

Table 1. Tally of number of pesticide components that meet differing definitions of PFAS.

	Type of PFAS Definition	Active Ingredients	Other/Inert Ingredients
EPA Office of Pesticide Programs	complex -but containing as few as 2 fully fluorinated carbon atoms*	4	2
Maine	organic chemicals containing at least one fully fluorinated carbon atom	56	3
Minnesota	organic chemicals containing at least one fully fluorinated carbon atom	> 90	Undisclosed

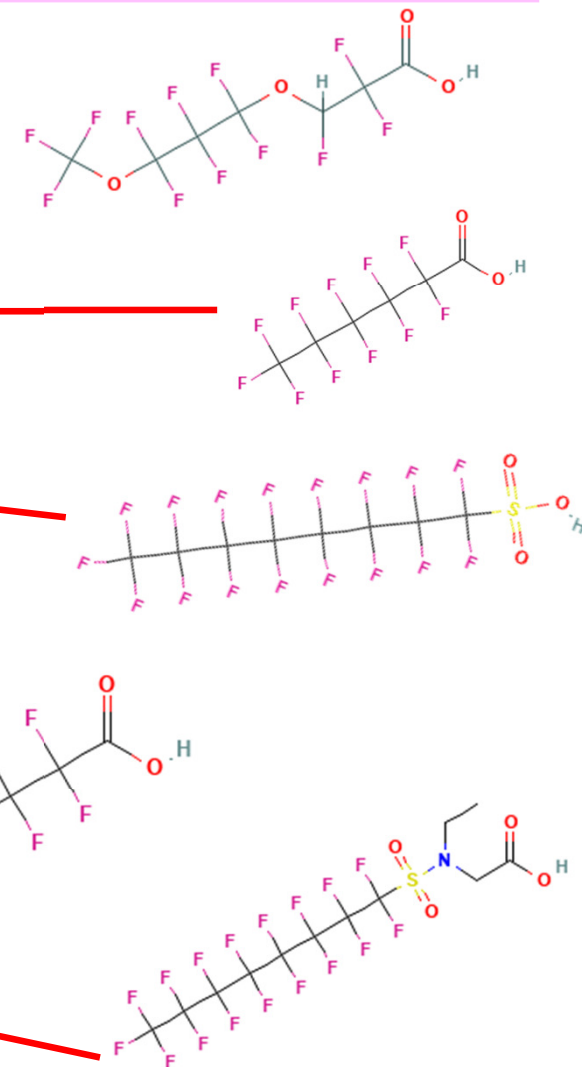
~5,000 allowed inert ingredients

<https://ordspub.epa.gov/ords/pesticides/f?p=INERTFINDER:1:0::no:1::>

* EPA's working definition of PFAS can be found at <https://www.epa.gov/pesticides/pfas-packaging>

PFAS Analytical Capabilities*

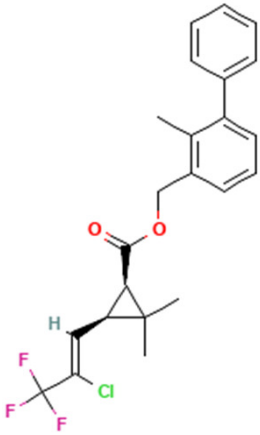
Analyte	Abbreviation	CASRN	Method 533	Method 537.1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	763051-92-9	x	x
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	756426-58-1	x	x
4,8-Dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4	x	x
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6	x	x
Perfluorobutanesulfonic acid	PFBS	375-73-5	x	x
Perfluorodecanoic acid	PFDA	335-76-2	x	x
Perfluorododecanoic acid	PFDoA	307-55-1	x	x
Perfluoroheptanoic acid	PFHpA	375-85-9	x	x
Perfluorohexanoic acid	PFHxA	307-24-4	x	x
Perfluorohexanesulfonic acid	PFHxS	355-46-4	x	x
Perfluorononanoic acid	PFNA	375-95-1	x	x
Perfluorooctanoic acid	PFOA	335-67-1	x	x
Perfluorooctanesulfonic acid	PFOS	1763-23-1	x	x
Perfluoroundecanoic acid	PFUnA	2058-94-8	x	x
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	4:2FTS	757124-72-4	x	
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	6:2FTS	27619-97-2	x	
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	8:2FTS	39108-34-4	x	
Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6	x	
Perfluorobutanoic acid	PFBA	375-22-4	x	
Perfluoro(2-ethoxyethane)sulfonic acid	PFEESA	113507-82-7	x	
Perfluoroheptanesulfonic acid	PFHpS	375-92-8	x	
Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5	x	
Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1	x	
Perfluoropentanoic acid	PFPeA	2706-90-3	x	
Perfluoropentanesulfonic acid	PFPeS	2706-91-4	x	
N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	2991-50-6		x
N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	2355-31-9		x
Perfluorotetradecanoic acid	PFTA	376-06-7		x
Perfluorotridecanoic acid	PFTTrDA	72629-94-8		x



