column.

NATIVE FLUOROTELOMER UNSATURATED CARBOXYLIC ACIDS (FTUCA)

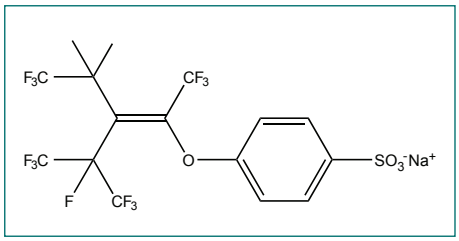
Catalogue Number	Product (isopropanol solution)	Qty/Conc
FHUEA	2H-Perfluoro-2-octenoic acid ***(6:2)***	1.2 mL 50.0 µg/mL
FOUEA	2H-Perfluoro-2-decenoic acid ***(8:2)***	1.2 mL 50.0 µg/mL
FDUEA	2H-Perfluoro-2-dodecenoic acid ***(10:2)***	1.2 mL 50.0 µg/mL

MASS-LABELLED FLUOROTELOMER UNSATURATED CARBOXYLIC ACIDS

Catalogue Number		Product
MFHUEA		2H-Perfluoro-(1,2-$^{13}C_2$)-2-octenoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in isopropanol; >99% $^{13}C_2$
MFOUEA		2H-Perfluoro-(1,2-$^{13}C_2$)-2-decenoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in isopropanol; >99% $^{13}C_2$
MFDUEA		2H-Perfluoro-(1,2-$^{13}C_2$)-2-dodecenoic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in isopropanol; >99% $^{13}C_2$

NATIVE PER- AND POLYFLUOROALKYL ETHER SULFONATES (PFESA)

Catalogue Number	Product (methanol solution)	Qty/Conc
9Cl-PF3ONS	Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate	1.2 mL 50.0 µg/mL
11Cl-PF3OUdS	Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate	1.2 mL 50.0 µg/mL
PFEESA	Potassium perfluoro(2-ethoxyethane)sulfonate	1.2 mL 50.0 µg/mL
aPFNOBS	Sodium *p*-perfluorous nonenoxybenzenesulfonate	1.2 mL 50.0 µg/mL



aPFNOBS

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

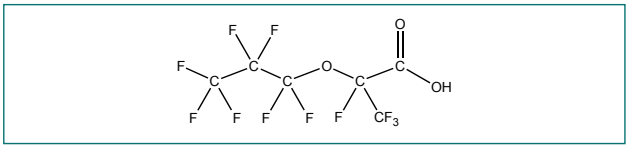
NATIVE PER- AND POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS (PFECA)

Catalogue Number	Product (methanol solution)	Qty/Conc
NaDONA	Sodium dodecafluoro-3H-4,8-dioxanonanoate	1.2 mL 50.0 µg/mL
PF4OPeA	Perfluoro-4-oxapentanoic acid (PFMPA)	1.2 mL 50.0 µg/mL
PF5OHxA	Perfluoro-5-oxahexanoic acid (PFMBA)	1.2 mL 50.0 µg/mL
3,6-OPFHpA	Perfluoro-3,6-dioxaheptanoic acid (NFDHA)	1.2 mL 50.0 µg/mL

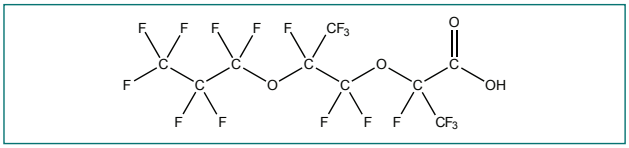
NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

HEXAFLUOROPROPYLENE OXIDE OLIGOMER ACIDS

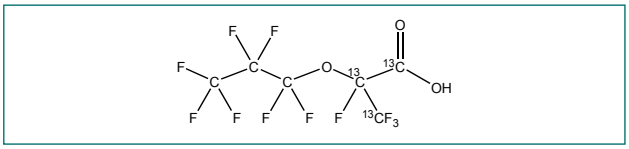
Catalogue Number	Product (methanol solution)	Qty/Conc
HFPO-DA	2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid	1.2 mL 50.0 µg/mL
HFPO-TrA	2,3,3,3-Tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propoxy]propanoic acid	1.2 mL 50.0 µg/mL
HFPO-TeA	2,3,3,3-Tetrafluoro-2-{1,1,2,3,3,3-hexafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propoxy]propoxy}-propanoic acid	1.2 mL 50.0 µg/mL
M3HFPO-DA	2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)-propanoic acid	1.2 mL 50.0 µg/mL



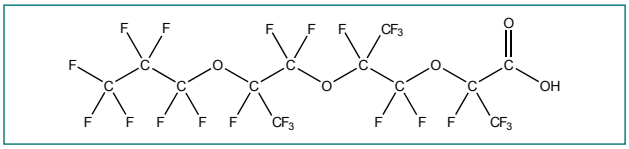
HFPO-DA (Dimer Acid, CAS: 13252-13-6)



HFPO-TrA (Trimer Acid, CAS: 13252-14-7)



M3HFPO-DA ($^{13}C_3$-Dimer Acid, CAS: 3030247-97-0)



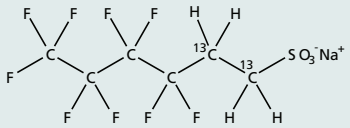
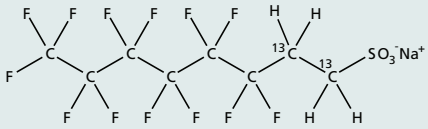
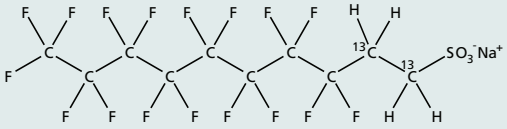
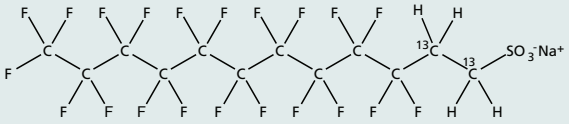
HFPO-TeA (Tetramer Acid, CAS: 65294-16-8)

NATIVE FLUOROTELOMER SULFONATES (X:2FTS)

Catalogue Number	Product (methanol solution)	
4:2FTS	Sodium 1H,1H,2H,2H-perfluorohexanesulfonate ***(4:2)***	1.2 mL 50.0 µg/mL
6:2FTS	Sodium 1H,1H,2H,2H-perfluorooctanesulfonate ***(6:2)***	1.2 mL 50.0 µg/mL
用 8:2FTS	Sodium 1H,1H,2H,2H-perfluorodecanesulfonate ***(8:2)***	1.2 mL 50.0 µg/mL
10:2FTS	Sodium 1H,1H,2H,2H-perfluorododecanesulfonate ***(10:2)***	1.2 mL 50.0 µg/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

