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Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade

Chemical Review Committee
Eighteenth meeting
Rome, 19–23 September 2022
Item 3 of the provisional agenda*

Review of the outcomes of the tenth meeting of the Conference of the Parties to the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade that are relevant to the work of the Committe

Indicative list of substances covered by the listing of perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds

Note by the Secretariat

1. In decision RC-10/7 on listing of perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds in Annex III to the Rotterdam Convention, the the Conference of the Parties at its tenth meeting listed perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds in Annex III to the Rotterdam Convention as follows:

“

Chemical	*Relevant CAS number(s)*	*Category*
Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds*	335-67-1	Industrial

*Note:

The following substances are included in this designation:

- Perfluorooctanoic acid (PFOA) and its salts
- Any related substance (including its salts and polymers) having a linear or branched perfluoroheptyl group with the formula C_7F_{15}- directly attached to another carbon atom as one of the structural elements
- Any related substance (including its salts and polymers) having a linear or branched perfluorooctyl group with the formula C_8F_{17}- as one of the structural elements

The following substances are excluded from this designation:

- C_8F_{17}-X, where X = F, Cl, Br
- C_8F_{17}-C(=O)OH, C_8F_{17}-C(=O)O-X′ or C_8F_{17}-CF_2-X′ (where X′ = any group, including salts)
- Perfluorooctane sulfonic acid (PFOS) and its derivatives ($C_8F_{17}SO_2X$ (X = OH, metal salt (O-M+), halide, amide and other derivatives including polymers)).”

* UNEP/FAO/RC/CRC.18/1.

2. At the same meeting, in decision RC-10/8 on the identification of substances covered by the listing of perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds, the Conference of the Parties requested the Secretariat to prepare, in consultation with the Chemical Review Committee, an indicative list of PFOA, its salts and PFOA-related compounds, make it available on the website of the Convention and update it periodically.

3. PFOA, its salts and PFOA-related compounds are listed in Annex A to the Stockholm Convention with the following definition:

> "Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds" means the following:
>
> (i) Perfluorooctanoic acid (PFOA; CAS No: 335-67-1), including any of its branched isomers;
>
> (ii) Its salts;
>
> (iii) PFOA-related compounds which, for the purposes of the Convention, are any substances that degrade to PFOA, including any substances (including salts and polymers) having a linear or branched perfluoroheptyl group with the moiety (C_7F_{15}) C as one of the structural elements;
>
> The following compounds are not included as PFOA-related compounds:
>
> (i) C_8F_{17}-X, where X= F, Cl, Br;
>
> (ii) Fluoropolymers that are covered by $CF_3[CF_2]_n$-R', where R'=any group, n>16;
>
> (iii) Perfluoroalkyl carboxylic and phosphonic acids (including their salts, esters, halides and anhydrides) with ≥8 perfluorinated carbons;
>
> (iv) Perfluoroalkane sulfonic acids (including their salts, esters, halides and anhydrides) with ≥9 perfluorinated carbons;
>
> (v) Perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF), as listed in Annex B to the Convention."

4. Pursuant to paragraph 8 and 9 of decision SC-9/13 on actions related to perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds adopted by the Conference of the Parties to the Stockholm Convention at its tenth meeting, the Secretariat has prepared and updated, taking into account the information provided by Parties and others and in consultation with the Persistent Organic Pollutants Review Committee, an indicative list of PFOA, its salts and PFOA-related compounds as set out in document UNEP/POPS/POPRC.17/INF/14/Rev.1. The list is available on the website of the Stockholm Convention.[1]

5. Furthermore, in paragraph 6 of decision SC-10/12 on the operation of the Persistent Organic Pollutants Review Committee, the Conference of the Parties to the Stockholm Convention at its tenth meeting invited Parties and observers to submit to the Secretariat any further information regarding the identification of substances covered by the listing of PFOA, its salts and PFOA-related compounds so that the information can be considered when the indicative list of PFOA, its salts and PFOA-related compounds is further updated pursuant to paragraph 9 of decision SC-9/13.

6. On the basis of information contained in document UNEP/POPS/POPRC.17/INF/14/Rev.1, the following draft indicative lists have been prepared as set out in the annex to the present note:

(a) Table 1: Draft indicative list of substances covered by the listing of PFOA, its salts and PFOA-related compounds;

(b) Table 2: Draft indicative list of substances not covered by the listing of PFOA, its salts and PFOA-related compounds.

(c) Table 3: 2D structural formulas for some selected substances;

7. The present note, including its annex, has not been formally edited.

[1] http://chm.pops.int/TheConvention/ThePOPs/AllPOPs/tabid/2509/Default.aspx.

Annex

Draft indicative list of substances covered by the listing of PFOA, its salts and PFOA-related compounds[2]

Table 1: Draft indicative list of substances covered by the listing of PFOA, its salts and PFOA-related compounds

This list does not include sulfluramid (*N*-EtFOSA, *N*-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonamide, CAS No. 4151-50-2), as it is covered by the listing of "perfluorooctane sulfonic acid, perfluorooctane sulfonates, perfluorooctane sulfonamides and perfluorooctane sulfonyls…" in Annex III to the Rotterdam Convention.

Known precursors of perfluorooctanoic acid (PFOA) are included based on the information made available to the Secretariat. The information on commercial use of PFOA, its salts and PFOA-related compounds is limited in the public domain. Parties and observers may wish to provide information on use of PFOA, its salts and PFOA-related compounds (brs@un.org) or consult information available in substance inventories such as the OECD Global Portal to Information on Chemical Substances (eChemPortal).

Notes:

a. Hyperlinks to the CAS Common Chemistry database are provided for those CAS numbers that have entries in that database;

b. Perfluorooctanoic acid (PFOA; CAS No: 335-67-1), including any of its branched isomers;

c. Salts of perfluorooctanoic acid (PFOA; CAS No: 335-67-1);

d. PFOA-related compounds which, for the purposes of the Convention, are the following:

- Any related substance (including its salts and polymers) having a linear or branched perfluoroheptyl group with the formula C_7F_{15}- directly attached to another carbon atom as one of the structural elements;
- Any related substance (including its salts and polymers) having a linear or branched perfluorooctyl group with the formula C_8F_{17}- as one of the structural elements

e. 8:2 fluorotelomer compounds;

f. References on transformation to PFOA are provided for those precursors that do not fall under the descriptions in columns (a) or (b), i.e., have the column 'Other' ticked. Existing studies have not tested PFOA precursors on an individual compound basis, but provide a well-established mechanistic understanding of the transformation pathways of groups of PFOA precursors that share similar molecular traits (e.g., n:2 fluorotelomer compounds with $n \geq 8$);

g. 'x' indicates that the structural formula of this chemical is available in Table 3; '↑' and '↓' indicate that the latest or next substance with a structural formula is closely related to this one (i.e., different cation or different perfluoro chain length). Structural formulas of other chemicals are available on the website of the Rotterdam Convention.[3]

[2] The indicative list is not an exhaustive list.

[3] http://www.pic.int/crc18. Please see "Chemical structures of PFOA, its salts and PFOA-related compounds", United States of America, 2021.

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
PFOA										
335-67-1	PFOA	Perfluorooctanoic acid		x						
45285-51-6	PFO	Perfluorooctanoate (conjugate base of the free acid) Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, ion(1-)		x						
PFOA isomers										
90480-55-0		Branched perfluorooctanoic acid		x						
1882109-81-0		Hexanoic acid, 2,2,3,4,5,5,6,6,6-nonafluoro-3,4-bis(trifluoromethyl)-		x						
1882109-80-9		Hexanoic acid, 2,3,3,4,4,5,6,6,6-nonafluoro-2,5-bis(trifluoromethyl)-		x						
1882109-79-6		Hexanoic acid, 2,2,3,3,4,5,5,6,6,6-decafluoro-4-(1,1,2,2,2-pentafluoroethyl)-		x						
1882109-78-5		Hexanoic acid, 2,2,3,4,4,5,5,6,6,6-decafluoro-3-(1,1,2,2,2-pentafluoroethyl)-		x						
1882109-77-4		Pentanoic acid, 2,3,3,4,4,5,5,5-octafluoro-2-(1,1,2,2,3,3,3-heptafluoropropyl)-		x						
1882109-76-3		Pentanoic acid, 2,3,3,4,4,5,5,5-octafluoro-2-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-		x						
1882109-75-2		Pentanoic acid, 2,2,3,5,5,5-hexafluoro-3,4,4-tris(trifluoromethyl)-		x						
1882109-74-1		Pentanoic acid, 2,2,4,5,5,5-hexafluoro-3,3,4-tris(trifluoromethyl)-		x						
1882109-73-0		Pentanoic acid, 2,3,3,5,5,5-hexafluoro-2,4,4-tris(trifluoromethyl)-		x						
1882109-72-9		Pentanoic acid, 2,3,4,5,5,5-hexafluoro-2,3,4-tris(trifluoromethyl)-		x						
1882109-71-8		Pentanoic acid, 2,4,4,5,5,5-hexafluoro-2,3,3-tris(trifluoromethyl)-		x						
1882109-70-7		Pentanoic acid, 3,3,4,5,5,5-hexafluoro-2,2,4-tris(trifluoromethyl)-		x						
1882109-68-3		Pentanoic acid, 2,2,3,4,5,5,5-heptafluoro-3-(1,1,2,2,2-pentafluoroethyl)-4-(trifluoromethyl)-		x						

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
1882109-67-2		Pentanoic acid, 2,2,4,4,5,5,5-heptafluoro-3-(1,1,2,2,2-pentafluoroethyl)-3-(trifluoromethyl)-		x						
1882109-66-1		Pentanoic acid, 2,3,4,4,5,5,5-heptafluoro-3-(1,1,2,2,2-pentafluoroethyl)-2-(trifluoromethyl)-		x						
1882109-65-0		Pentanoic acid, 2,3,3,4,5,5,5-heptafluoro-2-(1,1,2,2,2-pentafluoroethyl)-4-(trifluoromethyl)-		x						
1882109-64-9		Pentanoic acid, 2,3,4,4,5,5,5-heptafluoro-2-(1,1,2,2,2-pentafluoroethyl)-3-(trifluoromethyl)-		x						
1882109-63-8		Pentanoic acid, 3,3,4,4,5,5,5-heptafluoro-2-(1,1,2,2,2-pentafluoroethyl)-2-(trifluoromethyl)-		x						
1882109-69-4		Pentanoic acid, 3,4,4,5,5,5-hexafluoro-2,2,3-tris(trifluoromethyl)-		x						
1882109-62-7		Butanoic acid, 4,4,4-trifluoro-2,2,3,3-tetrakis(trifluoromethyl)-		x						
1882109-61-6		Butanoic acid, 2,3,4,4,4-pentafluoro-2-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-3-(trifluoromethyl)-		x						
1882109-60-5		Butanoic acid, 2,3,3,4,4,4-hexafluoro-2-[2,2,2-trifluoro-1,1-bis(trifluoromethyl)ethyl]-		x						
1882109-59-2		Butanoic acid, 3,3,4,4,4-pentafluoro-2-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-2-(trifluoromethyl)-		x						
1882109-58-1		Butanoic acid, 3,3,4,4,4-pentafluoro-2,2-bis(1,1,2,2,2-pentafluoroethyl)-		x						
1812247-20-3		Hexanoic acid, 2,2,4,4,5,5,6,6,6-nonafluoro-3,3-bis(trifluoromethyl)-		x						
1812247-19-0		Hexanoic acid, 2,3,3,4,5,5,6,6,6-nonafluoro-2,4-bis(trifluoromethyl)-		x						
1812247-18-9		Hexanoic acid, 2,3,4,4,5,5,6,6,6-nonafluoro-2,3-bis(trifluoromethyl)-		x						
1812247-17-8		Hexanoic acid, 3,3,4,4,5,5,6,6,6-nonafluoro-2,2-bis(trifluoromethyl)-		x						
1192593-79-5		Hexanoic acid, 2,2,3,3,5,5,6,6,6-nonafluoro-4,4-bis(trifluoromethyl)-		x						

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
1144512-36-6		Hexanoic acid, 2,2,3,3,4,5,6,6,6-nonafluoro-4,5-bis(trifluoromethyl)-		x						
1144512-35-5		Hexanoic acid, 2,2,3,4,4,5,6,6,6-nonafluoro-3,5-bis(trifluoromethyl)-		x						
1144512-34-4		Hexanoic acid, 2,2,3,3,4,4,6,6,6-nonafluoro-5,5-bis(trifluoromethyl)-		x						
1144512-18-4		Heptanoic acid, 2,2,3,3,4,5,5,6,6,7,7,7-dodecafluoro-4-(trifluoromethyl)-		x						
909009-42-3		Heptanoic acid, 2,2,3,3,4,4,5,6,6,7,7,7-dodecafluoro-5-(trifluoromethyl)-		x						
705240-04-6		Heptanoic acid, 2,2,3,4,4,5,5,6,6,7,7,7-dodecafluoro-3-(trifluoromethyl)-		x						
207678-51-1		Heptanoic acid, 2,3,3,4,4,5,5,6,6,7,7,7-dodecafluoro-2-(trifluoromethyl)-		x						
123116-17-6		Isooctanoic acid, pentadecafluoro-		x						
35605-76-6		Hexanoic acid, 2,3,3,4,4,5,5,6,6,6-decafluoro-2-(1,1,2,2,2-pentafluoroethyl)-		x						
15166-06-0		Heptanoic acid, 2,2,3,3,4,4,5,5,6,7,7,7-dodecafluoro-6-(trifluoromethyl)-		x						
PFOA salts (including linear and branched isomers)										
90480-56-1	APFO	Octanoic acid, pentadecafluoro-, branched, ammonium salt			x					
3825-26-1	APFO	Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, ammonium salt (1:1)			x					
335-95-5	Na-PFOA	Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, sodium salt (1:1)			x					
2395-00-8	K-PFOA	Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, potassium salt (1:1)			x					
17125-58-5	Li-PFOA	Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, lithium salt (1:1)	$Li^+ C_7F_{15}COO^-$		x					
335-93-3		Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, silver(1+) salt (1:1)			x					
68141-02-6		Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, chromium(3+) salt (3:1)			x					
98241-25-9		Ethanaminium, *N*,*N*,*N*-triethyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctanoate (1:1)			x					

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
13058-06-5		Hexanoic acid, 2,3,3,4,4,5,5,6,6,6-decafluoro-2-(1,1,2,2,2- pentafluoroethyl)-, ammonium salt (1:1)			x					
1195164-59-0		Hexanoic acid, 2,3,3,4,4,5,5,6,6,6-decafluoro-2-(1,1,2,2,2-pentafluoroethyl)-, sodium salt (1:1)			x					
19742-57-5		Heptanoic acid, 2,2,3,3,4,4,5,5,6,7,7,7-dodeca fluoro-6-(trifluoromethyl)-, ammonium salt (1:1)			x					
61436-04-2		Heptanoic acid, 2,2,3,3,4,4,5,5,6,7,7,7-dodecafluoro-6-(trifluoromethyl)-, iron salt (1:x)			x					
29457-73-6		Heptanoic acid, 2,2,3,3,4,4,5,5,6,7,7,7-dodeca fluoro-6-(trifluoromethyl)-, potassium salt (1:1)			x					
18017-22-6		Heptanoic acid, 2,2,3,3,4,4,5,5,6,7,7,7-dodeca fluoro-6-(trifluoromethyl)- , sodium salt (1:1)			x					
15739-82-9		Heptanoic acid, 2,2,3,3,4,4,5,5,6,7,7,7-dodeca fluoro-6-(trifluoromethyl)-, chromium salt (1:x)			x					
15715-47-6		Heptanoic acid, 2,2,3,3,4,4,5,5,6,7,7,7-dodeca fluoro-6-(trifluoromethyl)-, aluminum salt (3:1)			x					
Other PFCA mixtures containing PFOA										
68333-92-6		Fatty acids, C_{7-13}, perfluoro						x	7	
69278-80-4		Ethylamine salts of C_7-C_{13} perfluorinated fatty acids						x	7	
91032-01-8		Fatty acids, C_{7-19}, perfluoro						x	7	
72968-38-8		Fatty acids, C_{7-13}, perfluoro, ammonium salts						x	7	
72623-77-9		Fatty acids, C_{6-18}, perfluoro, ammonium salts	contains NH_4^+ $C_7F_{15}COO^-$					x	7	
PFOA esters and anhydrides										
376-27-2		Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, methyl ester						x	7	
3108-24-5		Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, ethyl ester						x	7	