Target Analyte Name	Abbreviation	CASRN
Perfluoroalkyl carboxylic acids		
Perfluorobutanoic acid	PFBA	375-22-4
Perfluoropentanoic acid	PFPeA	2706-90-3
Perfluorohexanoic acid	PFHxA	307-24-4
Perfluoroheptanoic acid	PFHpA	375-85-9
Perfluorooctanoic acid	PFOA	335-67-1
Perfluorononanoic acid	PFNA	375-95-1
Perfluorodecanoic acid	PFDA	335-76-2
Perfluoroundecanoic acid	PFUnA	2058-94-8
Perfluorododecanoic acid	PFDoA	307-55-1
Perfluorotridecanoic acid	PFTrDA	72629-94-8
Perfluorotetradecanoic acid	PFTeDA	376-06-7
Perfluoroalkyl sulfonic acids		
Acid Form		
Perfluorobutanesulfonic acid	PFBS	375-73-5
Perfluoropentanesulfonic acid	PFPeS	2706-91-4
Perfluorohexanesulfonic acid	PFHxS	355-46-4
Perfluoroheptanesulfonic acid	PFHpS	375-92-8
Perfluorooctanesulfonic acid	PFOS	1763-23-1
Perfluorononanesulfonic acid	PFNS	68259-12-1
Perfluorodecanesulfonic acid *	PFDS	335-77-3
Perfluorododecanesulfonic acid *	PFDoS	79780-39-5
Fluorotelomer sulfonic acids		
1 <i>H</i> ,1 <i>H</i> , 2 <i>H</i> , 2 <i>H</i> -Perfluorohexane sulfonic acid	4:2FTS	757124-72-4
1 <i>H</i> ,1 <i>H</i> , 2 <i>H</i> , 2 <i>H</i> -Perfluorooctane sulfonic acid	6:2FTS	27619-97-2
1 <i>H</i> ,1 <i>H</i> , 2 <i>H</i> , 2 <i>H</i> -Perfluorodecane sulfonic acid	8:2FTS	39108-34-4
Perfluorooctane sulfonamides		
Perfluorooctanesulfonamide	PFOSA	754-91-6
N-methyl perfluorooctanesulfonamide	NMeFOSA	31506-32-8
N-ethyl perfluorooctanesulfonamide	NEtFOSA	4151-50-2
Perfluorooctane sulfonamidoacetic acids		
N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	2355-31-9
N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	2991-50-6