MASS-LABELLED FLUOROTELOMER SULFONATES

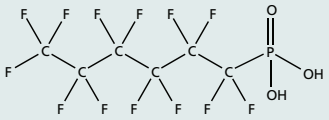
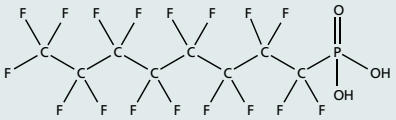
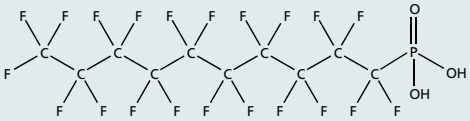
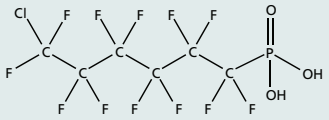
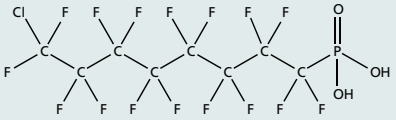
Catalogue Number		Product
M2-4:2FTS		Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate ***(4:2)*** 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% $^{13}C_2$
M2-6:2FTS		Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate ***(6:2)*** 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% $^{13}C_2$
用 M2-8:2FTS		Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate ***(8:2)*** 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% $^{13}C_2$
M2-10:2FTS		Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)dodecane sulfonate ***(10:2)*** 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% $^{13}C_2$

MASS-LABELLED FLUOROTELOMER SULFONATES: SOLUTION/MIXTURE

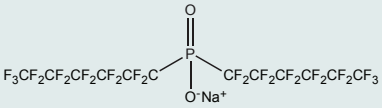
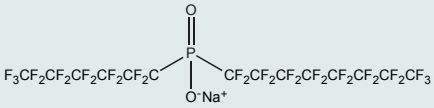
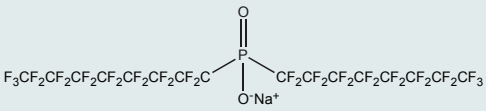
Catalogue Number	Product (methanol solution)		Qty/Conc
用 M2FTS-MXA	Mass-Labelled ($^{13}C_2$) X:2FTS Solution/Mixture		1.2 mL
	Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate	M2-4:2FTS	1000 ng/mL
	Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)octanesulfonate	M2-6:2FTS	1000 ng/mL
	Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)decanesulfonate	M2-8:2FTS	1000 ng/mL
	Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)dodecanesulfonate	M2-10:2FTS	1000 ng/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

NATIVE PER- AND POLYFLUOROALKYLPHOSPHONIC ACIDS (PFAPA)

Catalogue Number		Product
PFHxPA		Perfluorohexylphosphonic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol
PFOPA		Perfluorooctylphosphonic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol
PFDPA		Perfluorodecylphosphonic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol
Cl-PFHxPA		6-Chloroperfluorohexylphosphonic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol
Cl-PFOPA		8-Chloroperfluorooctylphosphonic acid 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol

NATIVE SODIUM PERFLUOROALKYL PHOSPHINATES (X:XPFPi)

Catalogue Number		Product
6:6PFPi		Sodium bis(perfluorohexyl)phosphinate 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol
6:8PFPi		Sodium perfluorohexyl(perfluorooctyl)phosphinate 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol
8:8PFPi		Sodium bis(perfluorooctyl)phosphinate 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol

NATIVE POLYFLUOROALKYL PHOSPHATE MONO-ESTERS (PAP)

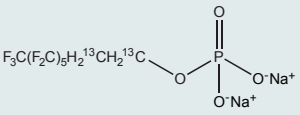
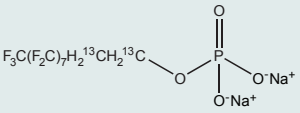
Catalogue Number	Product (methanol solution)	Qty/Conc	
6:2PAP	Sodium 1H,1H,2H,2H-perfluorooctyl phosphate	1.2 mL	50.0 µg/mL
8:2PAP	Sodium 1H,1H,2H,2H-perfluorodecyl phosphate	1.2 mL	50.0 µg/mL

NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

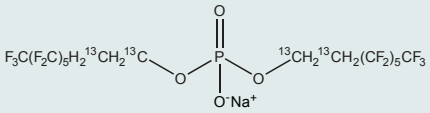
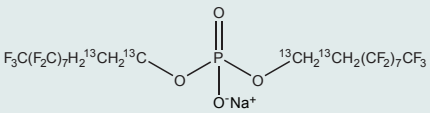
NATIVE POLYFLUOROALKYL PHOSPHATE DI-ESTERS (diPAP)

Catalogue Number	Product (methanol solution)	Qty/Conc	
6:2diPAP	Sodium bis(1H,1H,2H,2H-perfluorooctyl) phosphate	1.2 mL	50.0 µg/mL
6:2/8:2diPAP	Sodium (1H,1H,2H,2H-perfluorooctyl-1H,1H,2H,2H-perfluorodecyl) phosphate	1.2 mL	50.0 µg/mL
8:2diPAP	Sodium bis(1H,1H,2H,2H-perfluorodecyl) phosphate	1.2 mL	50.0 µg/mL

MASS-LABELLED POLYFLUOROALKYL PHOSPHATE MONO-ESTERS

Catalogue Number		Product
M2-6:2PAP		Sodium 1H,1H,2H,2H-(1,2-$^{13}C_2$)perfluorooctyl phosphate 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% $^{13}C_2$
M2-8:2PAP		Sodium 1H,1H,2H,2H-(1,2-$^{13}C_2$)perfluorodecyl phosphate 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% $^{13}C_2$

MASS-LABELLED POLYFLUOROALKYL PHOSPHATE DI-ESTERS

Catalogue Number		Product
M4-6:2diPAP		Sodium bis[1H,1H,2H,2H-(1,2-$^{13}C_2$)perfluorooctyl] phosphate 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% $^{13}C_4$
M4-8:2diPAP		Sodium bis[1H,1H,2H,2H-(1,2-$^{13}C_2$)perfluorodecyl] phosphate 1.2 mL; 50.0 µg/mL (±2.5 µg/mL); in methanol; >99% $^{13}C_4$

NATIVE POLYFLUOROALKYL PHOSPHATE ESTERS (SAmPAP)

Catalogue Number	Product (methanol solution)	Qty/Conc	
SAmPAP	Sodium 2-(N-ethylperfluorooctane-1-sulfonamido)ethyl phosphate	1.2 mL	50.0 µg/mL
diSAmPAP	Sodium bis[2-(N-ethylperfluorooctane-1-sulfonamido)ethyl] phosphate	1.2 mL	50.0 µg/mL

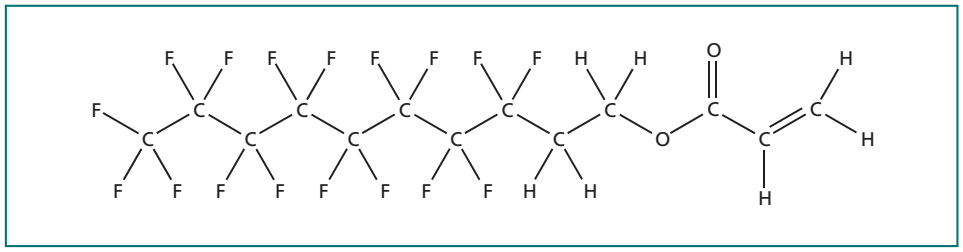
NOTE: Concentrations are listed for the specified salt when a counterion is indicated.

