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AGENTE ESCLUSIVO

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PERFLUORINATED COMPOUNDS (PFCs)

Wellington started to synthesize perfluorinated compounds in 2004 and, since then, we have regularly added new native and mass-labelled standards to our inventory. In this section you will find individual standards of the following groups of compounds including, in most cases, mass-labelled analogues as well as some useful solution/mixtures:

PFC-C-CVS Calibration Set and Support Solutions

Perfluoroalkanesulfonates (PFASs)

Perfluoroalkylcarboxylic acids (PFCAs)

Perfluorooctanesulfonamides (FOSAs)

Perfluorooctanesulfonamidoethanols (FOSEs)

Perfluorooctanesulfonamidoacetic acids (FOSAAs)

Fluorinated Telomer Alcohols (FTOHs)

Fluorinated Telomer Acids (FTAs)

Unsaturated Fluorinated Telomer Acids (FTUAs)

Perfluoroalkylphosphonic Acids (PFAPAs)

Perfluoroalkylphosphinic Acids (X:XPFPi)

Polyfluorinated Phosphate Esters (PAPs and SAmPAPs)

Fluorinated Telomer Acrylates and Acetates (FTAcrs and FTOAcS)

PFCs are still emerging environmental contaminants and each of the groups of compounds listed above pose unique analytical challenges. In addition, the individual isomers, such as the branched PFOA and PFOS isomers, are being found to have different toxicokinetic and ecokinetic properties. Thus our inventory of PFCs will continue to grow and we would urge you to visit our website for announcements of new products.



PFC-CVS-C

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

		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)
Native PFCs						
Perfluoro-n-butanoic acid	PFBA	2.0	10	50	200	1000
Perfluoro-n-pentanoic acid	PFPeA	2.0	10	50	200	1000
Perfluoro-n-hexanoic acid	PFHxA	2.0	10	50	200	1000
Perfluoro-n-heptanoic acid	PFHpA	2.0	10	50	200	1000
Perfluoro-n-octanoic acid	PFOA	2.0	10	50	200	1000
Perfluoro-n-nonanoic acid	PFNA	2.0	10	50	200	1000
Perfluoro-n-decanoic acid	PFDA	2.0	10	50	200	1000
Perfluoro-n-undecanoic acid	PFUdA	2.0	10	50	200	1000
Perfluoro-n-dodecanoic acid	PFDoA	2.0	10	50	200	1000
Perfluoro-n-tridecanoic acid	PFTrDA	2.0	10	50	200	1000
Perfluoro-n-tetradecanoic acid	PFTeDA	2.0	10	50	200	1000
Perfluoro-n-hexadecanoic acid	PFHxDA	2.0	10	50	200	1000
Perfluoro-n-octadecanoic acid	PFODA	2.0	10	50	200	1000
Potassium perfluoro-1-butanefluorobutanesulfonate	L-PFBS	2.0	10	50	200	1000
Sodium perfluoro-1-pentanesulfonate	L-PFPeS	2.0	10	50	200	1000
Sodium perfluoro-1-hexanesulfonate	L-PFHxS	2.0	10	50	200	1000
Sodium perfluoro-1-heptanesulfonate	L-PFHpS	2.0	10	50	200	1000
Sodium perfluoro-1-octanesulfonate	L-PFOS	2.0	10	50	200	1000
Sodium perfluoro-1-nonanesulfonate	L-PFNS	2.0	10	50	200	1000
Sodium perfluoro-1-decanesulfonate	L-PFDS	2.0	10	50	200	1000
Sodium perfluoro-1-dodecanesulfonate	L-PFDoS	2.0	10	50	200	1000
Mass-Labelled PFCs Extraction Standards						
Perfluoro-n-[¹³ C ₄]butanoic acid	MPFBA	50	50	50	50	50
Perfluoro-n-[¹³ C ₅]pentanoic acid	M5PFPeA	50	50	50	50	50
Perfluoro-n-[1,2,3,4,6- ¹³ C ₅]hexanoic acid	M5PFHxA	50	50	50	50	50
Perfluoro-n-[1,2,3,4- ¹³ C ₄]heptanoic acid	M4PFHpA	50	50	50	50	50
Perfluoro-n-[¹³ C ₈]octanoic acid	M8PFOA	50	50	50	50	50
Perfluoro-n-[¹³ C ₉]nonanoic acid	M9PFNA	50	50	50	50	50
Perfluoro-n-[1,2,3,4,5,6- ¹³ C ₆]decanoic acid	M6PFDA	50	50	50	50	50
Perfluoro-n-[1,2,3,4,5,6,7- ¹³ C ₇]undecanoic acid	M7PFUdA	50	50	50	50	50
Perfluoro-n-[1,2- ¹³ C ₂]dodecanoic acid	MPFDoA	50	50	50	50	50
Perfluoro-n-[1,2- ¹³ C ₂]tetradecanoic acid	M2PFTeDA	50	50	50	50	50
Sodium perfluoro-1-[2,3,4- ¹³ C ₃]butanesulfonate	M3PFBS	50	50	50	50	50
Sodium perfluoro-1-[1,2,3- ¹³ C ₃]hexanesulfonate	M3PFHxS	50	50	50	50	50
Sodium perfluoro-1-[¹³ C ₈]octanesulfonate	M8PFOS	50	50	50	50	50
Mass-Labelled PFCs Injection Standards						
Perfluoro-n-[2,3,4- ¹³ C ₃]butanoic acid	M3PFBA	50	50	50	50	50
Perfluoro-n-[1,2- ¹³ C ₂]octanoic acid	M2PFOA	50	50	50	50	50
Perfluoro-n-[1,2- ¹³ C ₂]decanoic acid	MPFDA	50	50	50	50	50
Sodium perfluoro-1-[1,2,3,4- ¹³ C ₄]octanesulfonate	MPFOS	50	50	50	50	50

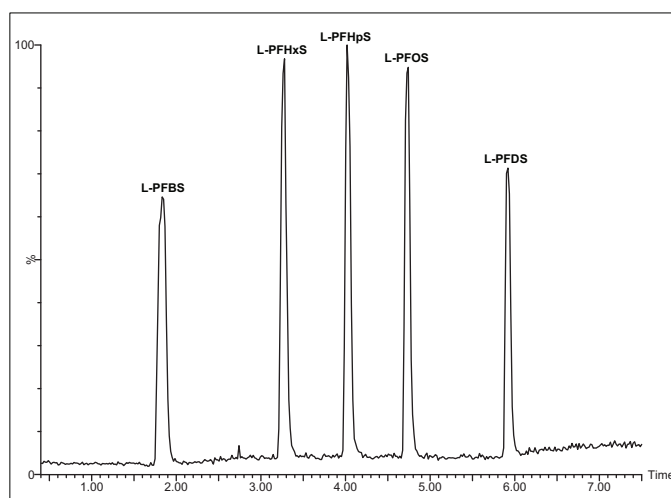
NOTE: All perfluoroalkylsulfonate concentrations are reported as the salt.