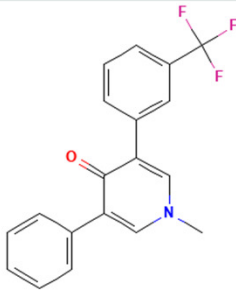
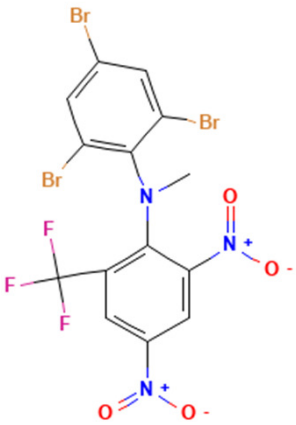
Perfluorooctane sulfonamide ethanols		
N-methyl perfluorooctanesulfonamidoethanol	NMeFOSE	24448-09-7
N-ethyl perfluorooctanesulfonamidoethanol	NEtFOSE	1691-99-2
Per- and Polyfluoroether carboxylic acids		
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6
4,8-Dioxa-3 <i>H</i> -perfluorononanoic acid	ADONA	919005-14-4
Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1
Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5
Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6
Ether sulfonic acids		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	756426-58-1
11-Chlorocicosafafluoro-3-oxaundecane-1-sulfonic acid *	11Cl-PF3OUdS	763051-92-9
Perfluoro(2-ethoxyethane)sulfonic acid	PFEESA	113507-82-7
Fluorotelomer carboxylic acids		
3-Perfluoropropyl propanoic acid	3:3FTCA	356-02-5
2 <i>H</i> ,2 <i>H</i> ,3 <i>H</i> ,3 <i>H</i> -Perfluorooctanoic acid	5:3FTCA	914637-49-3
3-Perfluoroheptyl propanoic acid	7:3FTCA	812-70-4

PFAS Analytical Capabilities
Method 1633



Main active ingredients PFAS by definition

Acifluorfen-sodium	Ethalfuralin	Flutolanil	Norflurazon	Pyrasulfotole	Tralopyril
Benfluralin	Fipronil	Fluvalinate	Novaluron	Pyridalyl	Trifloxystrobin
Bicyclopyrone	Fluazifop-P-butyl	Fomesafen	Noviflumuron	Pyrifluquinazon	Triflumizole
Bifenthrin	Fludioxonil	Fomesafen-sodium	Oxathiapiprolin	Pyroxasulfone	Trifluralin
Broflanilide	Fluensulfone	γ-Cyhalothrin	Oxyfluorfen	Saflufenacil	Triflusulfuron-methyl
Bromethalin	Flufenacet	Hexaflumuron	Penoxsulam	Tefluthrin	λ-Cyhalothrin
Chlorfenapyr	Fluopicolide	Hydramethylnon	Penthiopyrad	Tembotrione	
Cyflufenamid	Fluopyram	Indoxacarb	Picoxystrobin	Tetraconazole	
Cyflumetofen	Fluridone	Lactofen	Prodiamine	Tetraniliprole	
Dithiopyr	Flurprimidol	Mefentrifluconazole	Prosulfuron	Tiafenacil	