NATIVE FLUOROTELOMER ACRYLATES (X:2FTAcr)

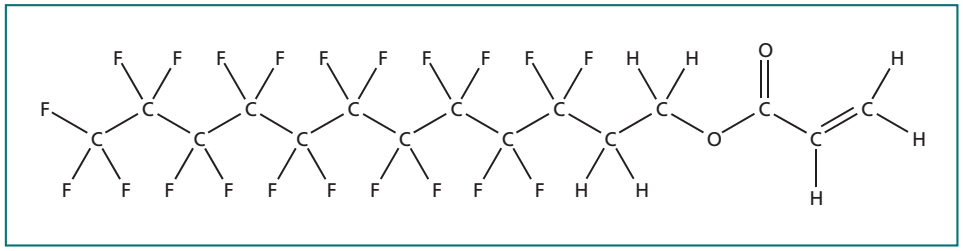
Catalogue Number	Product (isooctane solution)	Qty/Conc
用 8:2FTAcr	1H,1H,2H,2H-Perfluorodecyl acrylate	1.2 mL 50.0 µg/mL
10:2FTAcr	1H,1H,2H,2H-Perfluorododecyl acrylate (≥95%)	1.2 mL 47.5 µg/mL

NATIVE FLUOROTELOMER ACETATES (X:2FTOAc)

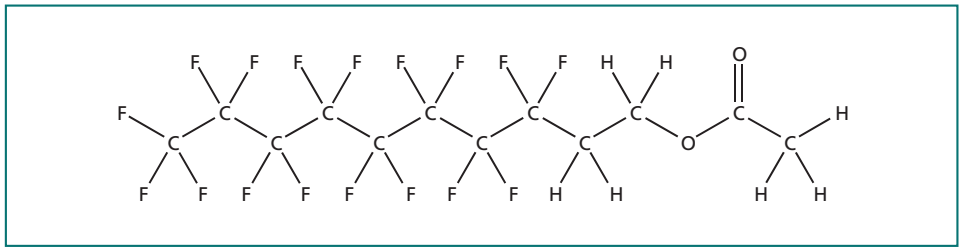
Catalogue Number	Product (isooctane solution)	Qty/Conc
8:2FTOAc	1H,1H,2H,2H-Perfluorodecyl acetate	1.2 mL 50.0 µg/mL
10:2FTOAc	1H,1H,2H,2H-Perfluorododecyl acetate	1.2 mL 50.0 µg/mL



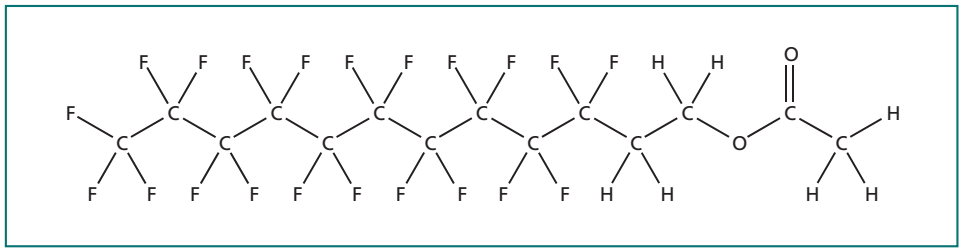
8:2FTAcr



10:2FTAcr



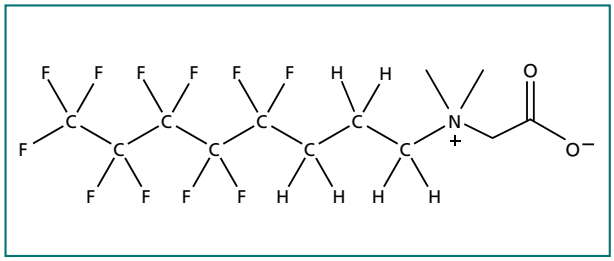
8:2FTOAc



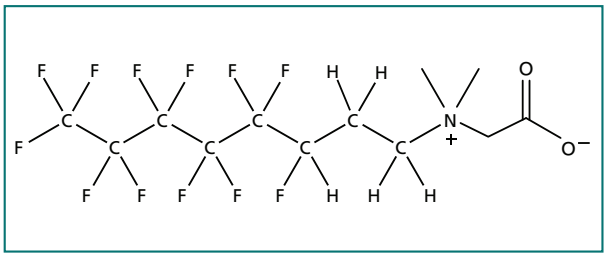
10:2FTOAc

CATIONIC/ZWITTERIONIC PFAS

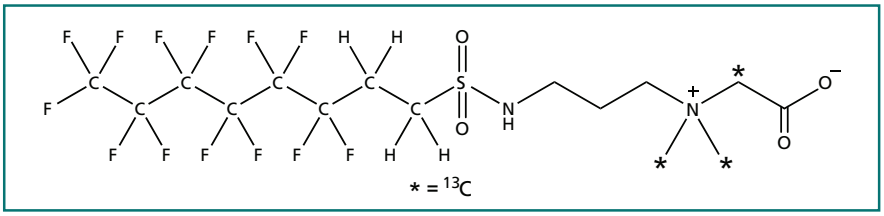
Catalogue Number	Product (methanol solution)	Qty/Conc	
N-AP-FBSA	N-[3-(Dimethylamino)propan-1-yl]perfluoro-1-butanesulfonamide	1.2 mL	50.0 µg/mL
N-AP-FPeSA	N-[3-(Dimethylamino)propan-1-yl]perfluoro-1-pentanesulfonamide	1.2 mL	50.0 µg/mL
N-AP-FHxSA	N-[3-(Dimethylamino)propan-1-yl]perfluoro-1-hexanesulfonamide	1.2 mL	50.0 µg/mL
N-AP-FOSA	N-[3-(Dimethylamino)propan-1-yl]perfluoro-1-octanesulfonamide	1.2 mL	50.0 µg/mL
N-TAmP-FHxSA	N-[3-(Trimethylammonio)propan-1-yl]perfluoro-1-hexanesulfonazanide	1.2 mL	50.0 µg/mL
N-AP-6:2FOSA	6:2 Fluorotelomer sulfonamide alkylamine (6:2 FTAA)	1.2 mL	50.0 µg/mL
N-OxAmP-6:2FOSA	6:2 Fluorotelomer sulfonamide amine oxide (6:2 FTNO)	1.2 mL	50.0 µg/mL
N-CMAmP-6:2FOSA	6:2 Fluorotelomer sulfonamide alkylbetaine (6:2 FTAB)	1.2 mL	50.0 µg/mL
M3N-CMAmP-6:2FOSA	$^{13}C_3$-6:2 Fluorotelomer sulfonamide alkylbetaine ($^{13}C_3$-6:2 FTAB)	1.2 mL	50.0 µg/mL
5:3FTB	5:3 Fluorotelomer betaine	1.2 mL	50.0 µg/mL
5:1:2FTB	5:1:2 Fluorotelomer betaine	1.2 mL	50.0 µg/mL



5:3FTB



5:1:2FTB



M3N-CMAmP-6:2FOSA

NOTE: The charge of these compounds will depend on pH.