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
33496-48-9		Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, 1,1'-anhydride						x	7	
Perfluoroalkyl phosphinic acids (PFPiAs)										
68412-69-1		Phosphinic acid, bis(perfluoro-C_{6-12}-alkyl) derivs.						x		
93062-53-4		Phosphinic acid, bis(perfluoro-C_{6-12}-alkyl) derivs., aluminum salts						x		
40143-79-1	C_8/C_8-PFPIA	Bis(perfluorooctyl)phosphinic acid						x		
610800-34-5	C_6/C_8-PFPIA	Phosphinic acid, P-(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)-P-(1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluorohexyl)-						x		
Perfluoroalkyl halides (incl. linear and branched isomers)										
335-66-0		Octanoyl fluoride, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-						x	7	
507-63-1	PFOI	Perfluorooctyl iodide						x	7	
90622-71-2		Alkyl iodides, C_{6-18}, perfluoro						x		
Fluorotelomer iodides (FTIs)										
2043-53-0	8:2 FTI	Decane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-10-iodo-					x		7	
68188-12-5	FTIs	Alkyl iodides, C_{4-20}, γ-ω-perfluoro						x		
68390-33-0	FTIs	Alkyl iodides, C_{10-12}, γ-ω-perfluoro						x		
Fluorotelomer olefins (FTOs)										
21652-58-4	8:2 FTO	8:2 Fluorotelomer olefin 1-Decene, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-					x		7	
Fluorotelomer alcohols (FTOHs)										
678-39-7	8:2 FTOH	1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-	$C_8F_{17}CH_2CH_2OH$				x		7	

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
Fluorotelomer saturated and non-saturated acids (FTCAs and FTUCAs)										
70887-84-2	8:2 FTUCA	2-Decenoic acid, 3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-hexadecafluoro-					x		7	
27854-31-5	8:2 FTCA	Decanoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-					x			
Fluorotelomer phosphate esters (PAPs)										
54009-73-3		1,2-Undecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,11,11,11-hexa decafluoro-10-(trifluoromethyl)-, 1-(dihydrogen phosphate)	$(F_3C)_2CFC_6F_{12}CH_2CH(OH)CH_2OP(=O)(OH)_2$					x		
63295-27-2		1,2-Tridecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,13,13,13-eicosafluoro-12-(trifluoromethyl)-, 1-(dihydrogen phosphate)	$(F_3C)_2CFC_8F_{16}CH_2CH(OH)CH_2OP(=O)(OH)_2$					x		
63295-28-3		1,2-Pentadecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,15,15,15-tetracosafluoro-14-(trifluoromethyl)-, 1-(dihydrogen phosphate)	$(F_3C)_2CFC_{10}F_{20}CH_2CH(OH)CH_2OP(=O)(OH)_2$					x		
63295-29-4		1,2-Heptadecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,17,17,17-octacosafluoro-16-(trifluoromethyl)-, 1-(dihydrogen phosphate)	$(F_3C)_2CFC_{12}F_{24}CH_2CH(OH)CH_2OP(=O)(OH)_2$					x		
63295-18-1		1,2-Undecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,11,11,11-hexa decafluoro-10-(trifluoromethyl)-, 1-(dihydrogen phosphate), diammonium salt	$2\ NH_4^+$ $(F_3C)_2CFC_6F_{12}CH_2CH(OH)CH_2OPO_3^{2-}$					x	3, 4	x
63295-19-2		1,2-Undecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,11,11,11-hexa decafluoro-10-(trifluoromethyl)-, 1-(dihydrogen phosphate), compd. with 2,2′-iminobis[ethanol] (1:2)	$2\ NH_2^+(CH_2CH_2OH)_2$ $(F_3C)_2CFC_6F_{12}CH_2CH(OH)CH_2OPO_3^{2-}$					x	3, 4	x
63295-23-8		2-Undecanol, 4,4,5,5,6,6,7,7,8,8,9,9,10,11,11,11-hexadecafluoro-10-(trifluoromethyl)-, dihydrogen phosphate, diammonium salt	$2\ NH_4^+$ $(F_3C)_2CFC_6F_{12}CH_2CH(CH_3)OPO_3^{2-}$					x	3, 4	x

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
63295-24-9		Acetic acid, 2-[[3,3,4,4,5,5,6,6,7,7,8,8,9,10,10, 10-hexadecafluoro-1-[(phosphonooxy)methyl]-9-(trifluoromethyl) decyl]oxy]-, ammonium salt (1:2)	2 NH_4^+ $(F_3C)_2CFC_6F_{12}CH_2CH(OCH_2COOH)CH_2OPO_3^{2-}$					x	3, 4	x
63295-22-7		1-Undecanol, 2-chloro-4,4,5,5,6,6,7,7,8,8,9,9,10, 11,11,11-hexadecafluoro-10-(trifluoromethyl)-, dihydrogen phosphate	$(F_3C)_2CFC_6F_{12}CH_2CH(Cl)CH_2OP(=O)(OH)_2$					x	3, 4	x
94158-70-0		1,2-Tridecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,13-heneicosafluoro-, 1-(dihydrogen phosphate)						x		
57678-03-2	8:2 monoPAP	8:2 Fluorotelomer phosphate monoester					x		7	
		1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-, 1-(dihydrogen phosphate)							7	
678-41-1	8:2 diPAP	8:2 Fluorotelomer phosphate diester					x			
		1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-, 1,1'-(hydrogen phosphate)								
93857-44-4		1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-, dihydrogen phosphate, diammonium salt	2 NH_4^+ $C_8F_{17}CH_2CH_2OPO_3^{2-}$				x		7	
90179-37-6		2-Undecanol, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11, 11,11-heptadecafluoro-, dihydrogen phosphate, potassium salt	x K^+ $C_8F_{17}CH_2CH(CH_3)OPO_3^{2-}$					x	3, 4	
98005-85-7		Diphosphoric acid, mono(3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10,10-heptadecafluorodecyl) ester, compd. with 2,2′,2″-nitrilotris[ethanol] (1:3)	3 $N(CH_2CH_2OH)_3$ $C_8F_{17}CH_2CH_2OP(=O)(OH)OP(=O)(OH)_2$				x			x
98005-84-6		Diphosphoric acid, mono(3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10,10-heptadecafluorodecyl) ester, compd. with 2-aminoethanol (1:3)	3 $NH_2CH_2CH_2OH$ $C_8F_{17}CH_2CH_2OP(=O)(OH)OP(=O)(OH)_2$				x			x
1158182-60-5	8:2/10:2 diPAP	Phosphoric acid, mono(3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10,11,11,12,12,12-heneicosafluoro dodecyl) mono(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10, 10,10-heptadecafluorodecyl) ester	$(O)P(OH)(OCH_2CH_2C_8F_{17})(OCH_2CH_2C_{10}F_{21})$				x			x

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
1578186-42-1	8:2/12:2 diPAP	Phosphoric acid, mono(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl) mono(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluorotetradecyl) ester	$(O)P(OH)(OCH_2CH_2C_8F_{17})(OCH_2CH_2C_{12}F_{25})$				x			↑
93776-20-6	Ammonium salt of 8:2 diPAP	Ammonium bi(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl) phosphate	NH_4^+ $OP(O^-)(OCH_2CH_2C_8F_{17})_2$				x			x
2343-53-5		1-Nonadecanol, 12,12,13,13,14,14,15,15,16,16,17,17, 18,18,19,19,19-heptadecafluoro-, dihydrogen phosphate	$OP(OH)[O(CH_2)_{11}C_8F_{17}]_2$				x			x
1578186-53-4	6:2/6:2/8:2 triPAP	Phosphoric acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl bis(3,3,4,4,5,5,6,6, 7,7,8,8,8-tridecafluorooctyl) ester	$OP(OCH_2CH_2C_6F_{13})_2OCH_2CH_2C_8F_{17}$				x			x
1578186-56-7	6:2/8:2/8:2 triPAP	Phosphoric acid, bis(3,3,4,4,5,5,6,6,7,7,8,8,9,9, 10,10,10-heptadecafluorodecyl) 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl ester	$OP(OCH_2CH_2C_8F_{17})_2OCH_2CH_2C_6F_{13}$				x			↑
1578186-64-7	6:2/8:2/10:2 triPAP	Phosphoric acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10, 11,11,12,12,12-heneicosafluorododecyl 3,3,4,4, 5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl ester	$OP(OCH_2CH_2C_6F_{13})(OCH_2CH_2C_8F_{17})OCH_2CH_2C_{10}F_{21}$				x			↑
149790-22-7	8:2 triPAP	1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-, 1,1',1''-phosphate	$OP(OCH_2CH_2C_8F_{17})_3$				x			↑
441765-20-4		1-Decanesulfonamide, 3,3,4,4,5,5,6,6,7,7,8,8,9, 9,10,10,10-heptadecafluoro-*N*-[3-(phosphorno oxy)propyl]-*N*-propyl-, sodium salt (1:2)	$2\ Na^+$ $C_8F_{17}CH_2CH_2SO_2N(C_3H_7)CH_2CH_2CH_2OPO_3^{2-}$				x			x
Fluorotelomer acrylates and methacrylates (FTACs and FTMACs)										
27905-45-9	8:2 FTAC	8:2 Fluorotelomer acrylate					x		7	
		2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9, 10,10,10-heptadecafluorodecyl ester							7	
1996-88-9		8:2 Fluorotelomer methacrylate					x		7	

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
	8:2 FTMAC	2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester								
85631-54-5	FTACs	2-Propenoic acid, γ-ω-perfluoro-C8-14-alkyl esters					x	x		
146955-29-5		2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10, 10,10-heptadecafluoro-1-(hydroxymethyl)decyl ester	$C_8F_{17}CH_2CH(CH_2OH)OC(O)CH=CH_2$				x			x
76962-34-0		2-Propenoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10, 11,11,11-heptadecafluoro-2-hydroxyundecyl ester	$C_8F_{17}CH_2CH(OH)CH_2OC(O)CH=CH_2$				x			x
Other fluorotelomer-based non-polymers										
99955-83-6	8:2 FTS	8:2 Fluorotelomer stearate monoester					x			
		Octadecanoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester								
302911-86-0		8:2 Fluorotelomer citrate triester					x			
		Pentanedioic acid, 3-[2-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)oxy]-2-oxoethyl]-3-hydroxy-, 1,5-bis(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl) ester								
3102-79-2		Perfluorooctylethyldichloromethyl silane					x		7	
74612-30-9		Perfluorooctylethyldimethylchlorosilane					x			
101947-16-4		Perfluorooctylethyltriethoxysilane	$C_8F_{17}CH_2CH_2Si(OCH_2CH_3)_3$				x			↓
78560-44-8		Perfluorooctylethyltrichlorosilane					x			
83048-65-1		Perfluorooctylethyltrimethoxysilane	$C_8F_{17}CH_2CH_2Si(OCH_3)_3$				x			
246234-80-0		Silane, (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)tris(1-methylethoxy)-	$C_8F_{17}CH_2CH_2Si[OCH(CH_3)_2]_3$				x			x
1189587-64-1		Silane, tetrakis[2-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)thio]ethyl]-	$Si(CH_2CH_2SCH_2CH_2C_8F_{17})_4$				x			x
68187-42-8		Propanamide, 3-[(γ-ω-perfluoro-C_{4-10}-alkyl)thio] derivatives					x			
70969-47-0		Thiols, C_{8-20}, γ-ω-perfluoro, telomers with acrylamide				x				

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
95370-51-7		Carbamic acid, [2-(sulphothio)ethyl]-, C-(γ-ω-perfluoro-C_{6-9}-alkyl) esters, monosodium salts						x	7	
148240-85-1		1,3-Propanediol, 2,2-bis[[(γ-ω-perfluoro-C_{4-10}-alkyl)thio]methyl] derivatives, phosphates, ammonium salts					x		7	
148240-87-3		1,3-Propanediol, 2,2-bis[[(γ-ω-perfluoro-C_{6-12}-alkyl)thio]methyl] derivatives, phosphates, ammonium salts					x		7	
148240-89-5		1,3-Propanediol, 2,2-bis[[(γ-ω-perfluoro-C_{10-20}-alkyl)thio]methyl] derivs., phosphates, ammonium salts					x	x		
183146-60-3		Oxirane, methyl-, polymer with oxirane, mono[2-hydroxy-3-[(γ-ω-perfluoro-C_{8-20}-alkyl)thio]propyl] ethers				x				
71608-61-2		Pentanoic acid, 4,4-bis[(γ-ω-perfluoro-C_{8-20}-alkyl)thio]derivs., compds. with diethanolamine					x	x	7	
94200-45-0		1,2-Undecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-heptadecafluoro-, 1-(dihydrogen phosphate), ammonium salt (1:2)					x		7	
77117-48-7	F_8H_2	Decane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$F(CF_2)_8(CH_2)_2H$				x			x
1835250-28-6	F_8H_3	Undecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$F(CF_2)_8(CH_2)_3H$				x			x
182130-12-7	F_8H_4	Dodecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$F(CF_2)_8(CH_2)_4H$				x			↑
1835250-47-9	F_8H_5	Tridecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$F(CF_2)_8(CH_2)_5H$				x			↑
182130-14-9	F_8H_6	Tetradecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$F(CF_2)_8(CH_2)_6H$				x			↑
182130-15-0	F_8H_7	Pentadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$F(CF_2)_8(CH_2)_7H$				x			↑
6145-05-7	F_8H_8	Hexadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$F(CF_2)_8(CH_2)_8H$				x			↑
931415-52-0	F_8H_9	Heptadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$F(CF_2)_8(CH_2)_9H$				x			↑
138472-76-1	F_8H_{10}	Octadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$F(CF_2)_8(CH_2)_{10}H$				x			↑