NATIVE LINEAR PERFLUOROALKYLSULFONATES (PFASs)

Catalogue Number	Product (methanol solution)	Qty/Conc
L-PFBS	Potassium perfluoro-1-butanesulfonate	1.2 ml 50 µg/ml
L-PFPeS	Sodium perfluoro-1-pentanesulfonate	1.2 ml 50 µg/ml
L-PFHxS	Sodium perfluoro-1-hexanesulfonate	1.2 ml 50 µg/ml
L-PFHpS	Sodium perfluoro-1-heptanesulfonate	1.2 ml 50 µg/ml
L-PFOS	Sodium perfluoro-1-octanesulfonate	1.2 ml 50 µg/ml
L-PFOSK	Potassium perfluoro-1-octanesulfonate	1.2 ml 50 µg/ml
L-PFNS	Sodium perfluoro-1-nonanesulfonate	1.2 ml 50 µg/ml
L-PFDS	Sodium perfluoro-1-decanesulfonate	1.2 ml 50 µg/ml
L-PFDoS	Sodium perfluoro-1-dodecanesulfonate	1.2 ml 50 µg/ml

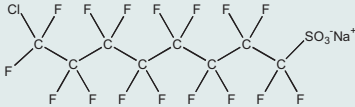
NATIVE PERFLUOROALKYLSULFONATES: SOLUTION/MIXTURE

Catalogue Number	Product (methanol solution)	Qty/Conc
PFS-MXA	Native PFAS Solution/Mixture	1.2 ml
	Potassium perfluoro-1-butanesulfonate	2 µg/ml
	Sodium perfluoro-1-hexanesulfonate	2 µg/ml
	Sodium perfluoro-1-heptanesulfonate	2 µg/ml
	Sodium perfluoro-1-octanesulfonate	2 µg/ml
	Sodium perfluoro-1-decanesulfonate	2 µg/ml



Chromatogram of PFS-MXA (Acquity UPLC BEH Shield RP₁₈ column)

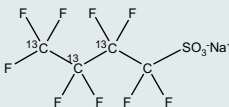
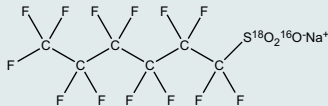
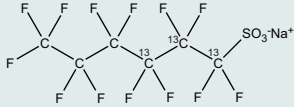
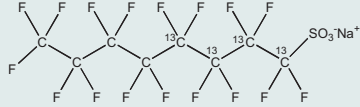
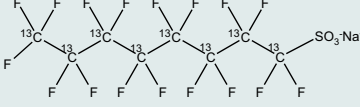
NATIVE CHLORO-PERFLUOROALKYLSULFONATE

Catalogue Number	Product
8Cl-PFOS	 <p>Sodium 8-chloroperfluoro-1-octanesulfonate 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol</p>

NATIVE BRANCHED PERFLUOROALKYLSULFONATES

Catalogue Number	Product (methanol solution)	Qty/Conc
br-PFHxSK	L-PFHxS with branched isomers (Potassium Salt)	1.2 ml 50 µg/ml
br-PFOSK	L-PFOSK with branched isomers	1.2 ml 50 µg/ml
T-PFOS	Potassium perfluorooctanesulfonate (Technical Grade)	1.2 ml 50 µg/ml
NaP3MHpS	Sodium perfluoro-3-methylheptanesulfonate	1.2 ml 50 µg/ml
NaP6MHpS	Sodium perfluoro-6-methylheptanesulfonate	1.2 ml 50 µg/ml
ipPFNS	Sodium perfluoro-7-methyloctanesulfonate	1.2 ml 50 µg/ml

MASS-LABELLED PERFLUOROALKYLSULFONATES

Catalogue Number	Product
M3PFBS	 <p>Sodium perfluoro-1-[2,3,4-¹³C₃]-butanesulfonate 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% 2,3,4-¹³C₃</p>
MPFHxS	 <p>Sodium perfluoro-1-hexane[¹⁸O₂]sulfonate 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; 94% ¹⁸O₂</p>
M3PFHxS	 <p>Sodium perfluoro-1-[1,2,3-¹³C₃]-hexanesulfonate 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% 1,2,3-¹³C₃</p>
MPFOS	 <p>Sodium perfluoro-1-[1,2,3,4-¹³C₄]-octanesulfonate 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% 1,2,3,4-¹³C₄</p>
M8PFOS	 <p>Sodium perfluoro-1-[¹³C₈]-octanesulfonate 1.2 ml; 48.5 µg/ml (±2.4 µg/ml); in methanol >99% linear; >99% ¹³C₈</p>

NOTE: All perfluoroalkylsulfonate concentrations are reported as the salt.

NATIVE LINEAR PERFLUOROALKYLCARBOXYLIC ACIDS (PFCAs)

Catalogue Number	Product (methanol solution)	Qty/Conc
PFBA	Perfluoro-n-butanoic acid	1.2 ml 50 µg/ml
PFPeA	Perfluoro-n-pentanoic acid	1.2 ml 50 µg/ml
PFHxA	Perfluoro-n-hexanoic acid	1.2 ml 50 µg/ml
PFHpA	Perfluoro-n-heptanoic acid	1.2 ml 50 µg/ml
PFOA	Perfluoro-n-octanoic acid	1.2 ml 50 µg/ml
PFNA	Perfluoro-n-nonanoic acid	1.2 ml 50 µg/ml
PFDA	Perfluoro-n-decanoic acid	1.2 ml 50 µg/ml
PFUdA	Perfluoro-n-undecanoic acid	1.2 ml 50 µg/ml
PFDoA	Perfluoro-n-dodecanoic acid	1.2 ml 50 µg/ml
PFTTrDA	Perfluoro-n-tridecanoic acid	1.2 ml 50 µg/ml
PFTeDA	Perfluoro-n-tetradecanoic acid	1.2 ml 50 µg/ml
PFHxDA	Perfluoro-n-hexadecanoic acid	1.2 ml 50 µg/ml
PFODA	Perfluoro-n-octadecanoic acid	1.2 ml 50 µg/ml

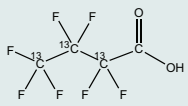
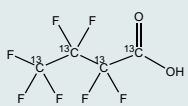
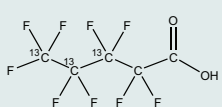