付録
クイックリファレンスガイド

PFAS製品の取扱いガイドライン

警告

弊社のPFAS溶液はメタノール･イソプロパノール溶液として提供されています。
最大濃度は50ug/ml、0.005%となっておりますが、これら化合物は有毒であり、以下の注意事項を厳守し、取り扱う必要があります。人体に触れたり、飲み込んだりすることがないよう扱ってください。毒性の警告表示がなかったとしても、健康被害が発生しない製品として認識することがないようにしてください。

注意
これらの素材は危険物取り扱いについて訓練を受けた方のみが使用してください。
取り扱う際は常にドラフトや手袋、目の保護器具、防護服を使用する必要があります。

受け取り･取り扱い･保管について

結晶性物質がある場合を除き、弊社の標準評価溶液は滅菌密閉かつ評価済みのガラス製アンプルで輸送されています。受け取り後は、アンプルの破損･漏れに注意し冷蔵庫に直立状態で保管してください。
開封前には、溶液をアンプルに沈ませてください。必要であれば軽くアンプルを指で弾きます。添えられたリングでアンプル直立に保ち、上部を取り外します。ガラスコンテナに製品を移し、蓋をして保管してください。

追加の取り扱いにおける推奨事項がある場合は、証明書に記載しています。

このガイドに記載されたSRM推移はあくまで開始点のみです。

廃棄について

本製品を使用するにあたり発生した廃棄物は有害であり、国や地域の規定に法って処理する必要があります。承認を受けた廃棄業者に委託してください。

正確性について

溶液は、純度の高い結晶性物質で作られています。結晶性物質は、外部で点検を受けた、ISO/IEC17025　準規の研究所にある微量天秤で計測されています。溶液は、精製された溶媒で溶解されて作られています。計測用フラスコや、それに続く希釈に使用するピペットはクラスAの誤差基準で、ISO/IEC　17025準規研究所と同一基準のものです。溶液の製造に関わる最大誤差は+-5%です。

研究室間認定について

WELLINGTON LABORATORIESは様々な研究室間の研究に製品を提供してきました。
2005年以降、様々なラウンドロビン分析で試験を受けました。
これらの研究の資料が必要な場合はご連絡ください。

WELLINGTON　LABORATORIESは、弊社製品の正確性を確認するために研究室間の研究に参加していくことを今後も計画しております。

使用期限・保存可能期間について

製品の使用期限や保存可能期間を見極めるため、特定の検体の変質や品質低下を測定してください。フッ素化化合物は、現在の化学研究文献において安定しているとされていますが、化合物は溶液として提供されたことはないため、観測されたことのない分解経路が発生することがあります。

よって、引き続き化合物の安定性を以下の方法で継続的に測定します：

1）新たに作られた溶液と古い溶液をLC/MS GC/MSで
2）保管中の溶液をLC/MS GCMSで

従って、安定性についての研究は進行中のものです。
実際の「使用期限」はありませんが、溶液が正確であるのは、未開封のアンプルの場合、輸送後2年程度と判断しています。

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塩形態におけるPFAS分析物の調整の報告

塩は、以下に引用されている方程式と方法に従って、測定された質量が塩含有量に対して補正されている場合、標準試料の原液として許容されます。

$$mass(acid\ form) = mass(salt)\ x\ \frac{MWacid}{MWsalt}$$

EPA試験法　537.1

固相抽出と高速液体クロマトグラフィー/タンデム質量分析法を用いた飲料水内の全フッ素化およびポリフッ素化アルキル物質の測定
ー2018年11月

EPA試験法 533

同位体希釈分析陰イオン交換クロマトグラフィーと高速液体クロマトグラフィー/タンデム質量分析法を用いた飲料水内の全フッ素化およびポリフッ素化アルキル物質の測定
ー2019年11月

Commonly Used Units of Measure

wt/wt basis				wt/vol basis			
ppm	mg/kg	µg/g	ng/mg	**ppm**	mg/L	µg/mL	ng/µL
ppb	µg/kg	ng/g	pg/mg	**ppb**	µg/L	ng/mL	pg/µL
ppt	ng/kg	pg/g	fg/mg	**ppt**	ng/L	pg/mL	fg/µL
ppq	pg/kg	fg/g	ag/mg	**ppq**	pg/L	fg/mL	ag/µL

Conversion Factors

Prefix	Symbol	Factor	Fraction	
centi	c	10^{-2}	= 1/100	part per hundred
milli	m	10^{-3}	= 1/1,000	part per thousand
micro	µ	10^{-6}	= 1/1,000,000	part per million (ppm)
nano	n	10^{-9}	= 1/1,000,000,000	part per billion (ppb)
pico	p	10^{-12}	= 1/1,000,000,000,000	part per trillion (ppt)
femto	f	10^{-15}	= 1/1,000,000,000,000,000	part per quadrillion (ppq)
atto	a	10^{-18}	= 1/1,000,000,000,000,000,000	part per quintillion
zepto	z	10^{-21}	= 1/1,000,000,000,000,000,000,000	part per sextillion
yocto	y	10^{-24}	= 1/1,000,000,000,000,000,000,000,000	part per septillion

The masses utilized to calculate the molecular weights stated in this reference guide are as follows:

^{12}C or C = 12.0107 (representing the average atomic mass of carbon)

^{13}C = 13.003355	O = 15.9994	N = 14.0067	Na = 22.9898
^{18}O = 17.9992	H = 1.00794	F = 18.9984	K = 39.0983
^{2}H = 2.0141	S = 32.065	P = 30.97376	Cl = 35.453

Summary of PFAS Analyte Information

Perfluoroalkanesulfonates (PFSAs)

Compound	Molecular Formula	Molecular Weight Salt	Molecular Weight Acid	ESI- SRM Transition 1	ESI- SRM Transition 2
NaPFPrS	$C_3F_7SO_3Na$	272.0739	250.0920	249 > 80	249 > 99
KPFBS	$C_4F_9SO_3K$	338.1899	300.0995	299 > 80	299 > 99
NaPFBS [M+3]	$^{13}C_3{}^{12}CF_9SO_3Na$	325.0594	303.0775	302 > 80	302 > 99
NaPFPeS	$C_5F_{11}SO_3Na$	372.0889	350.1070	349 > 80	349 > 99
KPFHxS	$C_6F_{13}SO_3K$	438.2049	400.1145	399 > 80	399 > 99
NaPFHxS	$C_6F_{13}SO_3Na$	422.0964	400.1145	399 > 80	399 > 99
NaPFHxS [M+3]	$^{13}C_3{}^{12}C_3F_{13}SO_3Na$	425.0744	403.0925	402 > 80	402 > 99
NaPFHxS [M+4]	$C_6F_{13}S^{18}O_2ONa$	426.0960	404.1141	403 > 84	403 > 103
NaPFHpS	$C_7F_{15}SO_3Na$	472.1039	450.1220	449 > 80	449 > 99
KPFECHS	$C_8F_{15}SO_3K$	500.2231	462.1327	461 > 381	461 > 99
NaCl-PFOS	$C_8ClF_{16}SO_3Na$	538.5660	516.5841	515 > 80	515 > 99
KPFOS	$C_8F_{17}SO_3K$	538.2199	500.1295	499 > 80	499 > 99
NaPFOS	$C_8F_{17}SO_3Na$	522.1114	500.1295	499 > 80	499 > 99
NaPFOS [M+4]	$^{13}C_4{}^{12}C_4F_{17}SO_3Na$	526.0820	504.1002	503 > 80	503 > 99
NaPFOS [M+8]	$^{13}C_8F_{17}SO_3Na$	530.0526	508.0708	507 > 80	507 > 99
NaPFNS	$C_9F_{19}SO_3Na$	572.1189	550.1370	549 > 80	549 > 99
NaPFDS	$C_{10}F_{21}SO_3Na$	622.1264	600.1445	599 > 80	599 > 99
NaPFUdS	$C_{11}F_{23}SO_3Na$	672.1339	650.1520	649 > 80	649 > 99
NaPFDoS	$C_{12}F_{25}SO_3Na$	722.1414	700.1595	699 > 80	699 > 99
NaPFTrDS	$C_{13}F_{27}SO_3Na$	772.1489	750.1670	749 > 80	749 > 99