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
117146-18-6	F_8H_{16}	Tetracosane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$F(CF_2)_8(CH_2)_{16}H$				x			↑
133310-73-3	F_8H_{18}	Hexacosane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$F(CF_2)_8(CH_2)_{18}H$				x			↑
137338-39-7	F_8H_{20}	Octacosane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$F(CF_2)_8(CH_2)_{20}H$				x			↑
137338-40-0	F_8H_{22}	Triacontane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$F(CF_2)_8(CH_2)_{22}H$				x			↑
137338-41-1	F_8H_{24}	Dotriacontane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$F(CF_2)_8(CH_2)_{24}H$				x			↑
133299-41-9		Eicosane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8, 13,13,14,14,15,15,16,16,17,17,18,18,19,19,20 ,20,20-tetratriacontafluoro-	$C_8F_{17}C_4H_8C_8F_{17}$				x			x
100550-08-1		Tetracosane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,17, 17,18,18,19,19,20,20,21,21,22,22,23,23,24, 24,24-tetratriacontafluoro-	$C_8F_{17}C_8H_{16}C_8F_{17}$				x			x
1244062-16-5		9-Tetracosene, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$C_8F_{17}CH{=}CH(CH_2)_{14}H$					x	3, 4	x
423-56-3	8:1 FTOH	1-Nonanol, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptadecafluoro-	$C_8F_{17}CH_2OH$					x	5	
135984-68-8	8:2 FTAL	Decanal, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-	$C_8F_{17}CH_2CHO$				x		7	
63967-40-8	PFNAL	Nonanal, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptadecafluoro-	$C_8F_{17}CHO$					x	3	
56900-98-2		Ethanol, 2-[2-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9, 10,10,10-heptadecafluorodecyl)oxy]ethoxy]-	$C_8F_{17}CH_2CH_2(OCH_2CH_2)_2OH$				x			
88243-13-4		Propanol, [2-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10, 10-heptadecafluorodecyl)oxy]methylethoxy]-	$C_8F_{17}CH_2CH_2(OCH_2CH_2)_2OH$ (2 H are replaced by 2 CH_3)				x			
88243-12-3		Ethanol, 2-[2-[2-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10, 10,10-heptadecafluorodecyl)oxy]methylethoxy] methylethoxy]-	$C_8F_{17}CH_2CH_2(OCH_2CH_2)_3OH$ (2 H are replaced by 2 CH_3)				x			
55427-54-8		3,6,9,12-Tetraoxadocosan-1-ol, 15,15,16,16,17, 17,18,18,19,19,20,20,21,21,22,22,22-heptadecafluoro-	$C_8F_{17}CH_2CH_2(OCH_2CH_2)_4OH$				x			x

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
88271-22-1		3,6,9,12-Tetraoxadocosan-1-ol, 15,15,16,16,17, 17,18,18,19,19,20,20,21,21,22,22,22-heptadecafluorodimethyl-	$C_8F_{17}CH_2CH_2(OCH_2CH_2)_4OH$ (2 H are replaced by 2 CH_3)				x			x
88243-14-5		3,6,9,12-Tetraoxadocosan-1-ol, 15,15,16,16,17, 17,18,18,19,19,20,20,21,21,22,22,22-heptadecafluorotetramethyl-	$C_8F_{17}CH_2CH_2(OCH_2CH_2)_4OH$ (4 H are replaced by 4 CH_3)				x			↑
88243-15-6		3,6,9,12,15-Pentaoxapentacosan-1-ol, 18,18,19, 19,20,20,21,21,22,22,23,23,24,24,25,25,25-heptadecafluoropentamethyl-	$C_8F_{17}CH_2CH_2(OCH_2CH_2)_5OH$ (5 H are replaced by 5 CH_3)				x			
88247-39-6		3,6,9,12,15,18-Hexaoxaoctacosan-1-ol, 21,21,22, 22,23,23,24,24,25,25,26,26,27,27,28,28,28-heptadecafluoro-	$C_8F_{17}CH_2CH_2(OCH_2CH_2)_6OH$				x			
88243-11-2		3,6,9,12,15,18-Hexaoxaoctacosan-1-ol, 21,21,22, 22,23,23,24,24,25,25,26,26,27,27,28,28,28-heptadecafluoropentamethyl-	$C_8F_{17}CH_2CH_2(OCH_2CH_2)_6OH$ (5 H are replaced by 5 CH_3)				x			
88243-16-7		3,6,9,12,15,18-Hexaoxaoctacosan-1-ol, 21,21,22, 22,23,23,24,24,25,25,26,26,27,27,28,28,28-heptadecafluoro hexamethyl-	$C_8F_{17}CH_2CH_2(OCH_2CH_2)_6OH$ (6 H are replaced by 6 CH_3)				x			
88243-10-1		3,6,9,12,15,18,21-Heptaoxahentriacontan-1-ol, 24,24,25,25,26,26,27,27,28,28,29,29,30, 30,31,31,31-heptadecafluoropentamethyl-	$C_8F_{17}CH_2CH_2(OCH_2CH_2)_7OH$ (5 H are replaced by 5 CH_3)				x			
88247-40-9		3,6,9,12,15,18,21,24-Octaoxatetratriacontan-1-ol, 27,27,28,28,29,29,30,30,31,31,32,32,33,33,34 ,34,34-heptadecafluoro-	$C_8F_{17}CH_2CH_2(OCH_2CH_2)_8OH$				x			
88243-17-8		3,6,9,12,15,18,21,24-Octaoxatetratriacontan-1-ol, 27,27,28,28,29,29,30,30,31,31,32,32,33,33,34 ,34,34-heptadecafluorooctamethyl-	$C_8F_{17}CH_2CH_2(OCH_2CH_2)_8OH$ (8 H are replaced by 8 CH_3)				x			
88243-09-8		3,6,9,12,15-Pentaoxapentacosan-1-ol, 18,18, 19,19,20,20,21,21,22,22,23,23,24,24,25,25,25 -heptadecafluoropentamethyl-, acetate	$C_8F_{17}CH_2CH_2(OCH_2CH_2)_5OC(=O)CH_3$ (5 H are replaced by 5 CH_3)				x			x
121500-31-0		1,2-Propanediol, 3-[(3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10,10-heptadecafluorodecyl)oxy]-	$C_8F_{17}CH_2CH_2OCH_2CH(OH)CH_2OH$				x			x

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
67549-47-7		11,14,17,20,23,26,29,32-Octaoxaoctatetracontan-33-one, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-	$C_8F_{17}(CH_2CH_2O)_8C(O)C_{15}H_{31}$				x			x
67535-33-5		Tridecanoic acid, 27,27,28,28,29,29,30,30,31,31, 32,32,33,33,34,34,34-heptadecafluoro-3,6,9,12, 15,18,21,24-octaoxatetra triacont-1-yl ester	$C_8F_{17}(CH_2CH_2O)_9C(O)C_{12}H_{25}$				x			x
38565-53-6		Oxirane, 2-(2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptadecafluorononyl)-	$C_8F_{17}CH_2C_2OH_3$				x			x
114482-33-6		Oxirane, 2-[[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)oxy]methyl]-	$C_8F_{17}CH_2CH_2OCH_2C_2OH_3$				x			x
99679-40-0		1-Decanaminium, *N*,*N*-diethyl-3,3,4,4,5,5, 6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-2-hydroxy-*N*-methyl-, iodide (1:1)	$I^- C_8F_{17}CH(OH)CH_2N^+(CH_3)(C_2H_5)_2$				x			x
93776-18-2		1-Undecanaminium, 4,4,5,5,6,6,7,7,8,8,9,9,10,10, 11,11,11-heptadecafluoro-2-hydroxy-*N*,*N*-bis(2-hydroxyethyl)-*N*-methyl-, iodide (1:1)	$I^- C_8F_{17}CH_2CH(OH)CH_2N^+(CH_3)(CH_2CH_2OH)_2$				x			x
121912-26-3		1-Propanaminium, 3-[[4-[(3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10,10-heptadecafluorodecyl)oxy]-1,4-dioxo-2-buten-1-yl]amino]-*N*,*N*,*N*-trimethyl-, iodide (1:1)	I^- $C_8F_{17}CH_2CH_2OC(O)CHCHC(O)NHCH_2CH_2CH_2N^+(CH_3)_3$				x			x
25935-14-2		Pyridinium, 1-(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10, 10,10-heptadecafluorodecyl)-, iodide (1:1)	$I^- C_8F_{17}CH_2CH_2N^+C_5H_5$				x			x
100155-23-5		Ethanaminium, *N*-ethyl-2-[[[[3-[[[[3-[[[[3-[[[[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadeca fluorodecyl)oxy]carbonyl]amino]methylphenyl] amino]carbonyl]amino]methylphenyl]amino]carbonyl]amino]methylphenyl]amino]carbonyl]oxy]-*N*,*N*-dimethyl-, ethyl sulfate	$C_2H_5OSO_3^- C_8F_{17}CH_2CH_2O[C(O)NHC_6H_4NH]_3C(O)OCH_2CH_2N^+(CH_3)_2CH_2CH_3$ (3 H are replaced by 3 CH_3)				x			x
-		1-Decanamine, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10, 10,10-heptadecafluoro-*N*,*N*-dimethyl-, *N*-oxide	$C_8F_{17}CH_2CH_2N(CH_3)_2O$				x			

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
100107-48-0		Ethanaminium, *N*-ethyl-2-[[[[3-[[[3-[[[3-[[[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadeca fluorodecyl)oxy]carbonyl]amino]methylphenyl] carbonimidoyl]amino]methylphenyl]carbonimidoyl]amino]methylphenyl]amino]carbonyl]oxy]-*N*,*N*-dimethyl-, ethyl sulfate	$C_2H_5OSO_3^-$ $C_8F_{17}CH_2CH_2OC(O)NHC_6H_4[N=C=NC_6H_4]_2NHC(O)OCH_2CH_2N^+(CH_3)_2CH_2CH_3$ (3 H are replaced by 3 CH_3)				x			x
2089109-26-0		1-Decanaminium, *N*-(carboxymethyl)-3,3,4,4,5,5, 6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-*N*,*N*-dimethyl-	$C_8F_{17}CH_2CH_2N^+(CH_3)_2CH_2COOH$				x			↓
145441-32-3		1-Decanaminium, *N*-(carboxymethyl)-3,3,4,4,5,5, 6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-*N*,*N*-dimethyl-, inner salt	$C_8F_{17}CH_2CH_2N^+(CH_3)_2CH_2COO^-$				x			x
2089109-30-6		1-Dodecanaminium, *N*-(carboxymethyl)-5,5,6,6, 7,7,8,8,9,9,10,10,11,11,12,12,12-heptadeca fluoro-*N*,*N*-dimethyl-	$C_8F_{17}CH_2CH_2CH_2CH_2N^+(CH_3)_2CH_2COOH$				x			x
80234-03-3		1-Undecanaminium, 2-(acetyloxy)-*N*-(carboxy methyl)-4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-heptadecafluoro-*N*,*N*-dimethyl-, inner salt	$C_8F_{17}CH_2CH(OC(O)CH_3)CH_2N^+(CH_3)_2CH_2COO^-$				x			x
34143-74-3		1-Decanethiol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10, 10-heptadecafluoro-	$C_8F_{17}CH_2CH_2SH$				x			
76830-13-2		2-Propenamide, telomer with 3,3,4,4,5,5,6,6,7,7, 8,8,9,9,10,10,10-heptadecafluoro-1-decanethiol	$(CH_2CHC(O)NH_2)_x$ $C_8F_{17}CH_2CH_2SH$ (formulas of the starting materials, not of the final product)				x			
39108-34-4	8:2 FTSA	1-Decanesulfonic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9, 9,10,10,10-heptadecafluoro-	$C_8F_{17}CH_2CH_2SO_3H$				x			
438237-73-1	8:2 FTSA-K	1-Decanesulfonic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9, 9,10,10,10-heptadecafluoro-, potassium salt (1:1)	K^+ $C_8F_{17}CH_2CH_2SO_3^-$				x			
63225-57-0		1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-hepta decafluoro-, 1-(hydrogen sulfate), ammonium salt (1:1)	NH_4^+ $C_8F_{17}CH_2CH_2OSO_3^-$				x			
54950-06-0		Butanedioic acid, 2-sulfo-, 1,4-bis(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl) ester, sodium salt (1:1)	Na^+ $C_8F_{17}CH_2CH_2OC(O)CH_2CH(SO_3^-)C(O)OCH_2CH_2C_8F_{17}$				x			x

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
441765-12-4		Acetic acid, 2-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10, 10-heptadecafluorodecyl)thio]-, lithium salt (1:1)	$Li^+ C_8F_{17}CH_2CH_2SCH_2COO^-$				x			
54207-62-4		Propanoic acid, 3-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10, 10,10-heptadecafluorodecyl)thio]-	$C_8F_{17}CH_2CH_2SCH_2CH_2COOH$				x			
481050-04-8		Propanoic acid, 3-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10, 10,10-heptadecafluorodecyl)thio]-, lithium salt (1:1)	$Li^+ C_8F_{17}CH_2CH_2SCH_2CH_2COO^-$				x			
441765-14-6		Ethanesulfonic acid, 2-[(3,3,4,4,5,5,6,6,7,7,8,8,9, 9,10,10,10-heptadecafluorodecyl)thio]-, lithium salt (1:1)	$Li^+ C_8F_{17}CH_2CH_2SCH_2CH_2SO_3^-$				x			
160819-47-6		2-Propanol, 1,3-bis[(3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10,10-heptadecafluorodecyl)thio]-	$HOCH(CH_2SCH_2CH_2C_8F_{17})_2$				x			x
160819-50-1		2-Propanol, 1-[(2-dodecylhexadecyl)oxy]-3-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)thio]-	$C_8F_{17}CH_2CH_2SCH_2CH(OH)CH_2OCH_2CH(C_{14}H_{29})C_{12}H_{25}$				x			x
160819-49-8		2-Propanol, 1-[(2-decyltetradecyl)oxy]-3-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)thio]-	$C_8F_{17}CH_2CH_2SCH_2CH(OH)CH_2OCH_2CH(C_{10}H_{21})C_{12}H_{25}$				x			x
121912-28-5		2,5,8,11,14,17,20,23-Octaoxa-27-thiaheptatriacontan-25-ol, 30,30,31,31,32,32,33,33,34,34,35, 35,36,36,37,37,37-heptadecafluoro-	$C_8F_{17}CH_2CH_2SCH_2CH(OH)(CH_2OCH_2)_8$				x			x
727351-53-3	8:2 FTSHA	1-Propanaminium, 2-hydroxy-*N*,*N*,*N*-trimethyl-3-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)thio]-	$C_8F_{17}CH_2CH_2SCH_2CH(OH)CH_2N^+(CH_3)_3$				x			x
71940-07-3		1-Propanaminium, 2-hydroxy-*N*,*N*,*N*-trimethyl-3-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)thio]-, chloride (1:1)	Cl^- $C_8F_{17}CH_2CH_2SCH_2CH(OH)CH_2N^+(CH_3)_3$				x			↑
71625-52-0		Ethanaminium, 2-[2-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9, 10,10,10-heptadecafluorodecyl)thio]ethoxy]-*N*,*N*,*N*-trimethyl-, iodide (1:1)	I^- $C_8F_{17}CH_2CH_2SCH_2CH_2OCH_2CH_2N^+(CH_3)_3$				x			x
1513863-91-6		Acetamide, *N*-[3-(dimethylamino)propyl]-2-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)thio]-	$C_8F_{17}CH_2CH_2SCH_2C(O)NHCH_2CH_2CH_2N(CH_3)_2$				x			x