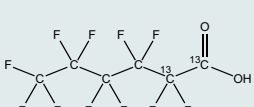
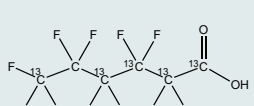
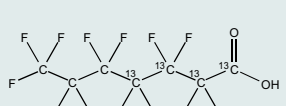
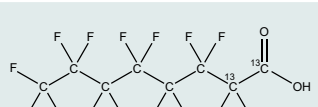
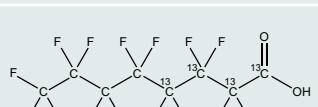
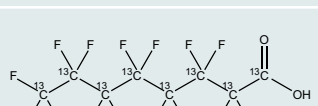
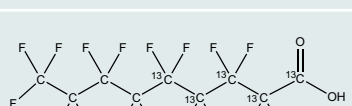
NATIVE PERFLUOROALKYLCARBOXYLIC ACIDS: SOLUTION/MIXTURE

Catalogue Number	Product (methanol solution)	Qty/Conc
PFC-MXA	Native PFCa Solution/Mixture	1.2 ml
	Perfluoro-n-butanoic acid	2 µg/ml
	Perfluoro-n-pentanoic acid	2 µg/ml
	Perfluoro-n-hexanoic acid	2 µg/ml
	Perfluoro-n-heptanoic acid	2 µg/ml
	Perfluoro-n-octanoic acid	2 µg/ml
	Perfluoro-n-nonanoic acid	2 µg/ml
	Perfluoro-n-decanoic acid	2 µg/ml
	Perfluoro-n-undecanoic acid	2 µg/ml
	Perfluoro-n-dodecanoic acid	2 µg/ml
	Perfluoro-n-tridecanoic acid	2 µg/ml
	Perfluoro-n-tetradecanoic acid	2 µg/ml

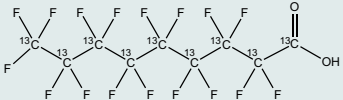
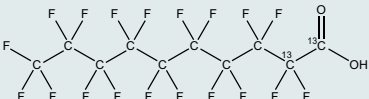
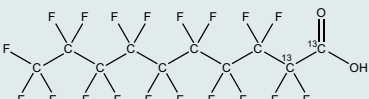
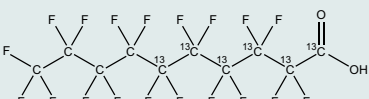
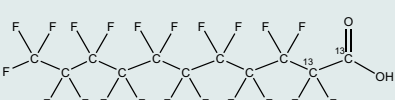
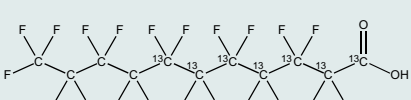
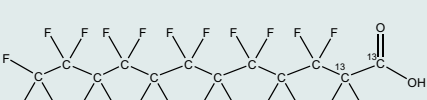
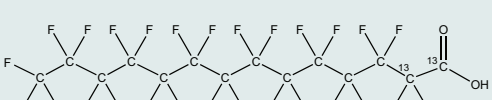
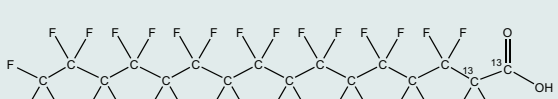
NATIVE BRANCHED PERFLUOROALKYLCARBOXYLIC ACIDS

Catalogue Number	Product (methanol solution)	Qty/Conc
T-PFOA	Perfluorooctanoic acid (Technical Grade)	1.2 ml 50 µg/ml
P3MHpA	Perfluoro-3-methylheptanoic acid	1.2 ml 50 µg/ml
P4MOA	Perfluoro-4-methyloctanoic acid	1.2 ml 50 µg/ml
ipPFNA	Perfluoro-7-methyloctanoic acid (90%)	1.2 ml 45 µg/ml
P355TMHxA	Perfluoro-3,5,5-trimethylhexanoic acid	1.2 ml 50 µg/ml
P37DMOA	Perfluoro-3,7-dimethyloctanoic acid	1.2 ml 50 µg/ml

MASS-LABELLED PERFLUOROALKYLCARBOXYLIC ACIDS

Catalogue Number	Product
M3PFBA 	Perfluoro-n-[2,3,4- ¹³ C ₃]butanoic acid 1.2 ml; 50 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 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 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 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 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 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 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% 1,2,3,4- ¹³ C ₄
M2ZPFOA 	Perfluoro-n-[1,2- ¹³ C ₂]octanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% 1,2- ¹³ C ₂
MPFOA 	Perfluoro-n-[1,2,3,4- ¹³ C ₄]octanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% 1,2,3,4- ¹³ C ₄
M8PFOA 	Perfluoro-n-[¹³ C ₈]octanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; 97.9% ¹³ C ₈ and 2.1% ¹³ C ₄
MPFNA 	Perfluoro-n-[1,2,3,4,5- ¹³ C ₅]nonanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% 1,2,3,4,5- ¹³ C ₅

MASS-LABELLED PERFLUOROALKYLCARBOXYLIC ACIDS

Catalogue Number	Product
M9PFNA 	Perfluoro-n-[¹³ C ₉]nonanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% ¹³ C ₉
MPFDA 	Perfluoro-n-[1,2- ¹³ C ₂]decanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% 1,2- ¹³ C ₂
MPFDA-A 	Perfluoro-n-[1,2- ¹³ C ₂]decanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in <u>acetonitrile</u> >99% linear; >99% 1,2- ¹³ C ₂
M6PFDA 	Perfluoro-n-[1,2,3,4,5,6- ¹³ C ₆]decanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% 1,2,3,4,5,6- ¹³ C ₆
MPFUdA 	Perfluoro-n-[1,2- ¹³ C ₂]undecanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% 1,2- ¹³ C ₂
M7PFUdA 	Perfluoro-n-[1,2,3,4,5,6,7- ¹³ C ₇]undecanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% 1,2,3,4,5,6,7- ¹³ C ₇
MPFDoA 	Perfluoro-n-[1,2- ¹³ C ₂]dodecanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% 1,2- ¹³ C ₂
M2PFTeDA 	Perfluoro-n-[1,2- ¹³ C ₂]tetradecanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% 1,2- ¹³ C ₂
M2PFHxDA 	Perfluoro-n-[1,2- ¹³ C ₂]hexadecanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; >99% 1,2- ¹³ C ₂