Chloroperfluoroalkyl Ether Sulfonates (Cl-PFESA)

Compound	Molecular Formula	Molecular Weight Salt	Molecular Weight Acid	ESI- SRM Transition 1	ESI- SRM Transition 2
9Cl-PF3ONS	$C_8F_{16}ClSO_4K$	570.6739	532.5835	531 > 351	531 > 83
11Cl-PF3OUdS	$C_{10}F_{20}ClSO_4K$	670.6889	632.5985	631 > 451	631 > 83

Perfluoroalkyl Ether Sulfonate (PFESA)

Compound	Molecular Formula	Molecular Weight Salt	Molecular Weight Acid	ESI- SRM Transition 1	ESI- SRM Transition 2
PFEESA	$C_4F_9SO_4K$	354.1893	316.0989	315 > 135	315 > 69

Fluorotelomer Sulfonates (X:2FTS)

Compound	Molecular Formula	Molecular Weight Salt	Molecular Weight Acid	ESI- SRM Transition 1	ESI- SRM Transition 2
4:2FTS	$C_6H_4F_9SO_3Na$	350.1346	328.1527	327 > 307	327 > 81
4:2FTS [M+2]	$^{13}C_2{}^{12}C_4H_4F_9SO_3Na$	352.1199	330.1380	329 > 81	329 > 309
6:2FTS	$C_8H_4F_{13}SO_3Na$	450.1496	428.1677	427 > 407	427 > 81
6:2FTS [M+2]	$^{13}C_2{}^{12}C_6H_4F_{13}SO_3Na$	452.1349	430.1530	429 > 81	429 > 409
8:2FTS	$C_{10}H_4F_{17}SO_3Na$	550.1646	528.1827	527 > 507	527 > 81
8:2FTS [M+2]	$^{13}C_2{}^{12}C_8H_4F_{17}SO_3Na$	552.1499	530.1680	529 > 81	529 > 509
10:2FTS	$C_{12}H_4F_{21}SO_3Na$	650.1796	628.1977	627 > 607	627 > 81

Summary of PFAS Analyte Information

Perfluoroalkylcarboxylic Acids (PFCA)

Compound	Molecular Formula	Molecular Weight	ESI- SRM Transition 1	ESI- SRM Transition 2
PFBA	$C_4HF_7O_2$	214.0383	213 > 169	-
PFBA [M+3]	$^{13}C_3{}^{12}CHF_7O_2$	217.0163	216 > 172	-
PFBA [M+4]	$^{13}C_4HF_7O_2$	218.0090	217 > 172	-
PFPeA	$C_5HF_9O_2$	264.0458	263 > 219	263 > 69
PFPeA [M+3]	$^{13}C_3{}^{12}C_2HF_9O_2$	267.0238	266 > 222	266 > 70
PFPeA [M+5]	$^{13}C_5HF_9O_2$	269.0091	268 > 223	268 > 70
PFHxA	$C_6HF_{11}O_2$	314.0533	313 > 269	313 > 119
PFHxA [M+2]	$^{13}C_2{}^{12}C_4HF_{11}O_2$	316.0387	315 > 270	315 > 119
PFHxA [M+5]	$^{13}C_5{}^{12}C_1HF_{11}O_2$	319.0166	318 > 273	318 > 120
PFHpA	$C_7HF_{13}O_2$	364.0608	363 > 319	363 > 169
PFHpA [M+4]	$^{13}C_4{}^{12}C_3HF_{13}O_2$	368.0315	367 > 322	367 > 169
PFOA	$C_8HF_{15}O_2$	414.0683	413 > 369	413 > 169
PFOA [M+2]	$^{13}C_2{}^{12}C_6HF_{15}O_2$	416.0537	415 > 370	415 > 169
PFOA [M+4]	$^{13}C_4{}^{12}C_4HF_{15}O_2$	418.0390	417 > 372	417 > 169
PFOA [M+8]	$^{13}C_8HF_{15}O_2$	422.0096	421 > 376	421 > 172
T-PFOA	$C_8F_{15}O_2NH_4$	431.0989	413 > 369	413 > 169
PFNA	$C_9HF_{17}O_2$	464.0758	463 > 419	463 > 219
PFNA [M+5]	$^{13}C_5{}^{12}C_4HF_{17}O_2$	469.0391	468 > 423	468 > 219
PFNA [M+9]	$^{13}C_9HF_{17}O_2$	473.0097	472 > 427	472 > 223
PFDA	$C_{10}HF_{19}O_2$	514.0833	513 > 469	513 > 219
PFDA [M+2]	$^{13}C_2{}^{12}C_8HF_{19}O_2$	516.0687	515 > 470	515 > 219
PFDA [M+6]	$^{13}C_6{}^{12}C_4HF_{19}O_2$	520.0393	519 > 474	519 > 219
PFUdA	$C_{11}HF_{21}O_2$	564.0908	563 > 519	563 > 269
PFUdA [M+2]	$^{13}C_2{}^{12}C_9HF_{21}O_2$	566.0762	565 > 520	565 > 269
PFUdA [M+7]	$^{13}C_7{}^{12}C_4HF_{21}O_2$	571.0394	570 > 525	570 > 270
PFDoA	$C_{12}HF_{23}O_2$	614.0983	613 > 569	613 > 269
PFDoA [M+2]	$^{13}C_2{}^{12}C_{10}HF_{23}O_2$	616.0837	615 > 570	615 > 269
PFTrDA	$C_{13}HF_{25}O_2$	664.1058	663 > 619	663 > 269
PFTeDA	$C_{14}HF_{27}O_2$	714.1133	713 > 669	713 > 369
MPFTeDA [M+2]	$^{13}C_2{}^{12}C_{12}HF_{27}O_2$	716.0987	715 > 670	715 > 369
PFHxDA	$C_{16}HF_{31}O_2$	814.1283	813 > 769	813 > 369
MPFHxDA [M+2]	$^{13}C_2{}^{12}C_{14}HF_{31}O_2$	816.1137	815 > 770	815 > 369
PFODA	$C_{18}HF_{35}O_2$	914.1433	913 > 869	913 > 369