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
704870-51-9		1-Propanaminium, 3-[[2-[(3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10,10-heptadecafluorodecyl)thio]acetyl] amino]-*N*,*N*,*N*-trimethyl-	$C_8F_{17}CH_2CH_2SCH_2C(O)NHCH_2CH_2CH_2N^+(CH_3)_3$				x			x
67333-62-4		1-Propanaminium, *N*-ethyl-3-[[3-[(3,3,4,4,5, 5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl) thio]-2-methyl-1-oxopropyl]amino]-*N*,*N*-dimethyl-, ethyl sulfate (1:1)	$C_2H_5OSO_3^-$ $C_8F_{17}CH_2CH_2SCH_2CH(CH_3)C(O)NHCH_2CH_2CH_2N^+(CH_3)_2C_2H_5$				x			x
1513863-96-1	8:2 FTSAB	1-Propanaminium, *N*-(carboxymethyl)-3-[[2-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)thio]acetyl] amino]-*N*,*N*-dimethyl-, inner salt	$C_8F_{17}CH_2CH_2SCH_2C(O)NHCH_2CH_2CH_2N^+(CH_3)_2CH_2COO^-$				x			x
1383438-89-8		Butanoic acid, 4-[[3-(dimethylamino)propyl] amino]-2-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl) thio]-4-oxo-	$C_8F_{17}CH_2CH_2SCH(COO^-)CH_2C(O)NHCH_2CH_2CH_2NH^+(CH_3)_2$				x			x
93128-66-6		Glycine, *N*-[3-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10, 10-heptadecafluorodecyl)thio]-2-hydroxypropyl]-*N*-methyl-	$C_8F_{17}CH_2CH_2SCH_2CH(OH)CH_2N(CH_3)CH_2COOH$				x			x
755698-73-8	8:2 FTSAS	1-Propanesulfonic acid, 2-[[3-[(3,3,4,4,5,5,6,6, 7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)thio]-1-oxopropyl]amino]-2-methyl-	$C_8F_{17}CH_2CH_2SCH_2CH_2C(O)NHC(CH_3)_2CH_2SO_3H$				x			x
62880-96-0		1-Propanesulfonic acid, 2-[[3-[(3,3,4,4,5,5,6,6, 7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)thio]-1-oxopropyl]amino]-2-methyl-, sodium salt (1:1)	Na^+ $C_8F_{17}CH_2CH_2SCH_2CH_2C(O)NHC(CH_3)_2CH_2SO_3^-$				x			x
1513864-19-1		1-Propanaminium, 2-hydroxy-*N*,*N*,*N*-trimethyl-3-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)sulfinyl]-	$C_8F_{17}CH_2CH_2S(O)CH_2CH(OH)CH_2N^+(CH_3)_3$				x			x
1513864-12-4		1-Propanesulfonic acid, 2-[[3-[(3,3,4,4,5,5,6,6,7, 7,8,8,9,9,10,10,10-heptadecafluorodecyl) sulfinyl]-1-oxopropyl]amino]-2-methyl-	$C_8F_{17}CH_2CH_2S(O)CH_2CH_2C(O)NHC(CH_3)_2CH_2SO_3H$				x			x
80475-33-8		1-Decanesulfonamide, *N*-[3-(dimethyloxido amino)propyl]-3,3,4,4,5,5,6,6,7,7,8,8,9,9, 10,10,10-heptadecafluoro-	$C_8F_{17}CH_2CH_2SO_2NHCH_2CH_2CH_2N(=O)(CH_3)_2$				x			x

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
34455-23-7		1-Decanesulfonamide, *N*-[3-(dimethylamino) propyl]-3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-	$C_8F_{17}CH_2CH_2SO_2NHCH_2CH_2CH_2N(CH_3)_2$				x			x
438237-77-5		1-Propanaminium, 3-[[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)sulfonyl] amino]-*N*,*N*,*N*-trimethyl-, 4-methylbenzene sulfonate (1:1)	$CH_3C_6H_4SO_3^-$ $C_8F_{17}CH_2CH_2SO_2NHCH_2CH_2CH_2N^+(CH_3)_3$				x			x
34455-21-5	8:2 FTAB	1-Propanaminium, *N*-(carboxymethyl)-3-[[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)sulfonyl]amino]-*N*,*N*-dimethyl-, inner salt	$C_8F_{17}CH_2CH_2SO_2NHCH_2CH_2CH_2N^+(CH_3)_2$ CH_2COO^-				x			x
34695-29-9		Ethanaminium, *N*-(2-carboxyethyl)-2-[[(3,3,4,4, 5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro decyl)sulfonyl]amino]-*N*,*N*-dimethyl-, inner salt	$C_8F_{17}CH_2CH_2SO_2NHCH_2CH_2N^+(CH_3)_2CH_2$ CH_2COO^-				x			x
441765-18-0		Glycine, *N*-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)sulfonyl]-*N*-propyl-, lithium salt	Li^+ $C_8F_{17}CH_2CH_2SO_2N(C_3H_7)CH_2COO^-$				x			x
98900-53-9		β-Alanine, *N*-(2-carboxyethyl)-*N*-[6-[[(3,3,4,4, 5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro decyl)sulfonyl]amino]hexyl]-, dipotassium salt	$2\ K^+$ $C_8F_{17}CH_2CH_2SO_2NHC_6H_{12}N(CH_2CH_2COO^-)_2$				x			x
Fluorotelomer-based side-chain fluorinated polymers										
115592-83-1		2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluorododecyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate, hexadecyl 2-propenoate, *N*-(hydroxymethyl)-2-propenamide, octadecyl 2-propenoate, 3,3,4,4,5,5,6,6,7,7, 8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluorotetradecyl 2-propenoate and 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl 2-propenoate				x	x	x		
129783-45-5		2-Propenoic acid, 2-methyl-, C_{10-16}-alkyl esters, polymers with 2-hydroxyethyl methacrylate, Me methacrylate and γ-ω-perfluoro-C_{8-14}-alkyl acrylate				x	x	x		

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
144031-01-6		2-Propenoic acid, dodecyl ester, polymers with Bu (1-oxo-2-propenyl)carbamate and γ-ω-perfluoro-C_{8-14}-alkyl acrylate				x	x	x		
116984-14-6		2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluorododecyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate, alpha-(2-methyl-1-oxo-2-propenyl)-omega-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl), 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16-nonacosafluorohexadecyl 2-propenoate, octadecyl 2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluorotetradecyl 2-propenoate and 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,17,17,18,18,18-tritriacontafluorooctadecyl 2-propenoate			x			7	
74049-08-4	PFOEA	Poly[2-(perfluorooctyl)ethyl acrylate]				x	x			
		2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester, homopolymer								
65104-45-2		2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluorododecyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluorotetradecyl 2-methyl-2-propenoate and 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl 2-methyl-2-propenoate			x	x	x		
53515-73-4		2-Propenoic acid, 2-methyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl ester, polymer with 2-propenoic acid						x	7	

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
93480-00-3		Poly(oxy-1,2-ethanediyl),a-[2-[2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl) amino]ethyl]-ω-hydroxy				x	x		7	
934505-67-6		2-Propenoic acid, polymer with 2-ethenylnaphthalene and 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-heptadecafluoro-2-hydroxyundecyl 2-propenoate	$C_8F_{17}CH_2CH(OH)CH_2OC(O)CHCH_2$ $C_{12}H_{10}CH_2CHCOOH$ (formulas of the starting materials, not of the final product)			x	x			
142636-88-2		2-Propenoic acid, 2-methyl-, octadecyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluorododecyl 2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate and 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluorotetradecyl 2-propenoate	$C_8F_{17}CH_2CH_2OC(O)CHCH_2$ $C_{10}F_{21}CH_2CH_2OC(O)CHCH_2$ $C_{12}F_{25}CH_2CH_2OC(O)CHCH_2$ $C_{18}H_{37}OC(O)C(CH_3)CH_2$ (formulas of the starting materials, not of the final product)			x	x			
Other substances										
90622-99-4		Amides, C_{7-19}, α-ω-perfluoro-*N*,*N*-bis(hydroxyethyl)						x	7	
71356-38-2		Piperazinium, 1-(carboxymethyl)-1-(2-hydroxyethyl)-4-(2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-nonadecafluoro-1-oxodecyl)-, inner salt						x		
85681-64-7		2-Propenoic acid, perfluoro-C_{8-16}-alkyl esters						x		
125328-29-2		2-Propenoic acid, 2-methyl-, C_{10-16}-alkyl esters, polymers with 2-hydroxyethylmethacrylate, Me methacrylate and perfluoro-C_{8-14}-alkyl acrylate						x		
325459-92-5		Phosphine, tris[4-(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)phenyl]-					x		7	
326475-46-1		Palladium, dichlorobis[tris[4-(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl) phenyl]phosphine-κP]-					x		7	

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
39186-68-0		1-Propanaminium, *N*-(2-carboxyethyl)-*N*,*N*-bis(2-hydroxyethyl)-3-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)amino]-, inner salt						x	7	
41358-63-8		Octanamide, *N*-[3-[bis(2-hydroxyethyl)amino]propyl]-2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-						x	7	
24216-05-5		Benzenesulfonyl chloride, 3,4-bis[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)amino]-						x	7	
53517-98-9		1-Propanaminium,*N*,*N*,*N*-trimethyl-3-[(2,2,3,3,4, 4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl) amino]-, chloride (1:1)	Cl^- $C_7F_{15}C(O)NHCH_2CH_2CH_2N^+(CH_3)_3$					x	7	
335-90-0		1-Propanaminium, *N*,*N*,*N*-trimethyl-3-[(2,2,3,3,4, 4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl) amino]-, iodide (1:1)	I^- $C_7F_{15}C(O)NHCH_2CH_2CH_2N^+(CH_3)_3$					x	6	x
85938-56-3		Octanamide, *N*-(3-aminopropyl)-2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-						x	7	
89685-61-0		1-Propanesulfonic acid,3-[ethyl(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)amino]-,sodium salt (1:1)						x		
84029-60-7		Nonene, heptadecafluoro-1-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl)oxy]-						x	7	
138473-79-7		Glycine, *N*-ethyl-*N*-(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)-, ammonium salt	NH_4^+ $C_7F_{15}C(O)N(C_2H_5)CH_2COO^-$					x	6	x
89932-71-8		Octanamide, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-*N*-(14-hydroxy-3,6,9,12-tetraoxatetradec-1-yl)-	$C_7F_{15}C(O)NHCH_2CH_2(OCH_2CH_2)_4OH$					x	6	x
178766-44-4		Ethanaminium, *N*,*N*,*N*-trimethyl-2-[(2,2,3,3,4,4, 5,5,6,6,7,7,7-pentadecafluoro-1-oxooctyl)amino]-, chloride (1:1)	Cl^- $C_7F_{15}C(O)NHCH_2CH_2N^+(CH_3)_3$					x	6	x
376-23-8		Octanamide, *N*-[3-(dimethylamino)propyl]-2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-	$C_7F_{15}C(O)NHCH_2CH_2CH_2N(CH_3)_2$					x		x

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
91707-61-8		1-Pentanaminium, *N*,*N*,*N*-trimethyl-5-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)amino]-, iodide (1:1)	I^- $C_7F_{15}C(O)NHCH_2CH_2CH_2CH_2CH_2N^+(CH_3)_3$					x	6	x
30295-53-5		Octanamide, *N*-[3-(dimethyloxidoamino)propyl]-2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-	$C_7F_{15}C(O)NHC_3H_6N(O)(CH_3)_2$					x	6	x
308-01-0		Pyridinium, 1-[2-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)amino]ethyl]-, chloride (1:1)	Cl^- $C_7F_{15}C(O)NHCH_2CH_2N^+C_5H_5$					x	6	x
331755-02-3		Pyridinium, 1-[2-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)amino]ethyl]-, bromide (1:1)	Br^- $C_7F_{15}C(O)NHCH_2CH_2N^+C_5H_5$					x	6	↑
103555-98-2		Piperazinium, 1-(2-hydroxyethyl)-1-methyl-4-(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)-, chloride (1:1)	Cl^- $C_7F_{15}C(O)NC_4H_8N^+(CH_3)CH_2CH_2OH$					x		x
90179-39-8		1-Propanaminium, *N*-(carboxymethyl)-*N*,*N*-dimethyl-3-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)amino]-, inner salt	$C_7F_{15}C(O)NHCH_2CH_2CH_2N^+(CH_3)_2CH_2COO^-$					x	6	x
5158-52-1		1-Propanaminium, *N*-(2-carboxyethyl)-3-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)amino]-*N*,*N*-dimethyl-, inner salt	$C_7F_{15}C(O)NHCH_2CH_2CH_2N^+(CH_3)_2CH_2CH_2COO^-$					x	6	x
57670-46-9		Ethanesulfonic acid, 2-[ethyl(2,2,3,3,4,4,5,5,6,6, 7,7,8,8,8-pentadecafluoro-1-oxooctyl)amino]-, potassium salt (1:1)	K^+ $C_7F_{15}C(O)N(C_2H_5)CH_2CH_2SO_3^-$					x	6	x
98900-76-6		1-Propanesulfonic acid, 3-[(3-aminopropyl)(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)amino]-2-hydroxy-, sodium salt (1:1)	Na^+ $C_7F_{15}C(O)N(C_3H_6NH_2)CH_2CH(OH)CH_2SO_3^-$					x	6	x
98900-75-5		Benzenesulfonic acid, 4-[[[3-(methylamino)propyl](2,2,3,3,4,4 ,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)amino]methyl]-, sodium salt (1:1)	Na^+ $C_7F_{15}C(O)N(C_3H_6NHCH_3)CH_2C_6H_4SO_3^-$					x	6	x
98046-76-5		Octanamide, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-*N*-[3-(trimethoxysilyl)propyl]-	$C_7F_{15}C(O)NHCH_2CH_2CH_2Si(OCH_3)_3$					x	6	x

				(i)[b]	(ii)[c]	(iii)[d]				
				PFOA	PFOA salts	PFOA-related compounds				
CAS No.[a]	Acronym	Designation	Condensed structural formula			(a)	(b)[e]	Other	Ref[f]	2D structure available in Table 3[g]
154380-30-0		Poly(oxy-1,2-ethanediyl), α-[dimethoxy[3-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)amino]propyl]silyl]-ω-[[dimethoxy[3-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-1-oxooctyl)amino]propyl]silyl]oxy]-	$C_7F_{15}C(O)NHCH_2CH_2CH_2Si(OCH_3)_2(OCH_2CH_2)_xOSi(OCH_3)_2CH_2CH_2CH_2NHC(O)C_7F_{15}$					x	6	x

Table 2: Draft indicative list of substances not covered by the listing of PFOA, its salts and PFOA-related compounds

For the purpose of this indicative list, fluoropolymers refer to a distinct subset of fluorinated polymers, namely, those made by (co)polymerization of olefinic monomers, at least one of which contains F bound to one or both of the olefinic C atoms, to form a carbon-only polymer backbone with F atoms directly attached to it, e.g., polytetrafluoroethylene. Fluoropolymers include those commonly referred to by the acronyms PTFE, FEP, PFA, ETFE, ECTFE, PVDF, PVF, THV, FEPM, FKM, FFKM, FEVE, EFEP, CPT, and MFA, as well as fluorinated ionomers and amorphous fluoropolymers (Buck et al. in 2011).

Notes:

a. Hyperlinks to the CAS Common Chemistry database are provided for those CAS numbers that have entries in that database;

b. C_8F_{17}-X, where X= F, Cl, Br;

c. Fluoropolymers that are covered by $CF_3[CF_2]_n$-R', where R'=any group, n>16;

d. Perfluoroalkyl carboxylic and phosphonic acids (including their salts, esters, halides and anhydrides) with ≥8 perfluorinated carbons;

e. Perfluoroalkane sulfonic acids (including their salts, esters, halides and anhydrides) with ≥9 perfluorinated carbons;

f. "Perfluorooctane sulfonic acid, perfluorooctane sulfonates, perfluorooctane sulfonamides and perfluorooctane sulfonyls…", as listed in Annex III to the Rotterdam Convention.