MIXED NATIVE PFCAs AND PFASs: SOLUTION/MIXTURES

Catalogue Number	Product (methanol solution)	Qty/Conc
PFAC-MXA	Native PFCAs and PFASs Solution/Mixture	1.2 ml
Perfluoro-n-butanoic acid		5 µg/ml
Perfluoro-n-pentanoic acid		5 µg/ml
Perfluoro-n-hexanoic acid		5 µg/ml
Perfluoro-n-heptanoic acid		5 µg/ml
Perfluoro-n-octanoic acid		5 µg/ml
Perfluoro-n-nonanoic acid		5 µg/ml
Perfluoro-n-decanoic acid		5 µg/ml
Potassium perfluoro-1-butanedisulfonate		5 µg/ml
Sodium perfluoro-1-hexanesulfonate		5 µg/ml
Sodium perfluoro-1-octanesulfonate		5 µg/ml
PFAC-MXB	Native PFCAs and PFASs Solution/Mixture	1.2 ml
Perfluoro-n-butanoic acid		2 µg/ml
Perfluoro-n-pentanoic acid		2 µg/ml
Perfluoro-n-hexanoic acid		2 µg/ml
Perfluoro-n-heptanoic acid		2 µg/ml
Perfluoro-n-octanoic acid		2 µg/ml
Perfluoro-n-nonanoic acid		2 µg/ml
Perfluoro-n-decanoic acid		2 µg/ml
Perfluoro-n-undecanoic acid		2 µg/ml
Perfluoro-n-dodecanoic acid		2 µg/ml
Perfluoro-n-tridecanoic acid		2 µg/ml
Perfluoro-n-tetradecanoic acid		2 µg/ml
Perfluoro-n-hexadecanoic acid		2 µg/ml
Perfluoro-n-octadecanoic acid		2 µg/ml
Potassium perfluoro-1-butanedisulfonate		2 µg/ml
Sodium perfluoro-1-hexanesulfonate		2 µg/ml
Sodium perfluoro-1-octanesulfonate		2 µg/ml
Sodium perfluoro-1-decanedisulfonate		2 µg/ml

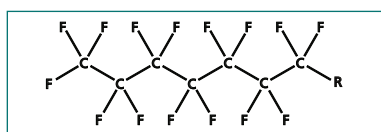
MIXED MASS-LABELLED PFCAs AND PFASs: SOLUTION/MIXTURE

Catalogue Number	Product (methanol solution)	Qty/Conc
MPFAC-MXA	Mass-Labelled PFCAs and PFASs Solution/Mixture	1.2 ml
Perfluoro-n-[1,2,3,4- ¹³ C ₄]butanoic acid		2 µg/ml
Perfluoro-n-[1,2- ¹³ C ₂]hexanoic acid		2 µg/ml
Perfluoro-n-[1,2,3,4- ¹³ C ₄]octanoic acid		2 µg/ml
Perfluoro-n-[1,2,3,4,5- ¹³ C ₅]nonanoic acid		2 µg/ml
Perfluoro-n-[1,2- ¹³ C ₂]decanoic acid		2 µg/ml
Perfluoro-n-[1,2- ¹³ C ₂]undecanoic acid		2 µg/ml
Perfluoro-n-[1,2- ¹³ C ₂]dodecanoic acid		2 µg/ml
Sodium perfluoro-1-hexane[¹⁸ O ₂]sulfonate		2 µg/ml
Sodium perfluoro-1-[1,2,3,4- ¹³ C ₄]octanesulfonate		2 µg/ml

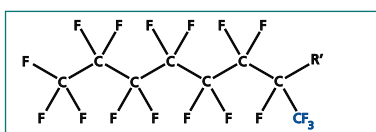
NOTE: Listed concentrations for the perfluoroalkylsulfonates are reported as the salt.

PFOS/PFOA ISOMERS

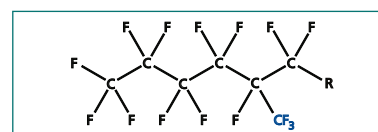
Catalogue Number	Product (methanol solution)	Qty/Anion Conc
P1MHpS	Sodium Perfluoro-1-methylheptane sulfonate	200 µl 1.00 µg/ml
P3MHpS	Sodium Perfluoro-3-methylheptane sulfonate	200 µl 1.00 µg/ml
	Perfluoro-3-methylheptanoic acid	1.90 µg/ml
P4MHpS	Sodium Perfluoro-4-methylheptane sulfonate	200 µl 1.00 µg/ml
	Perfluoro-4-methylheptanoic acid	2.20 µg/ml
P5MHpS	Sodium Perfluoro-5-methylheptane sulfonate	200 µl 1.00 µg/ml
	Perfluoro-5-methylheptanoic acid	1.96 µg/ml
P6MHpS	Sodium Perfluoro-6-methylheptane sulfonate	200 µl 1.00 µg/ml
	Perfluoro-6-methylheptanoic acid	3.10 µg/ml
P55DMHxS	Sodium Perfluoro-5,5-dimethylhexane sulfonate	200 µl 1.00 µg/ml
	Perfluoro-5,5-dimethylhexanoic acid	1.95 µg/ml
P44DMHxS	Sodium Perfluoro-4,4-dimethylhexane sulfonate	200 µl 1.00 µg/ml
	Perfluoro-4,4-dimethylhexanoic acid	3.14 µg/ml
P45DMHxS	Sodium Perfluoro-4,5-dimethylhexane sulfonate	200 µl 1.00 µg/ml
	Perfluoro-4,5-dimethylhexanoic acid	1.22 µg/ml
	Sodium Perfluoro-3,5-dimethylhexane sulfonate	0.50 µg/ml
	Perfluoro-3,5-dimethylhexanoic acid	0.60 µg/ml



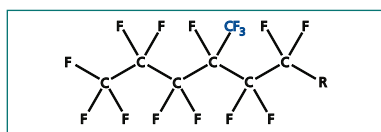
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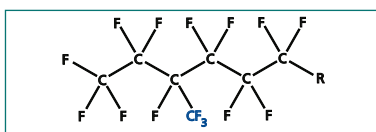
Perfluoro-1-methyl-



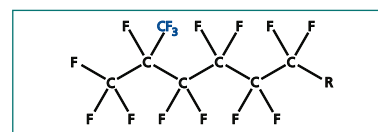
Perfluoro-3-methyl-



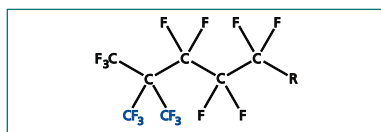
Perfluoro-4-methyl-



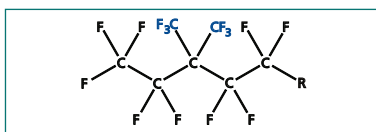
Perfluoro-5-methyl-



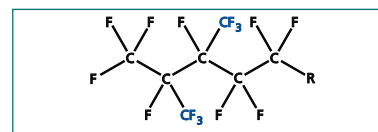
Perfluoro-6-methyl-



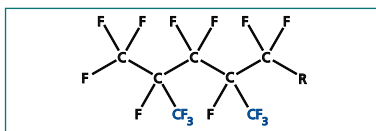
Perfluoro-5,5-dimethyl-



Perfluoro-4,4-dimethyl-



Perfluoro-4,5-dimethyl-



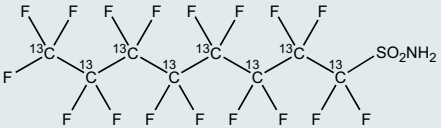
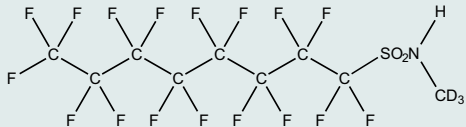
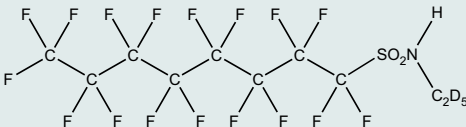
Perfluoro-3,5-dimethyl-