Hexafluoropropylene Oxide Dimer Acid

Compound	Molecular Formula	Molecular Weight	ESI- SRM Transition 1	ESI- SRM Transition 2
HFPO-DA	$C_6HF_{11}O_3$	330.0527	285 > 169	329 > 285
HFPO-DA [M+3]	$^{13}C_3{}^{12}C_3HF_{11}O_3$	333.0307	287 > 169	332 > 287

Summary of PFAS Analyte Information

Per- and Polyfluoroalkyl Ether Carboxylic Acids (PFECA)

Compound	Molecular Formula	Molecular Weight Salt	Molecular Weight Acid	ESI- SRM Transition 1	ESI- SRM Transition 2
NaDONA	$C_7HF_{12}O_4Na$	400.0510	378.0692	377 > 251	377 > 85
PF4OPeA	$C_4HF_7O_3$	-	230.0377	229 > 85	229 > 185
PF5OHxA	$C_5HF_9O_3$	-	280.0452	279 > 85	279 > 235
3,6-OPFHpA	$C_5HF_9O_4$	-	296.0446	295 > 201	201 > 85

Perfluoroalkanesulfonamides (FASA)

Compound	Molecular Formula	Molecular Weight	ESI- SRM Transition 1	ESI- SRM Transition 2
FBSA	$C_4H_2F_9NO_2S$	299.1148	298 > 78	298 > 119
N-MeFBSA	$C_5H_4F_9NO_2S$	313.1414	312 > 219	312 > 112
N-EtFBSA	$C_6H_6F_9NO_2S$	327.1679	326 > 219	326 > 126
FPeSA	$C_5H_2F_{11}NO_2S$	349.1223	348 > 78	348 > 119
FHxSA	$C_6H_2F_{13}NO_2S$	399.1298	398 > 78	398 > 169
FHpSA	$C_7H_2F_{15}NO_2S$	449.1373	448 > 78	448 > 169
FOSA	$C_8H_2F_{17}NO_2S$	499.1448	498 > 78	498 > 169
FOSA [M+8]	$^{13}C_8H_2F_{17}NO_2S$	507.0860	506 > 78	506 > 172
N-MeFOSA	$C_9H_4F_{17}NO_2S$	513.1714	512 > 219	512 > 169
N-MeFOSA [M+3]	$C_9{}^2H_3HF_{17}NO_2S$	516.1898	515 > 219	515 > 169
N-EtFOSA	$C_{10}H_6F_{17}NO_2S$	527.1979	526 > 219	526 > 169
N-EtFOSA [M+5]	$C_{10}{}^2H_5HF_{17}NO_2S$	532.2287	531 > 219	531 > 169
FDSA	$C_{10}H_2F_{21}NO_2S$	599.1598	598 > 78	598 > 169

Perfluoroalkanesulfonamidoethanols (N-MeFASE and N-EtFASE)

Compound	Molecular Formula	Molecular Weight	ESI- SRM Transition 1	ESI- SRM Transition 2
N-MeFBSE	$C_7H_8F_9NO_3S$	357.1939	356 > 122	356 > 80
N-EtFBSE	$C_8H_{10}F_9NO_3S$	371.2205	370 > 136	370 > 80
N-MeFOSE	$C_{11}H_8F_{17}NO_3S$	557.2239	556 > 122	556 > 80
N-MeFOSE [M+7]	$C_{11}{}^2H_7HF_{17}NO_3S$	564.2670	563 > 126	563 > 80
N-EtFOSE	$C_{12}H_{10}F_{17}NO_3S$	571.2505	570 > 136	570 > 80
N-EtFOSE [M+9]	$C_{12}{}^2H_9HF_{17}NO_3S$	580.3059	579 > 142	579 > 80

Perfluorooctanesulfonamidoacetic Acids (FOSAA)

Compound	Molecular Formula	Molecular Weight	ESI- SRM Transition 1	ESI- SRM Transition 2
FOSAA	$C_{10}H_4F_{17}NO_4S$	557.1809	556 > 498	556 > 419
N-MeFOSAA	$C_{11}H_6F_{17}NO_4S$	571.2074	570 > 419	570 > 483
N-MeFOSAA [M+3]	$C_{11}{}^2H_3H_3F_{17}NO_4S$	574.2259	573 > 419	573 > 515
N-EtFOSAA	$C_{12}H_8F_{17}NO_4S$	585.2340	584 > 419	584 > 526
N-EtFOSAA [M+5]	$C_{12}{}^2H_5H_3F_{17}NO_4S$	590.2648	589 > 419	589 > 531

Summary of PFAS Analyte Information

Fluorotelomer Alcohols (X:2FTOH)

Compound	Molecular Formula	Molecular Weight	ESI- SRM Transition 1	ESI- SRM Transition 2
4:2 FTOH	$C_6H_5F_9O$	264.0889	263 > 203	263 > 245
4:2 FTOH [M+4]	$C_6{}^2H_4HF_9O$	268.1135	266 > 204	266 > 225
5:2 sFTOH	$C_7H_5F_{11}O$	314.0964	293 > 119	293 > 236
6:2 FTOH	$C_8H_5F_{13}O$	364.1039	363 > 303	363 > 255
6:2 FTOH [M+2]	$^{13}C_2{}^{12}C_6H_5F_{13}O$	366.0892	365 > 305	365 > 256
6:2 FTOH [M+4]	$^{13}C_2{}^{12}C_6{}^2H_2H_3F_{13}O$	368.1015	367 > 306	367 > 256
7:2 sFTOH	$C_9H_5F_{15}O$	414.1114	393 > 219	393 > 169
8:2 FTOH	$C_{10}H_5F_{17}O$	464.1189	463 > 403	463 > 355
8:2 FTOH [M+2]	$^{13}C_2{}^{12}C_8H_5F_{17}O$	466.1042	465 > 405	465 > 356
8:2 FTOH [M+4]	$^{13}C_2{}^{12}C_8{}^2H_2H_3F_{17}O$	468.1165	467 > 406	467 > 356
10:2 FTOH	$C_{12}H_5F_{21}O$	564.1339	563 > 503	563 > 455
10:2 FTOH [M+4]	$^{13}C_2{}^{12}C_{10}{}^2H_2H_3F_{21}O$	568.1315	567 > 506	567 > 456

Fluorotelomer Carboxylic Acids (FTCA)

Compound	Molecular Formula	Molecular Weight	ESI- SRM Transition 1	ESI- SRM Transition 2
3:3 FTCA	$C_6H_5F_7O_2$	242.0915	241 > 177	241 > 117
5:3 FTCA	$C_8H_5F_{11}O_2$	342.1065	341 > 237	341 > 217
7:3 FTCA	$C_{10}H_5F_{15}O_2$	442.1215	441 > 337	441 > 317
6:2 FTCA	$C_8H_3F_{13}O_2$	378.0874	377 > 293	377 > 63
6:2 FTCA [M+2]	$^{13}C_2{}^{12}C_6H_3F_{13}O_2$	380.0727	379 > 294	379 > 64
8:2 FTCA	$C_{10}H_3F_{17}O_2$	478.1024	477 > 393	477 > 63
8:2 FTCA [M+2]	$^{13}C_2{}^{12}C_8H_3F_{17}O_2$	480.0877	479 > 394	479 > 64
10:2 FTCA	$C_{12}H_3F_{21}O_2$	578.1174	577 > 493	577 > 63
10:2 FTCA [M+2]	$^{13}C_2{}^{12}C_{10}H_3F_{21}O_2$	580.1027	579 > 494	579 > 64