Minnesota active ingredients PFAS by definition

Sodium acifluorfen

Benfluralin

beta-Cyfluthrin

Bicyclopyr

Bifenthrin

Bifenthrin,

Bixafen

Broflanilide

Bromethalin

Carfentrazone

Chlorfenapyr

Clodinafop

Cloransular

Cyflufenar

Cyflumetof

Cyfluthrin

Diflubenzuron

Diflufenoxim-sodium

Dithiopyr

Ethalfluralin

Etoxazole

Fipronil

Fonicamid

Florasulam

Florpyrauxifen-benzyl

Fluazifop-P-butyl

Fluazifop-propyl

Fluazifop-sodium

Fluazifop-butyl

Fluazifop-butyl

Fluazifop-butyl

Fluazifop-butyl

Fluazifop-butyl

Fluazifop-butyl

Fluazifop-butyl

Fluazifop-butyl

Fluazifop-butyl

Fluazifop-butyl

Fluazifop-butyl

Fluazifop-butyl

Fluazifop-butyl

Fluroxypyr

Fluroxypyr-meptyl

Flurprimidol

Fluthiacet-methyl

Flutianil

Flutolanil

Flutriafol

Fluvalinate

Fluxapyroxad

Flumetasafen

Flumetasafen, sodium

Gamma-Cyhalothrin

Gamma-linolenic acid

Gamma-linolenic acid

Gamma-linolenic acid

Gamma-linolenic acid

Gamma-linolenic acid

Gamma-linolenic acid

Gamma-linolenic acid

Gamma-linolenic acid

Gamma-linolenic acid

Gamma-linolenic acid

Gamma-linolenic acid

Norflurazon

Novaluron

Noviflumuron

Oxathiapiprolin

Oxyfluorfen

Penflufen

Penoxsulam

Penthiopyrad

Picoxystrobin

Prodiamine

Prosulfuron

Pyraflufen-ethyl

Pyrasulfotole Technical

Pyridalyl

Pyrifluquinazon

Pyroxasulfone

Pyroxsulam

Quinoxifen

Saflufenacil

Sulfoxaflor

Tefluthrin

Tembotrione

Tetraconazole

Tetraniliprole

TFM

Tiafenacil

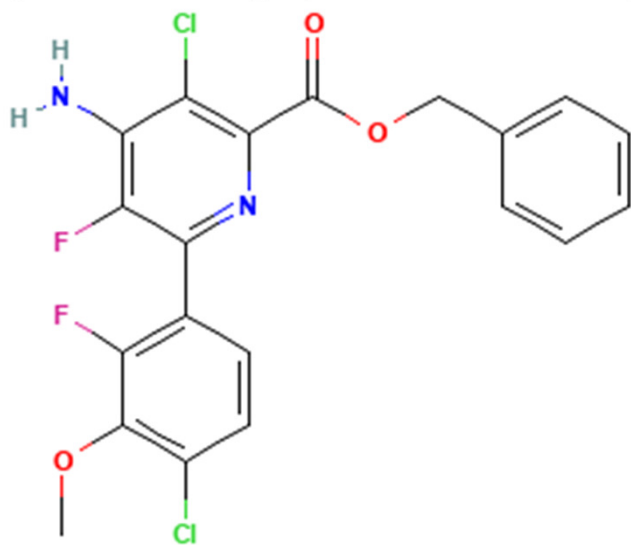
Tralopyril

Trifloxystrobin

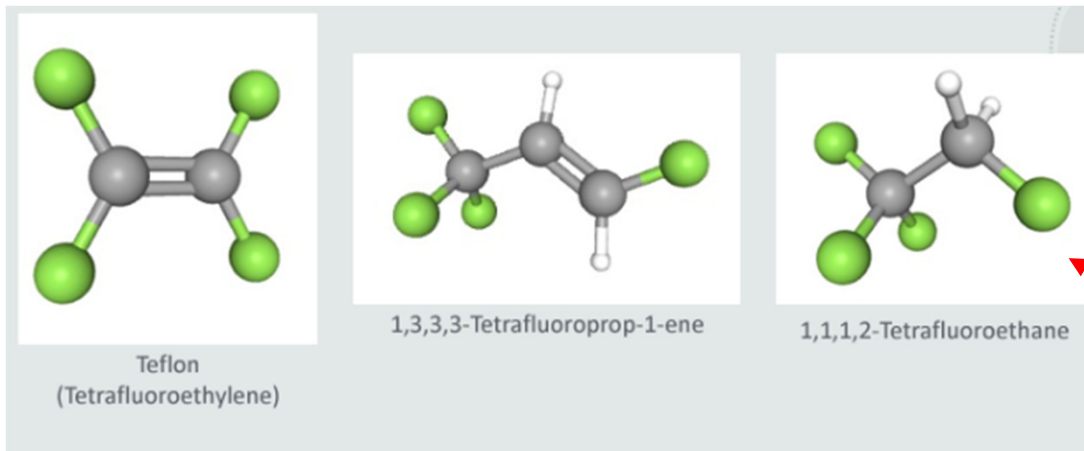
Triflumizole

Trifluralin

Triflurosulfuron-methyl



Maine inert ingredients PFAS by definition



Approved for use in organic
agriculture by the National
Organic Program

(propellant)