NOTE: R= CO₂⁻ and CF₂SO₃⁻
R'= SO₃⁻ only

NATIVE PERFLUOROCTANESULFONAMIDES (FOSAs)

Catalogue Number	Product (methanol solution)	Qty/Conc
FOSA-I	Perfluoro-1-octanesulfonamide (in isopropanol)	1.2 ml 50 µg/ml
N-MeFOSA-M	N-methylperfluoro-1-octanesulfonamide	1.2 ml 50 µg/ml
N,N-Me2FOSA-M	N,N-dimethylperfluoro-1-octanesulfonamide	1.2 ml 50 µg/ml
N-EtFOSA-M	N-ethylperfluoro-1-octanesulfonamide	1.2 ml 50 µg/ml

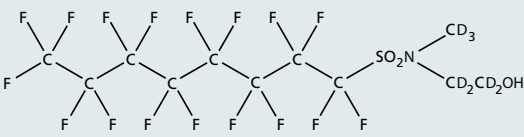
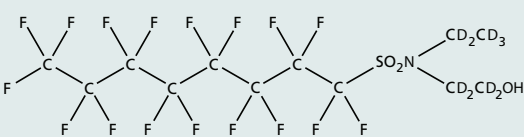
MASS-LABELLED PERFLUOROCTANESULFONAMIDES

Catalogue Number	Product
M8FOSA-I	 <p>Perfluoro-1-[¹³C₈]octanesulfonamide 1.2 ml; 50 µg/ml (±2.5 µg/ml); in isopropanol >99% linear; >99% ¹³C₈</p>
d-N-MeFOSA-M	 <p>N-methyl-d₃-perfluoro-1-octanesulfonamide 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; 98% ²H₃</p>
d-N-EtFOSA-M	 <p>N-ethyl-d₅-perfluoro-1-octanesulfonamide 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; 98% ²H₅</p>

NATIVE PERFLUOROCTANESULFONAMIDOETHANOLS (FOSEs)

Catalogue Number	Product (methanol solution)	Qty/Conc
N-MeFOSE-M	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	1.2 ml 50 µg/ml
N-EtFOSE-M	2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	1.2 ml 50 µg/ml

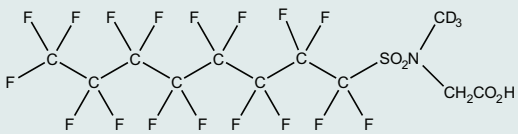
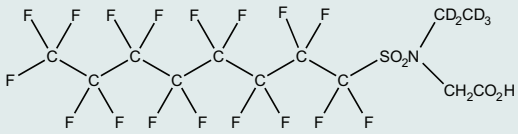
MASS-LABELLED PERFLUOROCTANESULFONAMIDOETHANOLS

Catalogue Number	Product
d7-N-MeFOSE-M	 <p>2-(N-methyl-d₃-perfluoro-1-octanesulfonamido)ethan-d₄-ol 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; 98% ²H₇</p>
d9-N-EtFOSE-M	 <p>2-(N-ethyl-d₅-perfluoro-1-octanesulfonamido)ethan-d₄-ol 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; 98% ²H₉</p>

NATIVE PERFLUOROOCETANESULFONAMIDOACETIC ACIDS (FOSAAs)

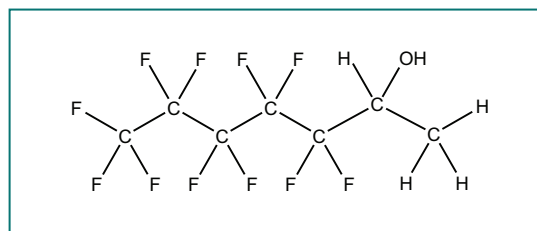
Catalogue Number	Product (methanol solution)	Qty/Conc
FOSAA	Perfluoro-1-octanesulfonamidoacetic acid (in isopropanol)	1.2 ml 50 µg/ml
N-MeFOSAA	N-methylperfluoro-1-octanesulfonamidoacetic acid	1.2 ml 50 µg/ml
N-EtFOSAA	N-ethylperfluoro-1-octanesulfonamidoacetic acid	1.2 ml 50 µg/ml

MASS-LABELLED PERFLUOROOCETANESULFONAMIDOACETIC ACIDS

Catalogue Number	Product
d3-N-MeFOSAA	 <p>N-methyl-d₃-perfluoro-1-octanesulfonamidoacetic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; 98% ²H₃</p>
d5-N-EtFOSAA	 <p>N-ethyl-d₅-perfluoro-1-octanesulfonamidoacetic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol >99% linear; 98% ²H₅</p>

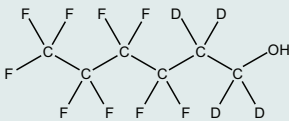
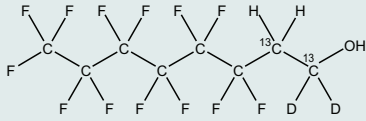
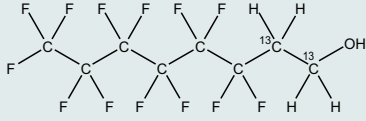
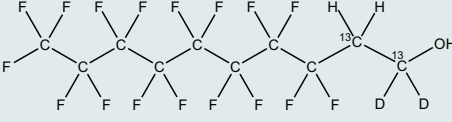
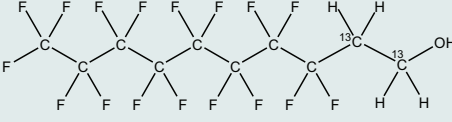
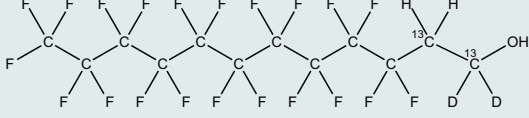
NATIVE TELOMER ALCOHOLS (FTOHs)