Fluorotelomer Unsaturated Carboxylic Acids (FTUCA)

Compound	Molecular Formula	Molecular Weight	ESI- SRM Transition 1	ESI- SRM Transition 2
6:2 FTUCA	$C_8H_2F_{12}O_2$	358.0811	357 > 293	357 > 243
6:2 FTUCA [M+2]	$^{13}C_2{}^{12}C_6H_2F_{12}O_2$	360.0664	359 > 294	359 > 244
8:2 FTUCA	$C_{10}H_2F_{16}O_2$	458.0961	457 > 393	457 > 343
8:2 FTUCA [M+2]	$^{13}C_2{}^{12}C_8H_2F_{16}O_2$	460.0814	459 > 394	459 > 344
10:2 FTUCA	$C_{12}H_2F_{20}O_2$	558.1111	557 > 493	557 > 119
10:2 FTUCA [M+2]	$^{13}C_2{}^{12}C_{10}H_2F_{20}O_2$	560.0964	559 > 494	559 > 119

Sodium Perfluoroalkyl Phosphinates (X:XPFPi)

Compound	Molecular Formula	Molecular Weight	ESI- SRM Transition 1	ESI- SRM Transition 2
6:6PFPi	$C_{12}F_{26}PO_2Na$	724.0492	701 > 401	701 > 63
6:8PFPi	$C_{14}F_{30}PO_2Na$	824.0642	801 > 501	801 > 401
8:8PFPi	$C_{16}F_{34}PO_2Na$	924.0792	901 > 501	901 > 63

Summary of PFAS Analyte Information

Perfluoroalkylphosphonic Acids (PFAPA)

Compound	Molecular Formula	Molecular Weight	ESI- SRM Transition 1	ESI- SRM Transition 2
PFHxPA	$C_6H_2F_{13}PO_3$	400.0312	399 > 79	-
Cl-PFHxPA	$C_6H_2ClF_{12}PO_3$	416.4858	415 > 79	-
PFOPA	$C_8H_2F_{17}PO_3$	500.0462	499 > 79	-
Cl-PFOPA	$C_8H_2ClF_{16}PO_3$	516.5008	515 > 79	-
PFDPA	$C_{10}H_2F_{21}PO_3$	600.0612	599 > 79	-

Polyfluoroalkyl Phosphate Mono-Esters (PAP)

Compound	Molecular Formula	Molecular Weight	ESI- SRM Transition 1	ESI- SRM Transition 2
6:2PAP	$C_8H_4F_{13}PO_4Na_2$	488.0475	443 > 97	443 > 79
6:2PAP [M+2]	$^{13}C_2{}^{12}C_6H_4F_{13}PO_4Na_2$	490.0328	445 > 97	445 > 79
8:2PAP	$C_{10}H_4F_{17}PO_4Na_2$	588.0625	543 > 97	543 > 79
8:2PAP [M+2]	$^{13}C_2{}^{12}C_8H_4F_{17}PO_4Na_2$	590.0478	545 > 97	545 > 79

Polyfluoroalkyl Phosphate Di-Esters (diPAP)

Compound	Molecular Formula	Molecular Weight	ESI- SRM Transition 1	ESI- SRM Transition 2
6:2diPAP	$C_{16}H_8F_{26}PO_4Na$	812.1543	789 > 97	789 > 443
6:2diPAP [M+4]	$^{13}C_4{}^{12}C_{12}H_8F_{26}PO_4Na$	816.1249	793 > 97	793 > 445
6:2/8:2diPAP	$C_{18}H_8F_{30}PO_4Na$	912.1693	889 > 97	889 > 443
8:2diPAP	$C_{20}H_8F_{34}PO_4Na$	1012.1843	989 > 97	989 > 543
8:2diPAP [M+4]	$^{13}C_4{}^{12}C_{16}H_8F_{34}PO_4Na$	1016.1549	993 > 97	993 > 545

Polyfluoroalkyl Phosphate Esters (SAmPAP)

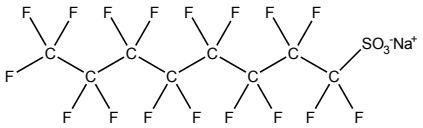
Compound	Molecular Formula	Molecular Weight	ESI- SRM Transition 1	ESI- SRM Transition 2
SAmPAP	$C_{12}H_9F_{17}NO_6PSNa_2$	695.1941	650 > 526	650 > 97
diSAmPAP	$C_{24}H_{18}F_{34}N_2O_8PS_2Na$	1226.4475	1203 > 526	1203 > 169

Cationic/Zwitterionic PFAS

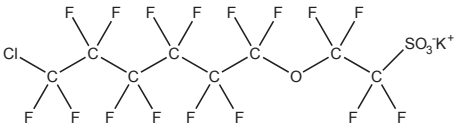
Compound	Molecular Formula	Molecular Weight	ESI+ SRM Transition 1	ESI+ SRM Transition 2
N-AP-FHxSA	$C_{11}H_{13}F_{13}N_2O_2S$	484.2773	485 > 85	485 > 58
N-TAmP-FHxSA	$C_{12}H_{15}F_{13}N_2O_2S$	498.3039	499 > 60	499 > 73
N-CMAmP-6:2FOSA	$C_{15}H_{19}F_{13}N_2O_4S$	570.3666	571 > 104	571 > 58
5:3FTB	$C_{12}H_{14}F_{11}NO_2$	413.2275	414 > 58	414 > 104
5:1:2FTB	$C_{12}H_{13}F_{12}NO_2$	431.2179	432 > 58	432 > 104

Structures of Commonly Analyzed PFAS

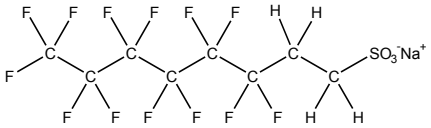
PFSA (example = PFOS)



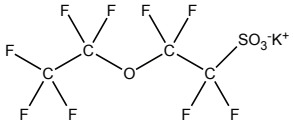
Cl-PFESA (example = 9Cl-PF3ONS)



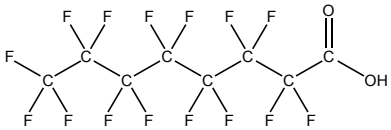
X:2FTS (example = 6:2FTS)



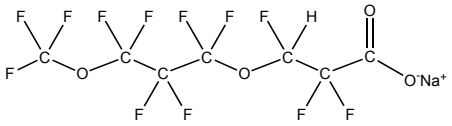
PFESA (example = PFEESA)