			Out of scope					
CAS No.[a]	Acronym	Designation	(i)[b]	(ii)[c]	(iii)[d]	(iv)[e]	(v)[f]	Other
PFOA								
Fluorotelomer alcohols								
647-42-7	6:2 FTOH	6:2 Fluorotelomer alcohol						x
		1-Octanol, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-						
Perfluoroalkyl phosphonic acids (PFPAs)								
68412-68-0		Phosphonic acid, perfluoro-C_{6-12}-alkyl derivs.			x			
Polyfluoroalkyl carboxylic acids								
1765-48-6		Undecanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafluoro-						x
307-71-1		Undecanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafluoro-, potassium salt						x
Perfluoroalkylcarboxylic acids other than PFOA, their isomers, and salts								
375-22-4	PFBA	Perfluorobutanoic acid						x
2706-90-3	PFPeA	Perfluoropentanoic acid						x

			Out of scope					
CAS No.[a]	Acronym	Designation	(i)[b]	(ii)[c]	(iii)[d]	(iv)[e]	(v)[f]	Other
307-24-4	PFHxA	Perfluorohexanoic acid						x
375-85-9	PFHpA	Perfluoroheptanoic acid						x
375-95-1	C_9-PFCA or PFNA	Perfluorononan-1-oic acid			x			
335-76-2	C_{10}-PFCA or PFDA	Perfluorodecanoic acid			x			
2058-94-8	C_{11}-PFCA or PFUnA	Perfluoroundecanoic acid			x			
307-55-1	C_{12}-PFCA or PFDoA	Perfluorododecanoic acid			x			
72629-94-8	C_{13}-PFCA or PFTrA	Perfluorotridecanoic acid			x			
376-06-7	C_{14}-PFCA or PFTeA	Perfluorotetradecanoic acid			x			
141074-63-7	C_{15}-PFCA	Perfluoropentadecanoic acid			x			
67905-19-5	C_{16}-PFCA	Perfluorohexadecanoic acid			x			
57475-95-3	C_{17}-PFCA	Perfluoroheptadecanoic acid			x			
16517-11-6	C_{18}-PFCA	Perfluorooctadecanoic acid			x			
133921-38-7	C_{19}-PFCA	Perfluorononadecanoic acid			x			
68310-12-3	C_{20}-PFCA	Perfluoroeicosanoic acid			x			
15811-52-6		Dodecanoyl fluoride, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,12,12,12-docosafluoro-11-(trifluoromethyl)-						x
16486-96-7		Dodecanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,12,12,12-docosafluoro-11-(trifluoromethyl)-			x			
18024-09-4		Tetradecanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,14,14,14-hexacosafluoro-13-(trifluoromethyl)-			x			
68015-87-2		Dodecanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,12,12,12-docosafluoro-11-(trifluoromethyl)-, compd. With ethanamine (1:1)			x			
68025-62-7		Tetradecanoyl fluoride, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,14,14,14-hexacosafluoro-13-(trifluoromethyl)-						x
3108-42-7		Ammonium nonadecafluorodecanoate			x			

			Out of scope					
CAS No.[a]	Acronym	Designation	(i)[b]	(ii)[c]	(iii)[d]	(iv)[e]	(v)[f]	Other
3658-63-7		Decanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,10,10,10-octadecafluoro-9-(trifluoromethyl)-, ammonium salt (1:1)			x			
3793-74-6		Ammonium tricosafluorododecanoate			x			
Perfluoroalkanesulfonic acids								
375-73-5	PFBS	Perfluorobutane sulfonic acid						x
2706-91-4	PFPeS	Perfluoropentane sulfonic acid						x
355-46-4	PFHxS	Perfluorohexane sulfonic acid						x
375-92-8	PFHpS	Perfluoroheptane sulfonic acid						x
1763-23-1	PFOS (3)	Perfluorooctane sulfonic acid					x	
Per- and polyfluoroalkyl ether carboxylic acids								
958445-44-8	ADONA	Propanoic acid, 2,2,3,3-tetrafluoro-3-[1,1,2,2,3,3-hexafluoro-3- (trifluoromethoxy) propoxy]-, ammonium salt (1:1)						x
908020-52-0	EEA-NH4	Ammonium salt of perfluoro[(2-ethyloxy-ethoxy)acetic acid						x
80153-82-8	EEA	Perfluoro[(2-ethyloxy-ethoxy)acetic acid						x
Fluoropolymers								
9002-84-0	PTFE	Polytetrafluoroethylene		x				
25067-11-2	FEP	Fluorinated Ethylene Propylene Copolymer		x				
26655-00-5	PFA	Perfluoro Alkoxy Polymer Propane,1,1,1,2,2,3,3-heptafluoro-3-[(1,2,2-trifluoroethenyl)oxy]-,polymer with 1 ,1,2,2 -tetrafluoroethene		x				
31784-04-0		Perfluoro Alkoxy Polymer Ethene, 1,1,2,2-tetrafluoro-, polymer with 1,1,2-trifluoro-2-(1,1,2,2,2-pentafluoroethoxy) ethane		x				
26425-79-6	MFA	Perfluoro Methyl Alkoxy Polymer Ethene, 1,1,2,2-tetrafluoro-, polymer with 1,2,2-trifluoro-2-(trifluoromethoxy)ethene		x				
Perfluoroalkyl halides (incl. linear and branched isomers)								
307-50-6		Undecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-tricosafluoro-11-iodo-						

			Out of scope					
CAS No.[a]	Acronym	Designation	(i)[b]	(ii)[c]	(iii)[d]	(iv)[e]	(v)[f]	Other
307-60-8		Dodecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12-pentacosafluoro-12-iodo-						
307-63-1		Tetradecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14-nonacosafluoro-14-iodo-						
335-79-5		Pentadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15-hentriacontafluoro-15-iodo-						
376-04-5		Tridecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13-heptacosafluoro-13-iodo-						
423-62-1		Decane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10-heneicosafluoro-10-iodo-						
558-97-4		Nonane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-nonadecafluoro-9-iodo-						
677-93-0		Decane, 1,1,1,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10-eicosafluoro-10-iodo-2-(trifluoromethyl)-						
3248-61-1		Dodecane, 1,1,1,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12-tetracosafluoro-12-iodo-2-(trifluoromethyl)-						
3248-63-3		Tetradecane, 1,1,1,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9, 10,10,11,11,12,12,13,13,14,14-octacosafluoro-14-iodo-2-(trifluoromethyl)-						
Fluorotelomer iodides (FTIs)								
2043-54-1	10:2 FTI	Dodecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9, 10,10-heneicosafluoro-12-iodo-						
30046-31-2	12:2 FTI	Tetradecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9, 9,10,10,11,11,12,12-pentacosafluoro-14-iodo-						
65510-55-6	14:2 FTI	Hexadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14-nonacosafluoro-16-iodo-						
65510-56-7	9:2 FTI	Undecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-nonadecafluoro-11-iodo-						
Fluorotelomer olefins (FTOs)								
30389-25-4	10:2 FTO	1-Dodecene, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluoro-						
Fluorotelomer alcohols (FTOHs)								
60699-51-6	14:2 FTOH	1-Hexadecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16-nonacosafluoro-						
176676-70-3	13:2 FTOH	1-Pentadecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,15-heptacosafluoro-						
39239-77-5	12:2 FTOH	1-Tetradecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluoro-						
1545-59-1	11:2 FTOH	1-Tridecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,13-tricosafluoro-						

			Out of scope					
CAS No.[a]	Acronym	Designation	(i)[b]	(ii)[c]	(iii)[d]	(iv)[e]	(v)[f]	Other
865-86-1	10:2 FTOH	1-Dodecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluoro-						
87017-97-8	9:2 FTOH	1-Undecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-nonadecafluoro-						
Fluorotelomer saturated and non-saturated acids (FTCAs and FTUCAs)								
70887-94-4	10:2 FTUCA	2-Dodecenoic acid, 3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-eicosafluoro-						
53826-13-4	10:2 FTCA	Dodecanoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluoro-						
191852-87-6	9:2 FTCA	Undecanoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-nonadecafluoro-						
Fluorotelomer phosphate esters (PAPs)								
94200-46-1		1,2-Tridecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,13-heneicosafluoro-, 1-(dihydrogen phosphate), diammonium salt						
94200-47-2		1,2-Pentadecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,15-pentacosafluoro-, 1-(dihydrogen phosphate), diammonium salt						
94200-48-3		1,2-Heptadecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,17,17,17-nonacosafluoro-, 1-(dihydrogen phosphate), diammonium salt						
94200-50-7		1,2-Tridecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,13,13,13-eicosafluoro-12-(trifluoromethyl)-, 1-(dihydrogen phosphate), diammonium salt						
94200-51-8		1,2-Pentadecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,15,15,15-tetracosafluoro-14-(trifluoromethyl)-, 1-(dihydrogen phosphate), diammonium salt						
94200-52-9		1,2-Heptadecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,17,17,17-octacosafluoro-16-(trifluoromethyl)-, 1-(dihydrogen phosphate), diammonium salt						
93857-45-5		1-Dodecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10, 11,11,12,12,12-heneicosafluoro-, 1-(dihydrogen phosphate), ammonium salt (1:2)						
57678-05-4	10:2 monoPAP	1-Dodecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluoro-, 1-(dihydrogen phosphate)						
1895-26-7	10:2 diPAP	1-Dodecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluoro-, 1,1'-(hydrogen phosphate)						
1158182-61-6	10:2/12:2 diPAP	Phosphoric acid, mono(3,3,4,4,5,5,6,6,7,7,8,8,9, 9,10,10,11,11,12,12,12-heneicosafluorododecyl) mono(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluorotetradecyl) ester						
93776-21-7	Ammonium salt of 10:2 diPAP	Ammonium bis(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10, 11,11,12,12,12-heneicosafluorodecyl) phosphate						
63295-20-5		1,2-Undecanediol, 4,4,5,5,6,6,7,7,8,8,9,9,10,11, 11,11-hexadecafluoro-10-(trifluoromethyl)-, 1,1-(hydrogen phosphate)						

			Out of scope					
CAS No.[a]	Acronym	Designation	(i)[b]	(ii)[c]	(iii)[d]	(iv)[e]	(v)[f]	Other
63295-26-1		1-Undecanol, 2-chloro-4,4,5,5,6,6,7,7,8,8,9,9, 10,11,11,11-hexadecafluoro-10-(trifluoromethyl)-, hydrogen phosphate						
1578186-57-8	6:2/6:2/10:2 triPAP	Phosphoric acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10, 11,11,12,12,12-heneicosafluorododecylbis (3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl) ester						
Fluorotelomer acrylates and methacrylates (FTACs and FTMACs)								
16083-78-6		2-Propenoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,17,17,17-octacosafluoro-2-hydroxy-16-(trifluoromethyl)heptadecyl ester						
4980-53-4	14:2 FTMAC	2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16-nonacosafluorohexadecyl ester						
6014-75-1	12:2 FTMAC	2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluorotetradecyl ester						
16083-87-7		2-Propenoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,15,15,15-tetracosafluoro-2-hydroxy-14-(trifluoromethyl)pentadecyl ester						
52956-82-8		2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,14,14,14-tetracosafluoro-13-(trifluoromethyl)tetradecyl ester						
74256-14-7		2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,12,12,12-eicosafluoro-11-(trifluoromethyl)dodecyl ester						
74256-15-8		2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7, 8,8,9,9,10,10,11,11,12,12,13,14,14,14-tetra cosafluoro-13-(trifluoromethyl)tetradecyl ester						
17741-60-5	10:2 FTAC							
2144-54-9	10:2 FTMAC	2-(Perfluorodecyl) ethyl methacrylate						
		2- Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluorododecyl ester						
91615-22-4		2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,16,16,16-octacosafluoro-15-(trifluoromethyl)hexadecyl ester						
94158-63-1		2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,17,18,18,18-dotriacontafluoro-17-(trifluoromethyl)octadecyl ester						
94158-64-2		2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,16,16,16-octacosafluoro-15-(trifluoromethyl)hexadecyl ester						
94158-65-3		2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,17,18,18,18-dotriacontafluoro-17-(trifluoromethyl)octadecyl ester						

			Out of scope					
CAS No.[a]	Acronym	Designation	(i)[b]	(ii)[c]	(iii)[d]	(iv)[e]	(v)[f]	Other
Other fluorotelomer-based non-polymers								
93776-12-6		1-Propanaminium, N-(2-carboxyethyl)-N,N-dimethyl-3-[(4,4,5,5,6,6,7,7,8,8,9,9,10, 10,11,11,12, 12,13,13,14,14,15,15,15-pentacosafluoro-2-hydroxypentadecyl) amino]-, inner salt						
93776-13-7		1-Propanaminium, N-(2-carboxyethyl)-3-[(4,4,5,5,6,6,7,7,8,8,9,9,10,10, 11,11,12, 12,13,13,13-heneicosafluoro-2-hydroxytridecyl)amino] -N,N-dimethyl-, inner salt						
93776-15-9		1-Propanaminium, N-(2-carboxyethyl)-N,N-dimethyl-3-[[4,4,5,5,6,6,7,7,8,8,9,9,10, 10,11,11,12, 12,13,13,14,15,15,15-tetracosafluoro-2-hydroxy-14- (trifluoromethyl) pentadecyl]amino]-, inner salt						
94159-83-8		2-Tridecanol, 1-[[3-(dimethylamino)propyl]amino]- 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,13,13,13-eicosafluoro-12-(trifluoromethyl)-						
94159-79-2		2-Pentadecanol, 1-[[3-(dimethylamino)propyl]amino]- 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,15-pentacosafluoro-						
94159-80-5		2-Tridecanol, 1-[[3-(dimethylamino)propyl]amino]- 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,13-heneicosafluoro-						
94159-82-7		2-Pentadecanol, 1-[[3-(dimethylamino)propyl]amino]- 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,15,15,15-tetracosafluoro-14- (trifluoromethyl)-						
146090-84-8		Silane, triethoxy(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10, 11,11,12,12,12-heneicosafluorododecyl)-						
123445-18-1		Silane, (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11, 12,12,12-heneicosafluorododecyl)trimethoxy-						
93776-00-2		2-Pentadecanol, 1,1'-[oxybis[(1-methyl-2,1-ethanediyl)oxy]]bis[4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,15-pentacosafluoro-						
154478-87-2	F10H2	Dodecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10-heneicosafluoro-						
1835251-22-3	F10H3	Tridecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10-heneicosafluoro-						
1244062-17-6	F10H4	Tetradecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10-heneicosafluoro-						
250738-42-2	F10H5	Pentadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10-heneicosafluoro-						
116177-54-9	F10H6	Hexadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10-heneicosafluoro-						
200817-54-5	F10H7	Heptadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10-heneicosafluoro-						
93454-70-7	F10H8	Octadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10-heneicosafluoro-						
125635-85-0	F10H9	Nonadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10-heneicosafluoro-						
90499-29-9	F10H10	Eicosane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10-heneicosafluoro-						