Catalogue Number	Product (methanol solution)	Qty/Conc
FBET	2-Perfluorobutyl ethanol (4:2)	1.2 ml 50 µg/ml
5:2sFTOH	1-Perfluoropentyl ethanol (5:2 secondary)	1.2 ml 50 µg/ml
FHET	2-Perfluorohexyl ethanol (6:2)	1.2 ml 50 µg/ml
7:2sFTOH	1-Perfluoroheptyl ethanol (7:2 secondary)	1.2 ml 50 µg/ml
FOET	2-Perfluorooctyl ethanol (8:2)	1.2 ml 50 µg/ml
FDET	2-Perfluorodecyl ethanol (10:2)	1.2 ml 50 µg/ml



5:2sFTOH: 1-Perfluoropentyl ethanol

MASS-LABELLED TELOMER ALCOHOLS

Catalogue Number	Product
MF BET	 <p>2-Perfluorobutyl-[1,1,2,2-²H₄]-ethanol 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; > 98% 1,1,2,2-²H₄</p>
MF HET	 <p>2-Perfluorohexyl-[1,1-²H₂]-[1,2-¹³C₂]-ethanol 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; 98% 1,1-²H₂, >99% 1,2-¹³C₂</p>
M2 FHET	 <p>2-Perfluorohexyl-[1,2-¹³C₂]-ethanol 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; >99% 1,2-¹³C₂</p>
MFO ET	 <p>2-Perfluorooctyl-[1,1-²H₂]-[1,2-¹³C₂]-ethanol 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; 98% 1,1-²H₂, >99% 1,2-¹³C₂</p>
M2 FO ET	 <p>2-Perfluorooctyl-[1,2-¹³C₂]-ethanol 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; >99% 1,2-¹³C₂</p>
MF DE T	 <p>2-Perfluorodecyl-[1,1-²H₂]-[1,2-¹³C₂]-ethanol 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; 98% 1,1-²H₂, >99% 1,2-¹³C₂</p>

NATIVE TELOMER ACIDS (FTAs)

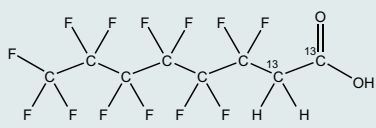
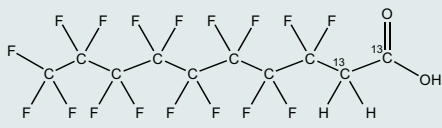
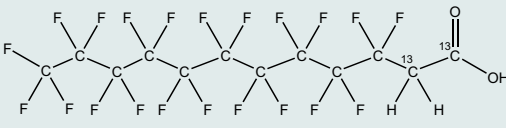
Catalogue Number	Product (isopropanol solution)	Qty/Conc
FHEA	2-Perfluorohexyl ethanoic acid (6:2)	1.2 ml 50 µg/ml
FOEA	2-Perfluorooctyl ethanoic acid (8:2)	1.2 ml 50 µg/ml
FDEA	2-Perfluorodecyl ethanoic acid (10:2)	1.2 ml 50 µg/ml

Catalogue Number	Product (methanol solution)	Qty/Conc
FPrPA	3-Perfluoropropyl propanoic acid (3:3)	1.2 ml 50 µg/ml
FPePA	3-Perfluoropentyl propanoic acid (5:3)	1.2 ml 50 µg/ml
FHpPA	3-Perfluoroheptyl propanoic acid (7:3)	1.2 ml 50 µg/ml

NATIVE TELOMER ACIDS: SOLUTION/MIXTURE

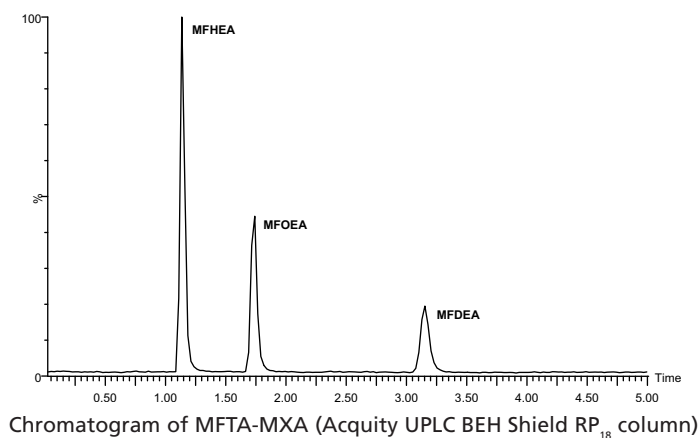
Catalogue Number	Product (isopropanol solution)	Qty/Conc
FTA-MXA	Native FTA Solution/Mixture	1.2 ml
	2-Perfluorohexyl ethanoic acid (6:2)	2 µg/ml
	2-Perfluorooctyl ethanoic acid (8:2)	2 µg/ml
	2-Perfluorodecyl ethanoic acid (10:2)	2 µg/ml

MASS-LABELLED TELOMER ACIDS

Catalogue Number	Product
MFHEA	 <p>2-Perfluorohexyl-[1,2-¹³C₂]-ethanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in isopropanol; > 99% ¹³C₂</p>
MFOEA	 <p>2-Perfluorooctyl-[1,2-¹³C₂]-ethanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in isopropanol; > 99% ¹³C₂</p>
MFDEA	 <p>2-Perfluorodecyl-[1,2-¹³C₂]-ethanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in isopropanol; > 99% ¹³C₂</p>

MASS-LABELLED TELOMER ACIDS: SOLUTION/MIXTURE

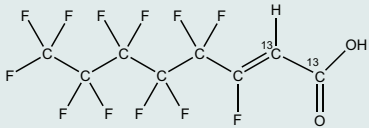
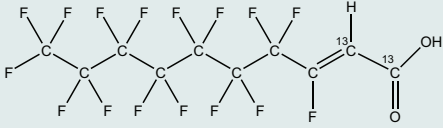
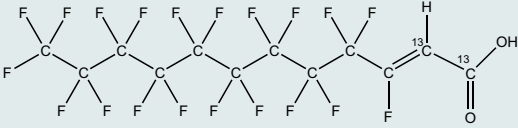
Catalogue Number	Product (isopropanol solution)	Qty/Conc
MFTA-MXA	Mass-Labelled FTA Solution/Mixture	1.2 ml
	2-Perfluorohexyl-[1,2- ¹³ C ₂]-ethanoic acid (6:2)	2 µg/ml
	2-Perfluorooctyl-[1,2- ¹³ C ₂]-ethanoic acid (8:2)	2 µg/ml
	2-Perfluorodecyl-[1,2- ¹³ C ₂]-ethanoic acid (10:2)	2 µg/ml



NATIVE UNSATURATED TELOMER ACIDS (FTUAs)