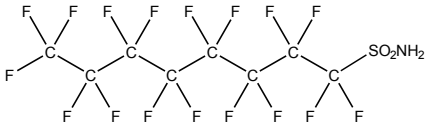
PFCA (example = PFOA)



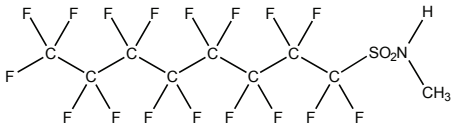
PFECA (example = NaDONA)



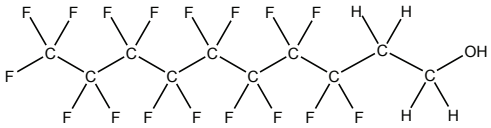
FASA (example = FOSA)



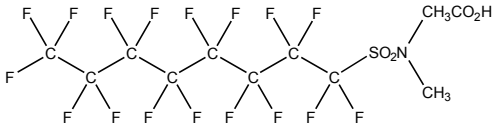
N-alkylFASA (example = N-MeFOSA)



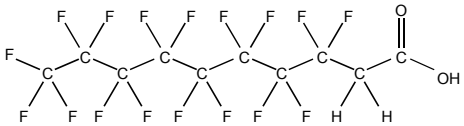
FTOH (example = FOET / 8:2 FTOH)



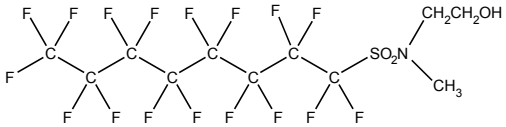
N-alkylFASAA (example = N-MeFOSAA)



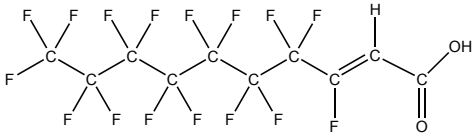
FTCA (example = FOEA / 8:2 FTCA)



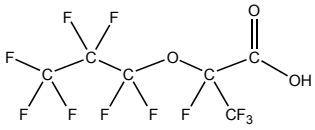
N-alkylFOSE (example = N-MeFOSE)



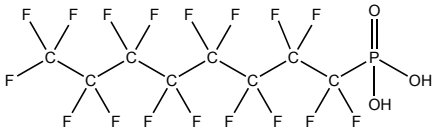
FTUCA (example = FOUEA / 8:2 FTUCA)



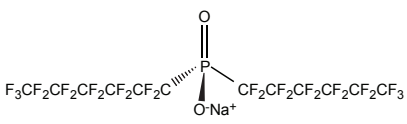
Dimer Acid (example = HFPO-DA)



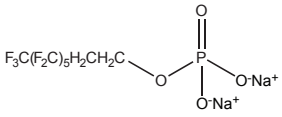
PFAPA (example = PFOPA)



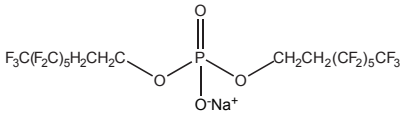
X:XPFPi (example = 6:6PFPi)



PAP (example = 6:2PAP)



diPAP (example = 6:2diPAP)



Typical HPLC/UPLC Flow Rates

Column ID (mm)	Particle Size 5 µm	Particle Size 3 µm	Particle Size 2 µm	Particle Size sub 2 µm*
1.0	0.05 mL/min	0.07 mL/min	0.10 mL/min	0.15 mL/min
2.1	0.2	0.3	0.5	0.4 - 0.6
3.2	0.5	0.7	1.0	0.8
4.6	1.0	1.5	2.0	1.0

*Flow rate may be limited by column back pressure.

Common Buffers

Buffer Type	pKa	Buffer pH Range	Examples
Acetate	4.8	3.8 - 5.8	Ammonium Acetate Acetic Acid Sodium Acetate
Ammonia	9.2	8.2 - 10.2	Ammonium Hydroxide Ammonium Phosphate (mono- and di-basic) Ammonium Carbonate
Borate	9.2	8.2 - 10.2	Sodium Borate Boric Acid
Carbonate	10.2	9.2 - 11.2	Ammonium Carbonate Ammonium Bicarbonate
Citrate	3.1 4.7 5.4	2.1 - 4.1 3.7 - 5.7 4.4 - 6.4	Trisodium Citrate Diammonium Citrate Triammonium Citrate Citric Acid
Formate	3.8	2.8 - 4.8	Ammonium Formate Formic Acid
Phosphate	2.1 7.2 12.3	1.1 - 3.1 6.2 - 8.2 11.3 - 13.3	Potassium Phosphate Monobasic Potassium Phosphate Dibasic Potassium Phosphate Tribasic Phosphoric acid

Conversion Factors for Units of Pressure Measurement

	PSI	*bar*	*torr*	*kPa*	*atm*	*inches Hg*	*kg/cm²*
PSI=	1	0.06895	51.713	6.8948	0.068	2.0359	0.0703
bar=	14.5038	1	751.88	100	0.9869	29.5300	1.0197
torr=	0.0193	0.00133	1	0.1330	0.00132	0.0394	0.00136
kPa=	0.1450	0.0100	7.52	1	0.00987	0.2962	0.0102
atm=	14.696	1.0133	760	101.32	1	29.921	1.0332
inches Hg=	0.49612	0.03376	25.400	3.376	0.0334	1	0.0345
kg/cm²=	14.223	0.9806	735.5	98.06	0.967	28.958	1

共に、成長を

ハロゲン化芳香族合物の取り扱い参考資料にご好評をいただき、このPFASの
クイックリファレンスガイドをご案内させていただく運びとなりました。

PFASの安定性、分析の課題や推奨される保管についての資料完全版は
WELLINGTON LABORATORIESカナダ本社のウェブサイトから
ご覧いただけます。

https://well-labs.com

用途確認書

令和　　年　　月　　日

株式会社ｳｪﾘﾝﾄﾝ ﾗﾎﾞﾗﾄﾘｰｽﾞ ｼﾞｬﾊﾟﾝ
代表取締役　加坂　達司　殿

住所
会社名
所属
使用者　　（個人印で可）
電話番号

今般、貴社から購入予定の第一種特定化学物質は、「化学物質の審査及び製造等の規制に関する法律」（昭和48年法律第117号）第25条ただし書きに規定する試験研究用として使用します。

1，第一種特定化学物質(有機フッ素化合物 3 種内第一種特定化学物質 3 種含有)
① PFAS-3PAR
（第一種特定化学物質 3 種類　メタノール溶液　1.2ml）×　1　ガラスアンプル

第一種特定化学物質 3 種類: L-PFHxS, L-PFOS, PFOA

2，試験研究の目的
目的:
環境水に含まれる有機フッ素化合物を定量分析することを目的とする。今回購入する有機フッ素化合物(PFAS-3PAR) は、液体クロマトグラフタンデム質量分析計（LCMSMS）にて正確に定量分析を行うための標準物質として使用する。
内容:
今回購入する有機フッ素化合物（PFAS-3PAR）は、メタノールで数段階希釈して10ng/mL の標準溶液とし、1 試料に 10 µL を添加して使用する。

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