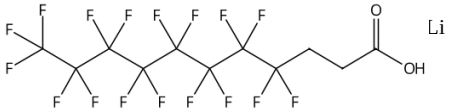
			Out of scope					
CAS No.[a]	Acronym	Designation	(i)[b]	(ii)[c]	(iii)[d]	(iv)[e]	(v)[f]	Other
93454-71-8	F10H12	Docosane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10-heneicosafluoro-						
31200-97-2		1-Undecanol, 4,4,5,5,6,6,7,7,8,8,9,9,10,11,11,11-hexadecafluoro-10-(trifluoromethyl)-						
307-37-9	9:1 FTOH	1-Decanol, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9, 10,10,10-nonadecafluoro-						
307-46-0	10:1 FTOH	1-Undecanol, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9, 10,10,11,11,11-heneicosafluoro-						
864551-38-2	10:2 FTAL	Dodecanal, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10, 11,11,12,12,12-heneicosafluoro-						
864551-40-6	10:2 FTUAL	2-Dodecenal, 3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11, 11,12,12,12-eicosafluoro-						
335-73-9	PFDAL	Decanal, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-nonadecafluoro-						
63967-42-0	PFUnDAL	Undecanal, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-heneicosafluoro-						
94817-79-5		2-Undecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11, 11,11-nonadecafluoro-1-[(1-methylpropyl) amino]-						
94817-80-8		2-Dodecanol, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11, 12,12,12-nonadecafluoro-1-[(1-methylpropyl) amino]-						
-		1-Dodecanamine, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10, 10,11,11,11-nonadecafluoro-N,N-dimethyl-, N-oxide						
2089109-27-1		1-Dodecanaminium, N-(carboxymethyl)-3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluoro-N,N-dimethyl-						
171184-16-0		1-Dodecanaminium, N-(carboxymethyl)-4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-nonadecafluoro-N,N-dimethyl-, inner salt						
171184-17-1		1-Tetradecanaminium, N-(carboxymethyl)-4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-tricosafluoro-N,N-dimethyl-, inner salt						
171184-04-6		1-Dodecanaminium, N-(carboxymethyl)-3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-eicosafluoro-N,N-dimethyl-, inner salt						
80244-66-2		1-Tridecanaminium, 2-(acetyloxy)-N-(carboxy methyl)-4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12, 12,13,13,13-heneicosafluoro-N,N-dimethyl-, inner salt						
121913-10-8		2-Propenamide, telomer with 3,3,4,4,5,5,6,6,7,7, 8,8,9,9,10,10,11,11,12,12,12-heneicosafluoro-1-dodecanethiol						
120226-60-0	10:2 FTSA	1-Dodecanesulfonic acid, 3,3,4,4,5,5,6,6,7,7,8, 8,9,9,10,10,11,11,12,12,12-heneicosafluoro-						
63225-58-1		1-Dodecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10, 11,11,12,12,12-heneicosafluoro-, 1-(hydrogen sulfate), ammonium salt (1:1)						

			Out of scope					
CAS No.[a]	Acronym	Designation	(i)[b]	(ii)[c]	(iii)[d]	(iv)[e]	(v)[f]	Other
1513864-17-9	10:2 FTSHA	1-Propanaminium, 2-hydroxy-N,N,N-trimethyl-3-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12, 12-heneicosafluorododecyl)sulfinyl]-						
–		1-Propanaminium, 2-hydroxy-N,N,N-trimethyl-3-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12, 12-heneicosafluorododecyl)thio]-, chloride (1:1)						
1513863-92-7		Acetamide, N-[3-(dimethylamino)propyl]-2-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12, 12,12-heneicosafluorododecyl) thio]-						
1513864-01-1		1-Propanaminium, 3-[[2-[(3,3,4,4,5,5,6,6,7,7,8,8, 9,9,10,10,11,11,12,12,12-heneicosafluorodo decyl)thio]acetyl]amino]-N,N,N-trimethyl-						
1513863-97-2	10:2 FTSAB	1-Propanaminium, N-(carboxymethyl)-3-[[2-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12, 12,12-heneicosafluorododecyl) thio]acetyl] amino]-N,N-dimethyl-, inner salt						
1383438-90-1		Butanoic acid, 4-[[3-(dimethylamino)propyl] amino]-2-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11, 11,12,12,12-heneicosa fluorododecyl)thio]-4-oxo-						
690947-60-5	10:2 FTSAS	1-Propanesulfonic acid, 2-[[3-[(3,3,4,4,5,5,6,6, 7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluoro dodecyl)thio]-1-oxopropyl] amino]-2-methyl-						
62880-98-2		1-Propanesulfonic acid, 2-[[3-[(3,3,4,4,5,5,6,6,7, 7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluoro dodecyl)thio]-1-oxopropyl]amino]-2-methyl-, sodium salt (1:1)						
1513864-11-3		1-Propanesulfonic acid, 2-[[3-[(3,3,4,4,5,5,6,6,7, 7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluoro dodecyl)sulfinyl]-1-oxopropyl]amino]-2-methyl-						
34455-24-8		1-Dodecanesulfonamide, N-[3-(dimethylamino) propyl]-3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11, 11,12,12,12-heneicosafluoro-						
34455-35-1	10:2 FTAB	1-Propanaminium, N-(carboxymethyl)-3-[[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluorododecyl)sulfonyl]amino]-N,N-dimethyl-, inner salt						
34695-31-3		Ethanaminium, N-(2-carboxyethyl)-2-[[(3,3,4,4, 5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluorododecyl) sulfonyl]amino]-N,N-dimethyl-, inner salt						

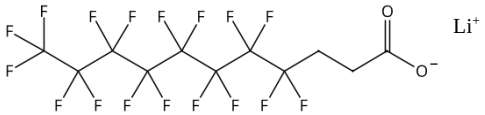
Table 3: 2D structural formulas for some selected substances added by Switzerland to the indicative list of substances covered by the listing of PFOA, its salts and PFOA-related compounds (ver. February 2022)

Note:

The structural formulas presented in Table 1 were directly taken from Chemical Abstracts Service's (CAS) **SciFinder^n** [4].Please note that most of the anionic PFASs are therefore displayed in their neutral form in this document. Strictly speaking, this is not correct. The correct form is given in the condensed structural formula added to the indicative list of substances covered by the listing of PFOA, its salts and PFOA-related compounds in the submission of Switzerland. An example of the incorrect and correct forms is shown below:

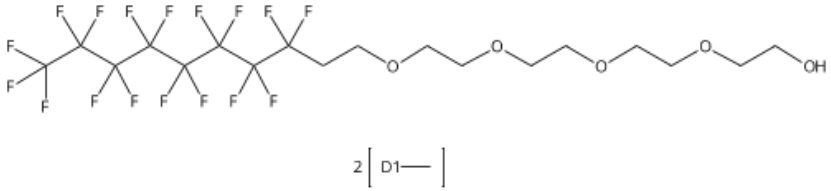


Incorrect form

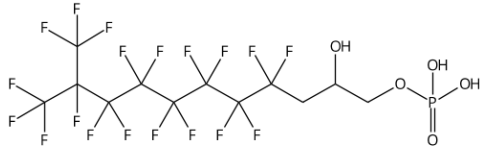
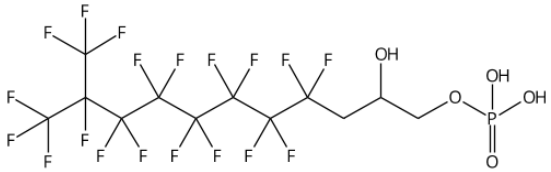
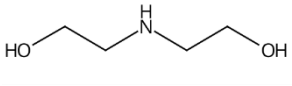
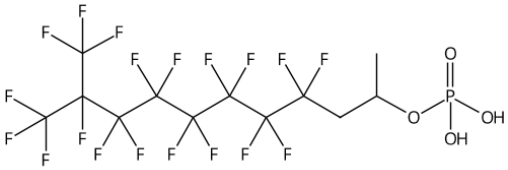
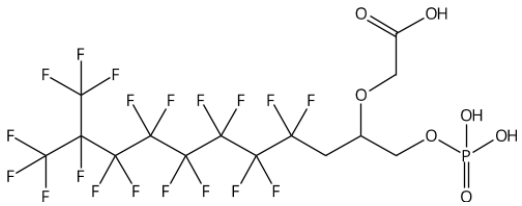
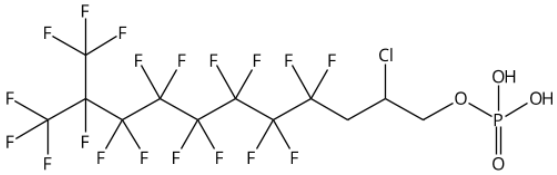


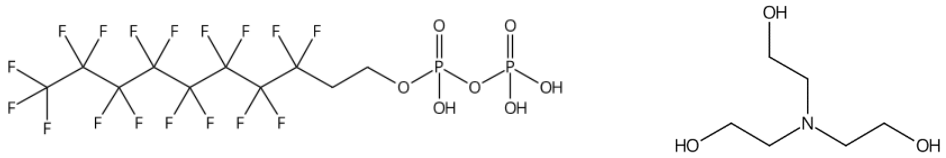
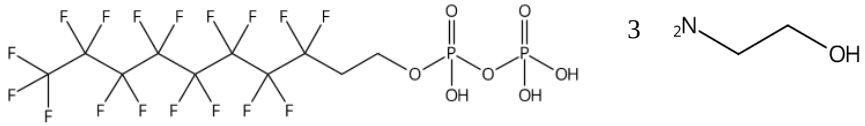
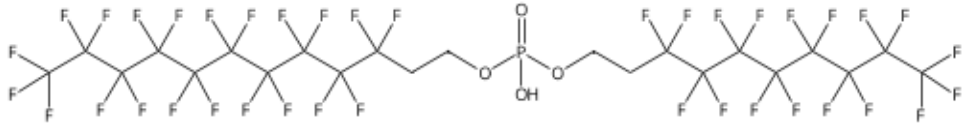
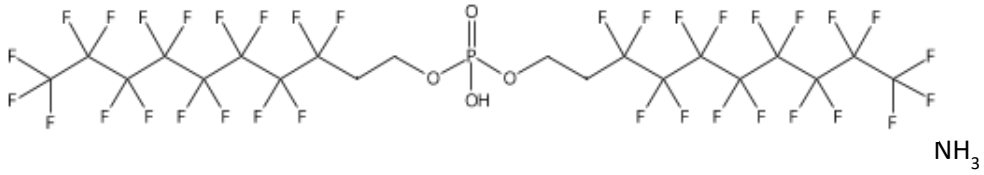
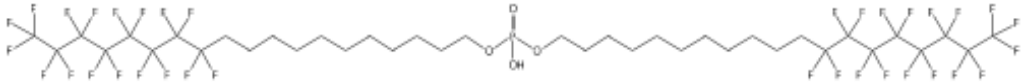
Correct form

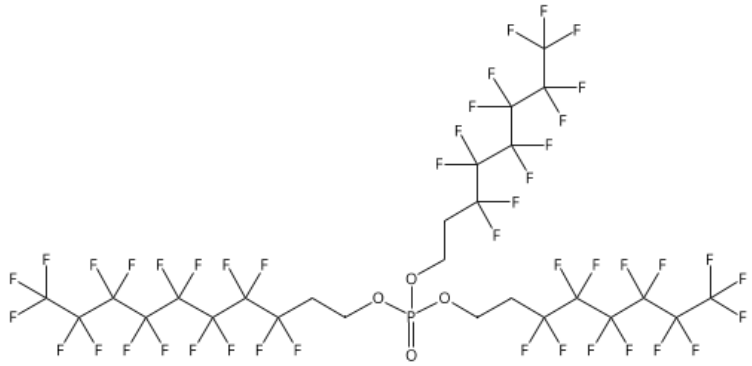
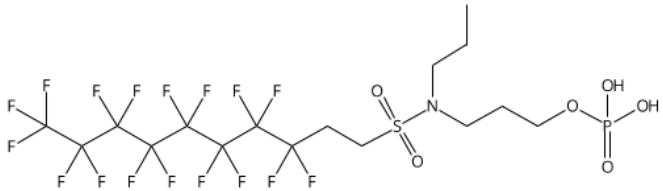
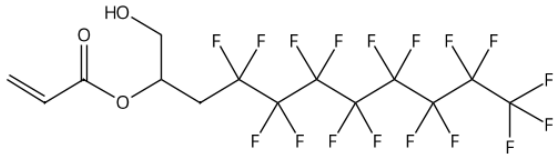
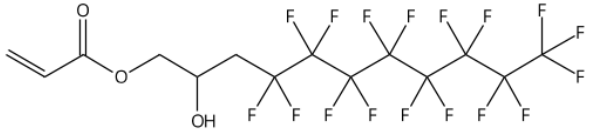
Some substances do have an unknown or variable structure. In the structural formulas from SciFinder^n, "D1" indicates that it is unknown where the moiety in square brackets is connected to the structural formula above (see below for the example of CAS No. 88271-22-1).

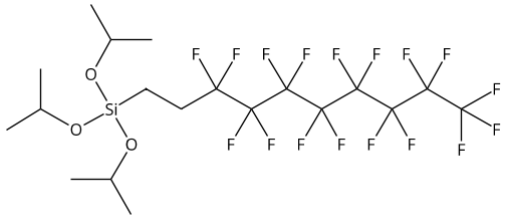
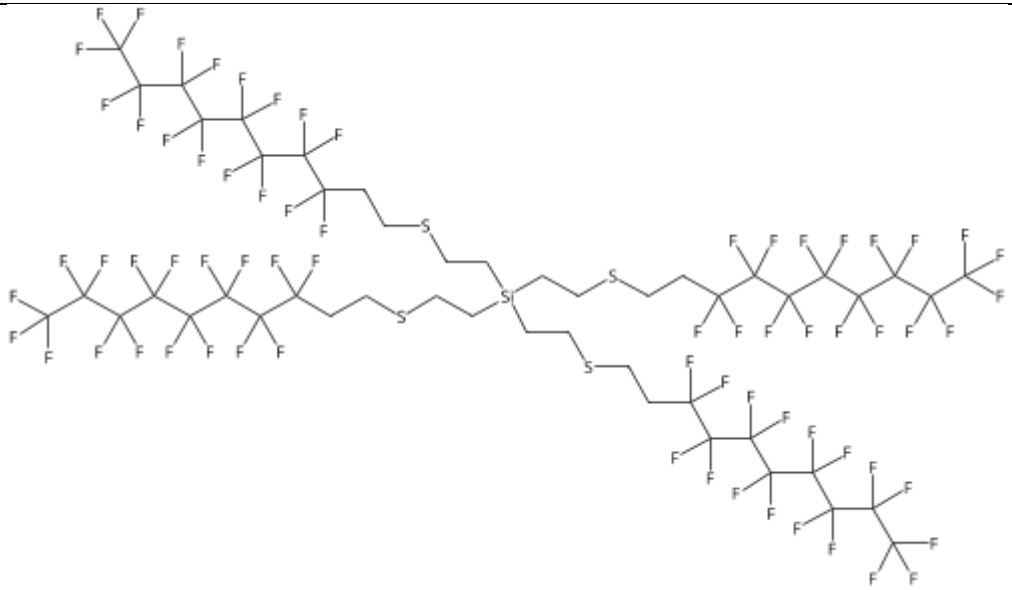
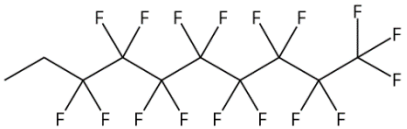
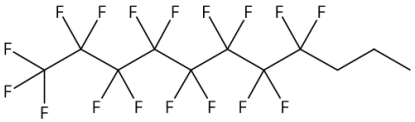