Catalogue Number	Product (isopropanol solution)	Qty/Conc
FHUEA	2H-Perfluoro-2-octenoic acid (6:2)	1.2 ml 50 µg/ml
FOUEA	2H-Perfluoro-2-decenoic acid (8:2)	1.2 ml 50 µg/ml
FDUEA	2H-Perfluoro-2-dodecenoic acid (10:2)	1.2 ml 50 µg/ml

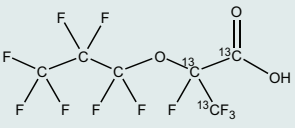
MASS-LABELLED UNSATURATED TELOMER ACIDS

Catalogue Number	Product
MFHUEA	 <p>2H-Perfluoro-[1,2-¹³C₂]-2-octenoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in isopropanol; > 99% ¹³C₂</p>
MFOUEA	 <p>2H-Perfluoro-[1,2-¹³C₂]-2-decenoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in isopropanol; > 99% ¹³C₂</p>
MFDEUA	 <p>2H-Perfluoro-[1,2-¹³C₂]-2-dodecenoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in isopropanol; > 99% ¹³C₂</p>

NATIVE HEXAFLUOROPROPYLENE OXIDE DIMER ACID

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 µg/ml

MASS-LABELLED HEXAFLUOROPROPYLENE OXIDE DIMER ACID

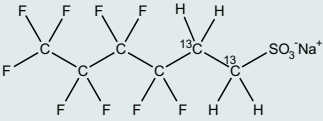
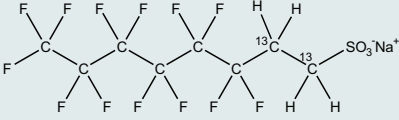
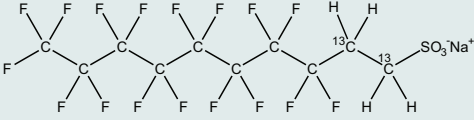
Catalogue Number	Product
M3HFPO-DA	 <p>2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-¹³C₃-propanoic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; > 99% ¹³C₃</p>

NATIVE TELOMER SULFONATES (FTSs)

Catalogue Number	Product (methanol solution)	Qty/Conc
4:2FTS	Sodium 1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	1.2 ml 50 µg/ml
6:2FTS	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	1.2 ml 50 µg/ml
8:2FTS	Sodium 1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	1.2 ml 50 µg/ml
10:2FTS	Sodium 1H,1H,2H,2H-perfluorododecane sulfonate (10:2)	1.2 ml 50 µg/ml

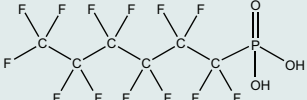
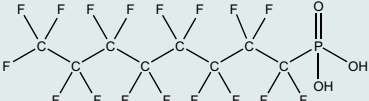
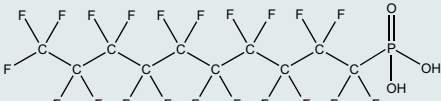
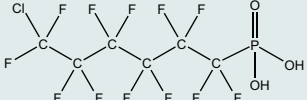
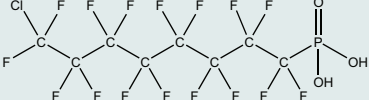
NOTE: Listed concentrations are reported as the salt.

MASS-LABELLED TELOMER SULFONATES

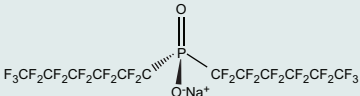
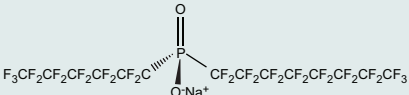
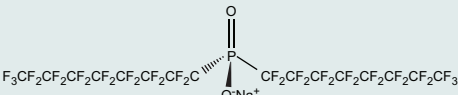
Catalogue Number	Product
M2-4:2FTS	 <p>Sodium 1H,1H,2H,2H-perfluoro-1-[1,2-¹³C₂]-hexane sulfonate (4:2) 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; > 99% ¹³C₂</p>
M2-6:2FTS	 <p>Sodium 1H,1H,2H,2H-perfluoro-1-[1,2-¹³C₂]-octane sulfonate (6:2) 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; > 99% ¹³C₂</p>
M2-8:2FTS	 <p>Sodium 1H,1H,2H,2H-perfluoro-1-[1,2-¹³C₂]-decane sulfonate (8:2) 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; > 99% ¹³C₂</p>

NOTE: Listed concentration is reported as the salt.

NATIVE PERFLUOROALKYLPHOSPHONIC ACIDS (PFAPAs)

Catalogue Number	Product
PFHxPA	 <p>Perfluorohexylphosphonic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol;</p>
PFOPA	 <p>Perfluorooctylphosphonic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol;</p>
PFDPA	 <p>Perfluorodecylphosphonic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol;</p>
Cl-PFHxPA	 <p>6-Chloroperfluorohexylphosphonic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol;</p>
Cl-PFOPA	 <p>8-Chloroperfluorooctylphosphonic acid 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol;</p>

NATIVE SODIUM PERFLUOROALKYL PHOSPHINATES (X:XPFPi)

Catalogue Number	Product
6:6PFPi 	Sodium bis(perfluorohexyl)phosphinate 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol;
6:8PFPi 	Sodium perfluorohexylperfluorooctylphosphinate 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol;
8:8PFPi 	Sodium bis(perfluorooctyl)phosphinate 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol;

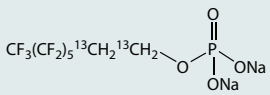
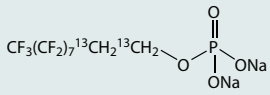
NATIVE MONO-SUBSTITUTED POLYFLUORINATED PHOSPHATE ESTERS

Catalogue Number	Product (methanol solution)	Qty/Conc
6:2PAP	Sodium 1H,1H,2H,2H-perfluorooctylphosphate	1.2 ml 50 µg/ml
8:2PAP	Sodium 1H,1H,2H,2H-perfluorodecylphosphate	1.2 ml 50 µg/ml

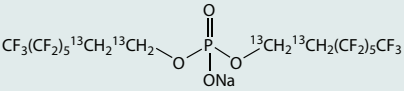
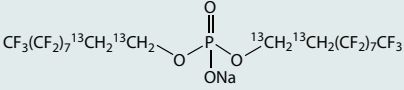
NATIVE DI-SUBSTITUTED POLYFLUORINATED PHOSPHATE ESTERS

Catalogue Number	Product (methanol solution)	Qty/Conc
6:2diPAP	Sodium bis(1H,1H,2H,2H-perfluorooctyl)phosphate	1.2 ml 50 µg/ml
6:2/8:2diPAP	Sodium (1H,1H,2H,2H-perfluorooctyl-1H,1H,2H,2H-perfluorodecyl)phosphate	1.2 ml 50 µg/ml
8:2diPAP	Sodium bis(1H,1H,2H,2H-perfluorodecyl)phosphate	1.2 ml 50 µg/ml