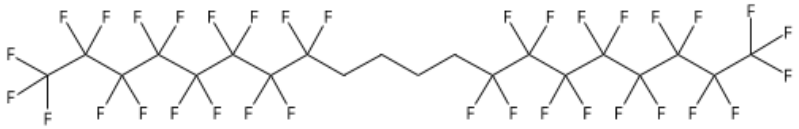
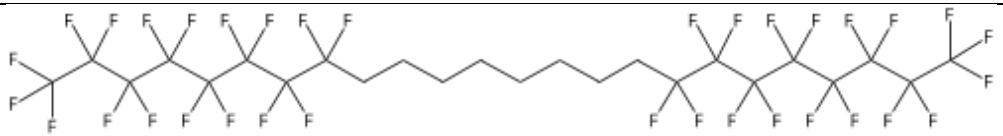
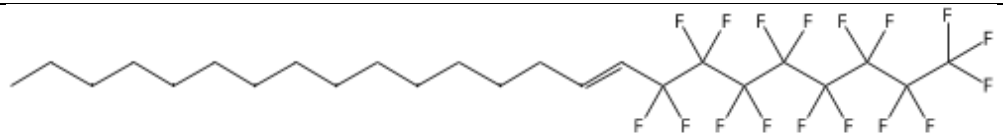
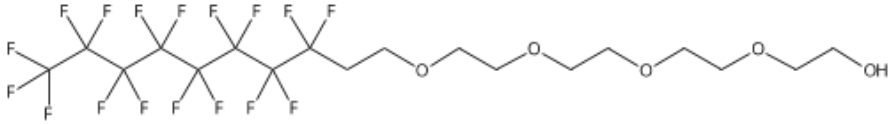
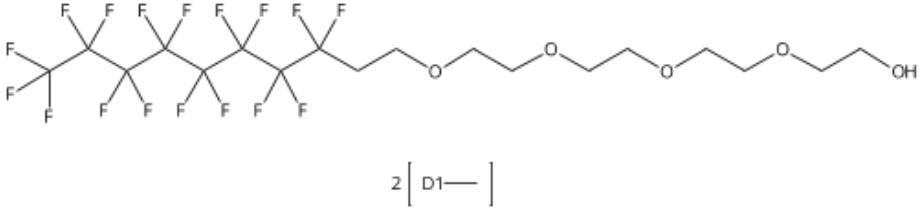
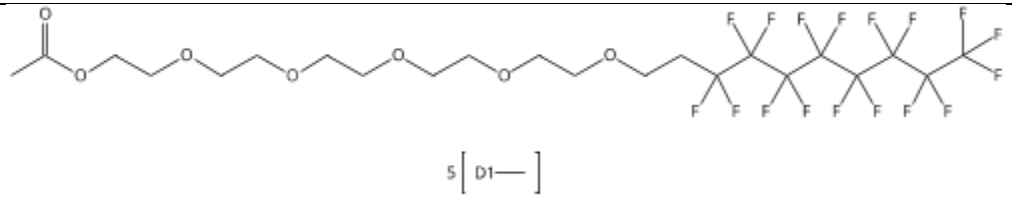
[4] https://www.cas.org/products/scifinder.

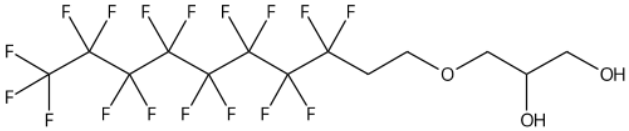
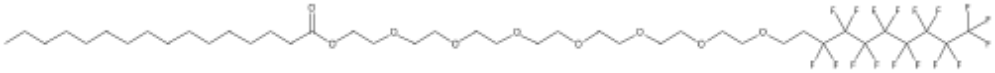
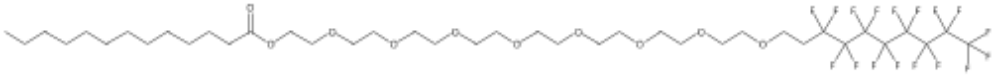
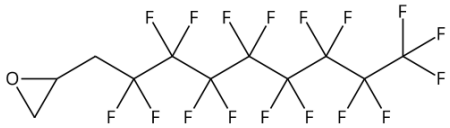
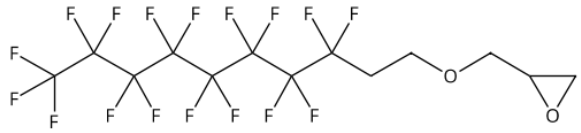
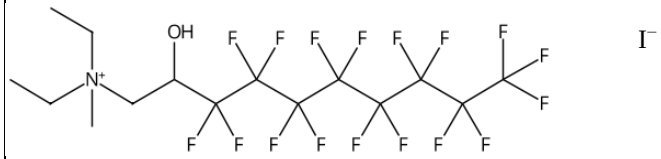
CAS No.	2D Structural Formula
Fluorotelomer phosphate esters (PAPs)	
63295-18-1	 2 NH_3
63295-19-2	 
63295-23-8	 2 NH_3
63295-24-9	 2 NH_3
63295-22-7	

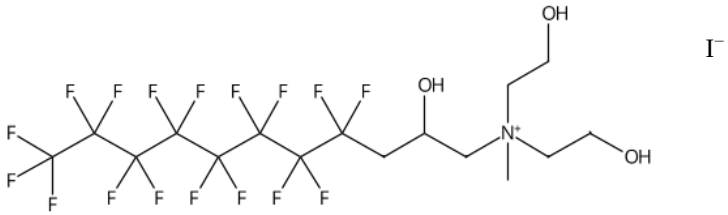
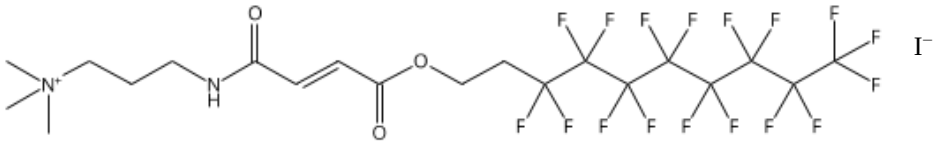
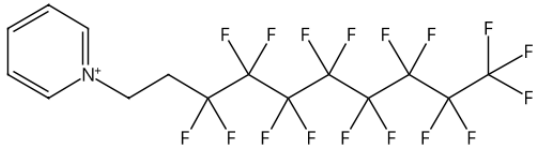
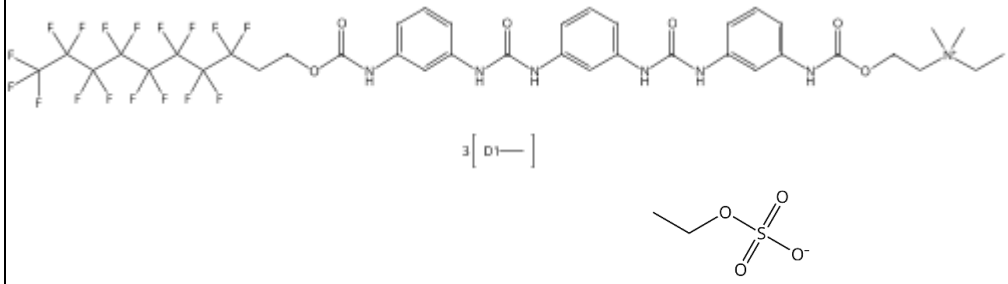
CAS No.	2D Structural Formula
98005-85-7	
98005-84-6	
1158182-60-5	
93776-20-6	
2343-53-5	

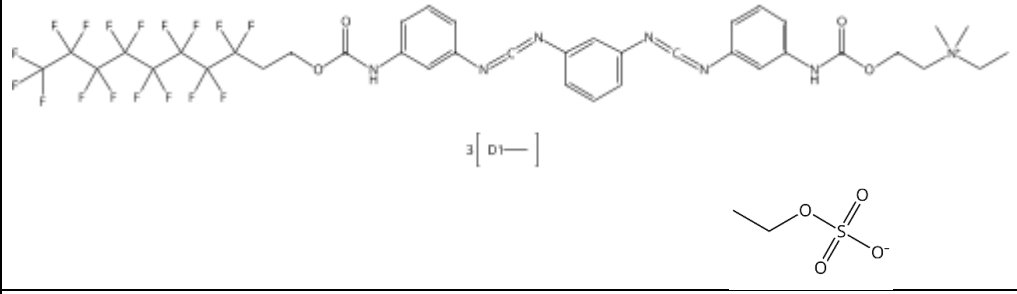
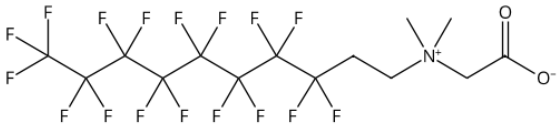
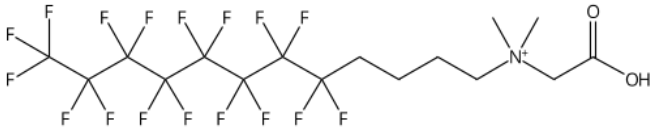
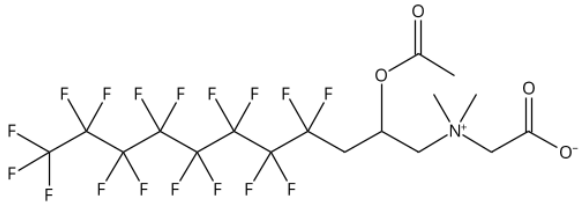
CAS No.	2D Structural Formula
1578186-53-4	
441765-20-4	 2 Na
Fluorotelomer acrylates and methacrylates (FTACs and FTMACs)	
146955-29-5	
76962-34-0	
Other fluorotelomer-based non-polymers	

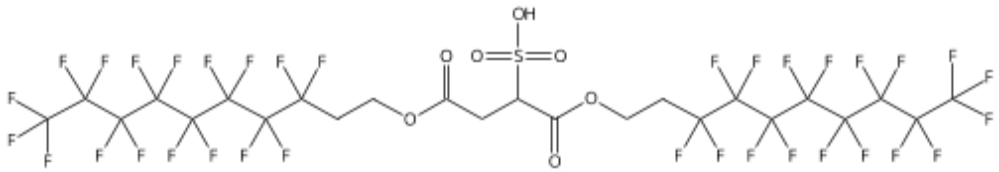
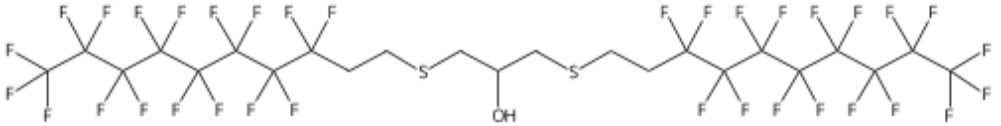
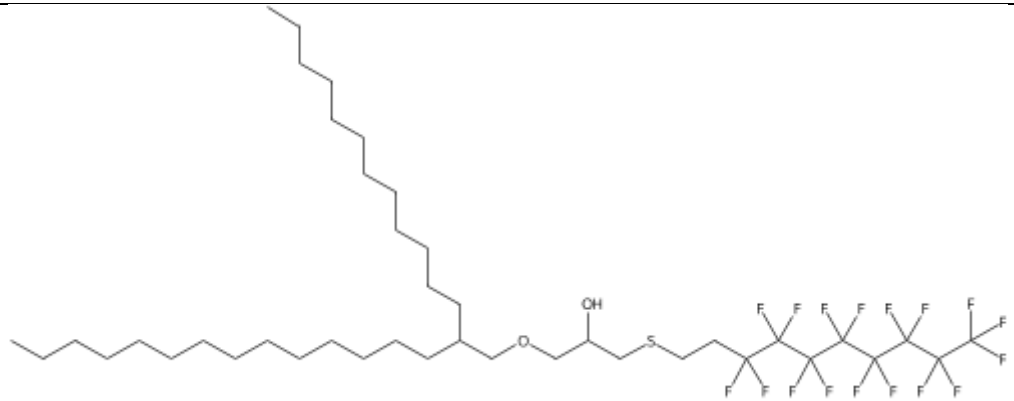
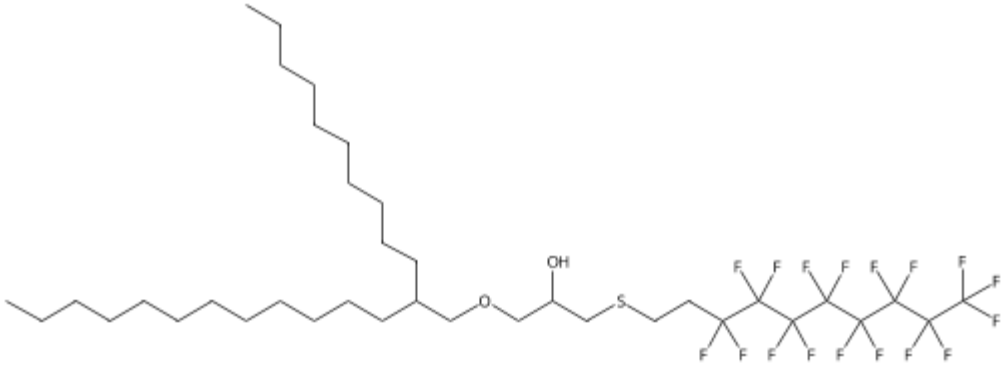
CAS No.	2D Structural Formula
246234-80-0	
1189587-64-1	
77117-48-7	
1835250-28-6	

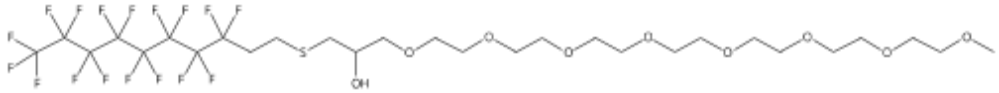
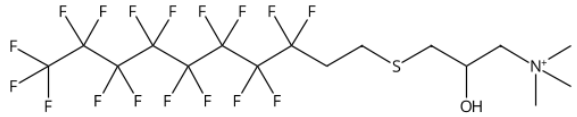
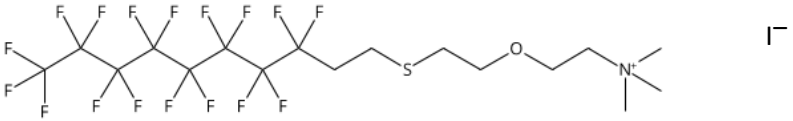
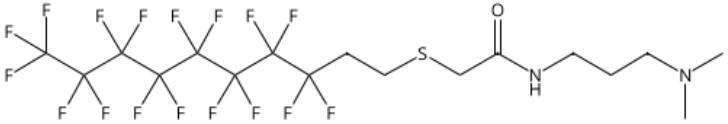
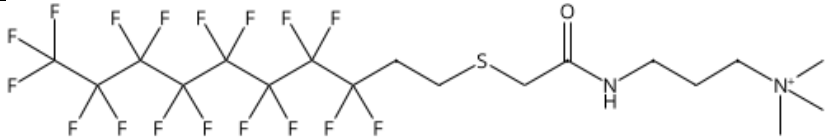
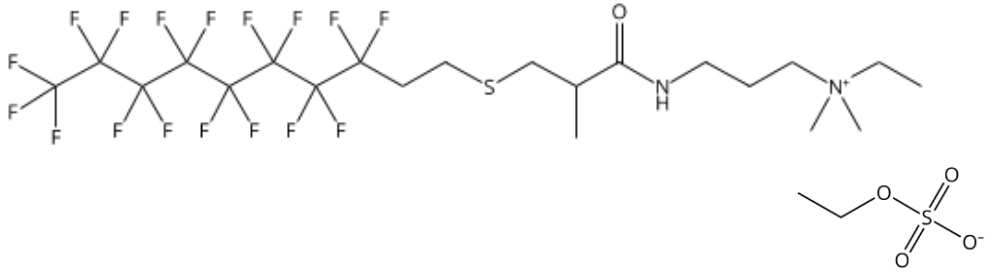
CAS No.	2D Structural Formula
133299-41-9	
100550-08-1	
1244062-16-5	
55427-54-8	
88271-22-1	
88243-09-8	