MASS-LABELLED MONO-SUBSTITUTED POLYFLUORINATED PHOSPHATE ESTERS (PAPs)

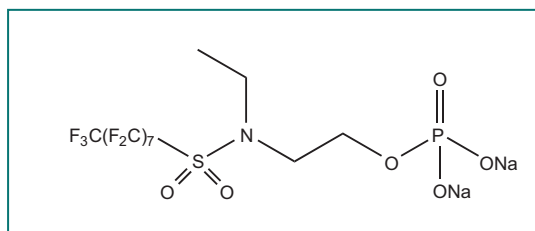
Catalogue Number	Product
M2-6:2PAP 	Sodium 1H,1H,2H,2H-[1,2- ¹³ C ₂]perfluorooctylphosphate 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; > 99% ¹³ C ₂
M2-8:2PAP 	Sodium 1H,1H,2H,2H-[1,2- ¹³ C ₂]perfluorodecylphosphate 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; > 99% ¹³ C ₂

MASS-LABELLED DI-SUBSTITUTED POLYFLUORINATED PHOSPHATE ESTERS (diPAPs)

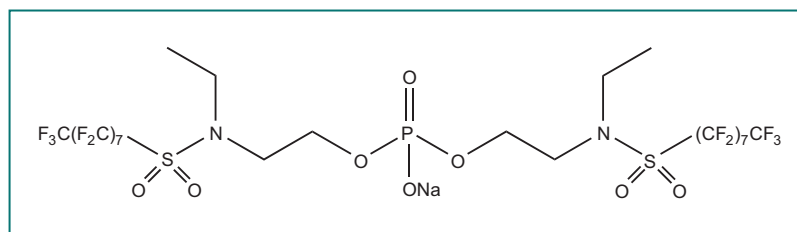
Catalogue Number	Product
M4-6:2diPAP 	Sodium bis(1H,1H,2H,2H-[1,2- ¹³ C ₂]perfluorooctyl)- phosphate 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; > 99% ¹³ C ₄
M4-8:2diPAP 	Sodium bis(1H,1H,2H,2H-[1,2- ¹³ C ₂]perfluorodecyl)- phosphate 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; > 99% ¹³ C ₄

NATIVE POLYFLUORINATED PHOSPHATE ESTERS (SAmPAPs)

Catalogue Number	Product (methanol solution)	Qty/Conc
SAmPAP	Sodium 2-(N-ethylperfluorooctane-1-sulfonamido)ethyl phosphate	1.2 ml 50 µg/ml
diSAmPAP	Sodium bis[2-(N-ethylperfluorooctane-1-sulfonamido)ethyl] phosphate	1.2 ml 50 µg/ml



SAmPAP



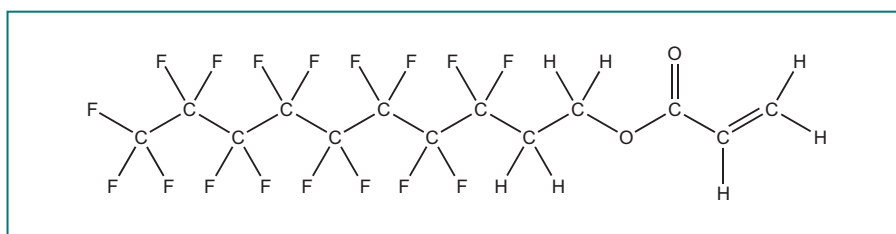
diSAmPAP

NATIVE TELOMER ACRYLATES (X:2FTAcr)

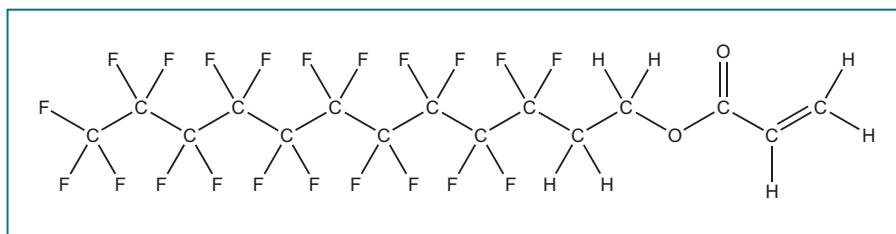
Catalogue Number	Product (isooctane solution)	Qty/Conc
8:2FTAcr	1H,1H,2H,2H-Perfluorodecyl acrylate	1.2 ml 50 µg/ml
10:2FTAcr	1H,1H,2H,2H-Perfluorododecyl acrylate (97%)	1.2 ml 48.5 µg/ml

NATIVE TELOMER ACETATES (X:2FTOAc)

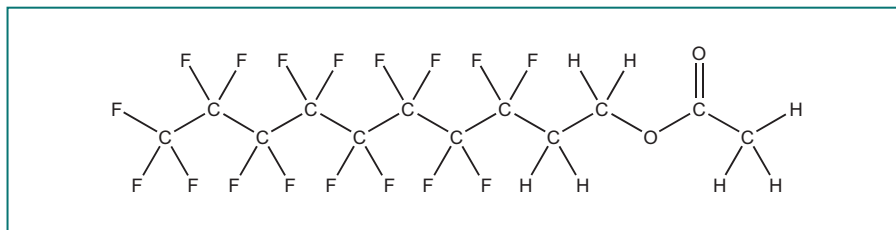
Catalogue Number	Product (isooctane solution)	Qty/Conc
8:2FTOAc	1H,1H,2H,2H-Perfluorodecyl acetate	1.2 ml 50 µg/ml
10:2FTOAc	1H,1H,2H,2H-Perfluorododecyl acetate	1.2 ml 50 µg/ml



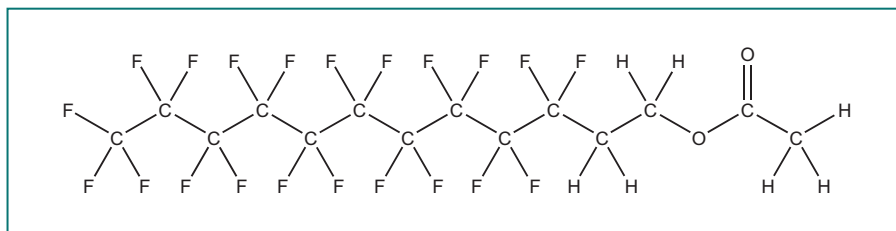
8:2FTAcr



10:2FTAcr



8:2FTOAc



10:2FTOAc