CAS No.	2D Structural Formula
121500-31-0	
67549-47-7	
67535-33-5	
38565-53-6	
114482-33-6	
99679-40-0	

CAS No.	2D Structural Formula
93776-18-2	
121912-26-3	
25935-14-2	
100155-23-5	

CAS No.	2D Structural Formula
100107-48-0	
145441-32-3	
2089109-30-6	
80234-03-3	

CAS No.	2D Structural Formula
54950-06-0	 Na
160819-47-6	
160819-50-1	
160819-49-8	

CAS No.	2D Structural Formula
121912-28-5	
727351-53-3	
71625-52-0	
1513863-91-6	
704870-51-9	
67333-62-4	

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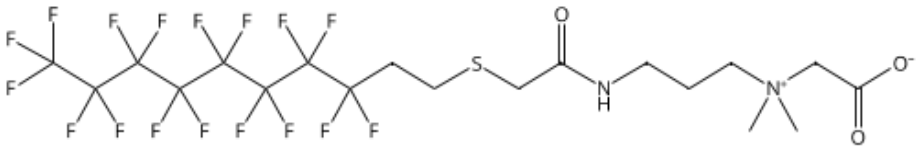
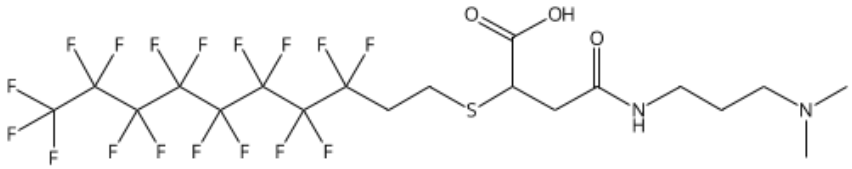
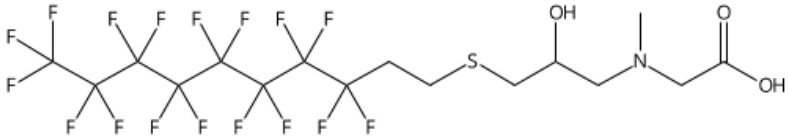
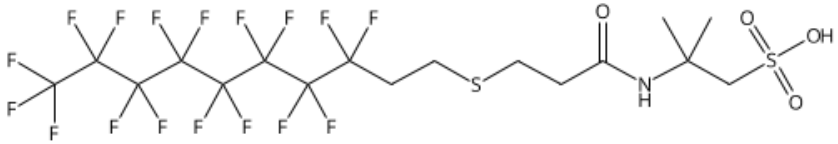
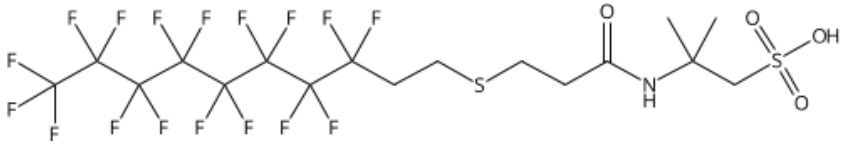
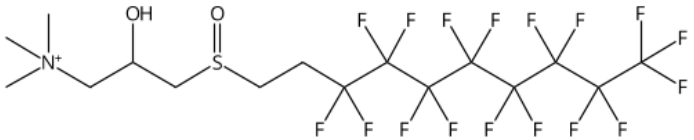
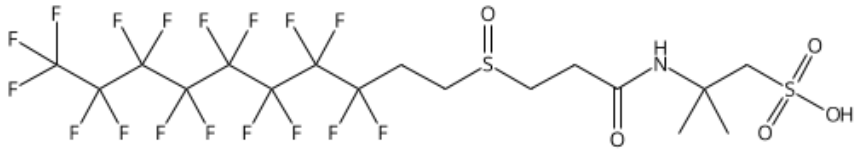
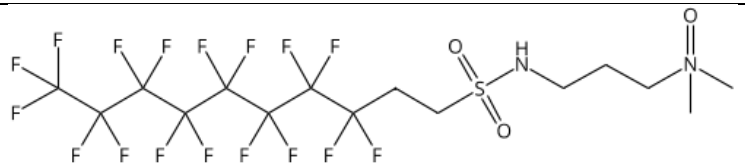
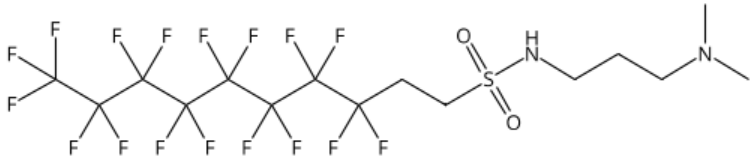
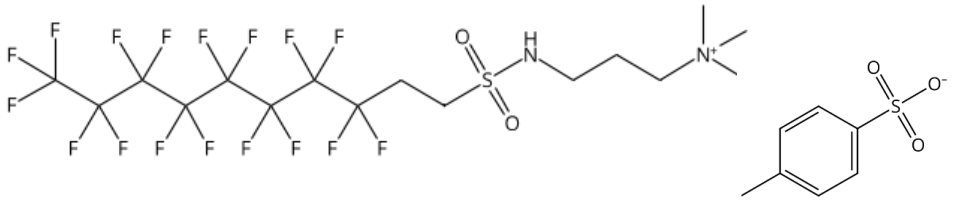
1513863-96-1	
1383438-89-8	
93128-66-6	
755698-73-8	
62880-96-0	 Na

CAS No.	2D Structural Formula
1513864-19-1	
1513864-12-4	
80475-33-8	
34455-23-7	
438237-77-5	

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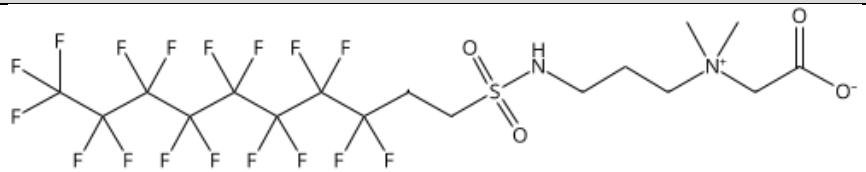
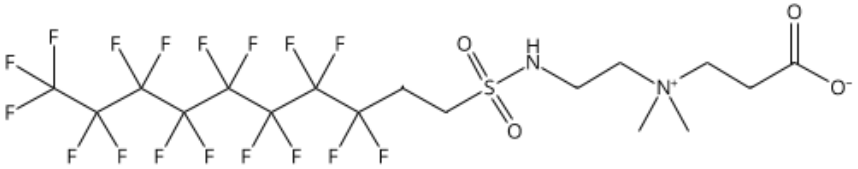
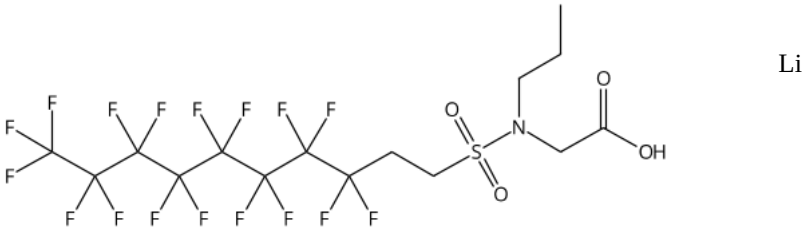
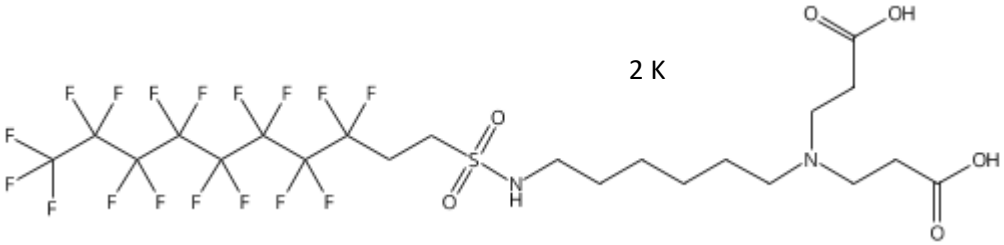
34455-21-5	
34695-29-9	
441765-18-0	 Li
98900-53-9	 2 K
Other substances	

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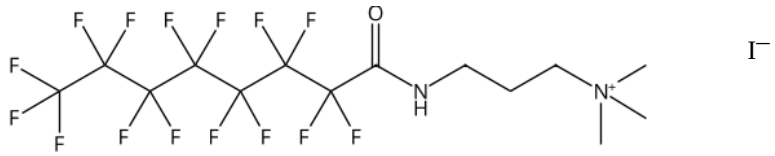
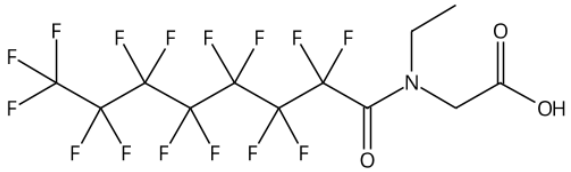
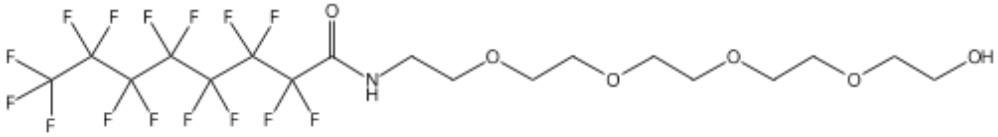
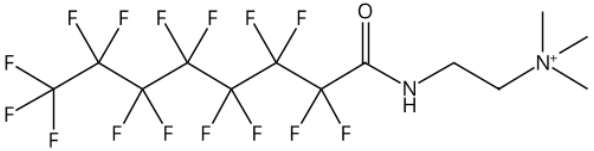
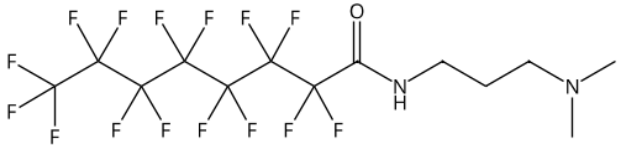
335-90-0	 I^-
138473-79-7	 NH_3
89932-71-8	
178766-44-4	 Cl^-
376-23-8	

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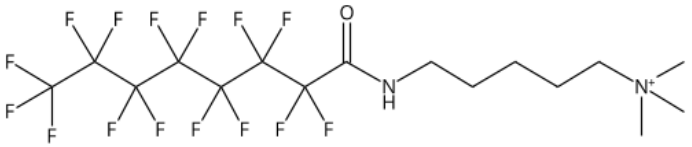
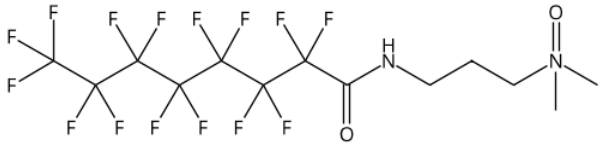
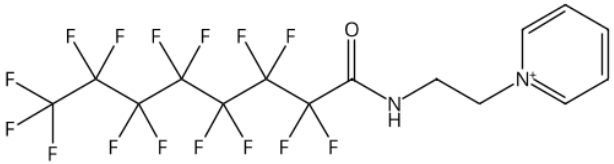
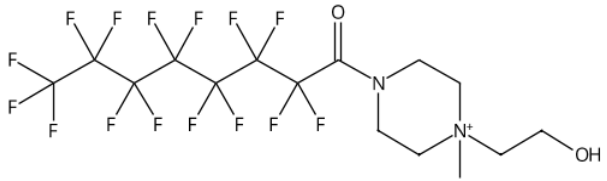
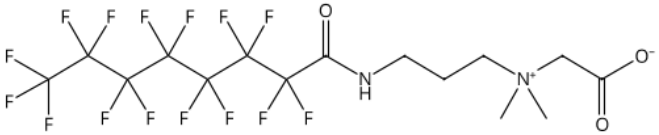
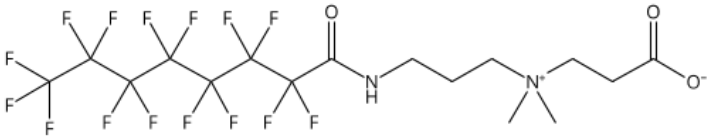
91707-61-8	 I^-
30295-53-5	
308-01-0	 Cl^-
103555-98-2	 Cl^-
90179-39-8	
5158-52-1	

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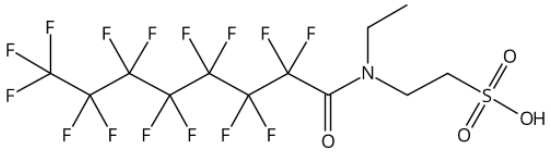
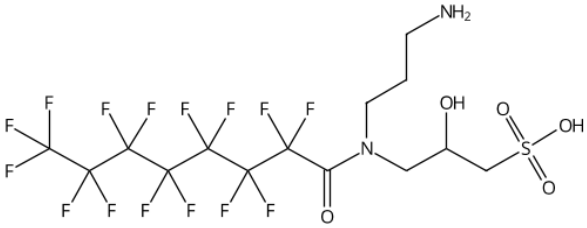
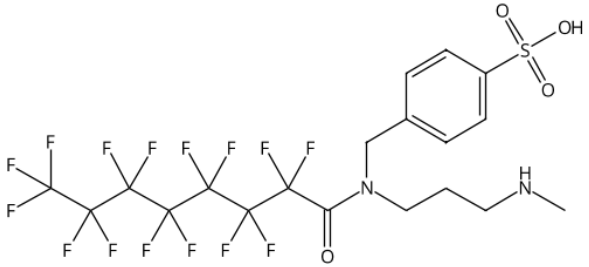
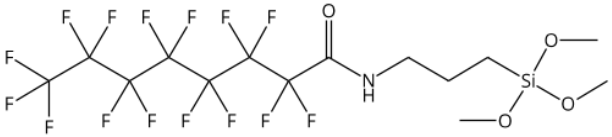
57670-46-9	 K
98900-76-6	 Na
98900-75-5	 Na
98046-76-5	

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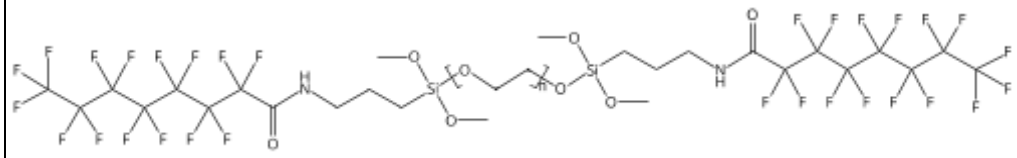
154380-30-0	

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