名称	CASRN	標准	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and	DNA binding by OASIS	DNA binding by OECD	Oncologic is Primary r Classification (	in vitro mutagenicity	in vivo mutagenicity	Organic functional	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色	遺伝毒性 in vitro マ	in vitro コ メット試験	遺伝毒性 vitro 小核	遺伝毒性 vitro DNA	in vitro HPRT試験	in vitro 不 定期DNA合	in vitro 細 逆 胞形質転換 vi	伝毒性 道 vo 小核試 vi	伝毒性 遺伝毒 ivo DNA損 in vivo	性 遺伝毒性 染色 in vivo 不定	遺伝毒性 E in vivo コ	in vivo突然 変異	発がん性
Fluorotelomer	2043-47-2		nongenotox) alerts by ISS  No alert found No alert found	No alert found	No alert found	Classification ( a Not classified N	alerts by ISS	alerts by ISS			外共不同	灰 ウスリン フォーマ討	t	<b>武城</b>	無列町部場		PSK.	enter E	· 9	(体英常)	試験 期DNA合成 試験	ノフト試験		
alcohol 4:2	2043-47-2	F	No alert found No alert found	No alert found	No alert found	Not classified P	No alert found	No alert found	Alcohol;Alkyl halide;Perflour ocarbon															
		F—F							derivatives															
		F—F																						
		F——F																						
		F																						
Fluorotelomer		ан	No alert found No alert found							TA1535,TA1537,TA98,TA100,WP2uvr														
alcohol 6:2	647-42-7	F	No alert found No alert found	No alert found	No alert found	Not classified P	No alert found	No alert found	Alcohol;Alkyl halide;Perflour	±S9)Negative//TA1535, TA1537, TA98,TA100, WP2 uvrA (±S9)	Negative;H PBL(±S9)	L51/8Y (±									Crl:(WI) WU BRラット雄			
		F—F							derivatives	Negative Negative	Negative;C	mouse lymphoma te L5178Y									Negative			
		F									S9:Negativ	re L5178Y cells												
											+S9:Positiv	v Negative(: S9), Ambiguous (+S9)Nega	±											
											Negative/	/ Ambiguous	s											
											peripheral blood	ve(-S9)												
											lymphocyt	e												
											Negative(: S9);	±												
		oH.									Chinese													
Fluorotelom er alcohol	678-39-7	F	No alert found No alert found	No alert found	No alert found	Not classified N	No alert found	No alert found	halide:Perflour	TA98, TA100, TA1535, TA1537, WP2uvrA; TA98, TA100, WQP2uvrA								IC	rl:CD(SD) SS BRラッ					腫瘍発生な し、肝腫瘍
8:2		F F							ocarbon derivatives	pkM101(±S9) Negative								l- N	雄、骨髄 egative					促進活性な し
		F F																						
		F																						
		FF																					-	
		F																						
		F F																						
		он																						
追加 Fluorotelomer alcohol 10:2	865-86-1		No alert found No alert found	AN2;AN2 >> Schiff base formation by aldehyde formed after metabolic activation;AN2 >> Schiff base formation by aldehyd	No alert found	Not classified N	No alert found	No alert found	Alcohol;Alkyl halide;Perflour	TA98, TA100, WP2uvrA plM101(±S9 Negative	)													
		1		formed after metabolic activation >> Geminal Polyhaloalkane Derivatives:Radical:Radical >> Radical mechanism via ROS formation (indirect):Radical >> Radical mechanism via ROS					ocarbon derivatives															
		FF																						
				Derivatives:SN2:SN2 >> Applation involving a leaving group																				
				after metabolic activation;SN2 >> Acylation involving a leaving group after metabolic activation >> Geminal Polyhaloalkane Derivatives;SN2 >> Nucleophilic substitution at sp3 carbon	•																			
				atom after thiol (glutathione) conjugation:SN2 >> Nucleophilic substitution at sp3 carbon atom after thiol (glutathione) conjugation >> Geminal Polyhaloalkane Derivatives																				
				conjugation >> Germinal Polyhaloalkane Derivatives																				
		r—																						
	375-82-6	DH F	No alert found No alert found	No alert found	No alert found		No alert found	No alert found	Alcohol;Alkyl			-			-							-		
Fluorotelomer alcohol						beta- Haloether Reactive			halide;Perflour ocarbon derivatives												0 0 0 0 0 0			
						Functional			derivatives															
		F—F				Groups																		
		F—F																						
		F—F																						
		F—F																						
		F—F																						
		но																						
9:1	307-37-9	no _	No alert found No alert found	No alert found	No alert found	Alpha- and	No alert found	No alert found	Alcohol:Alkvl				-	-	-		-	-					-	
Fluorotelomer alcohol						beta-			halide;Perflour ocarbon															
		F-F				Haloether Reactive Functional			derivatives															
		F—F				Functional Groups																		
		F F																						
		F																						
		F-F																						
		F-F																						
		F—F																						
		но																						
1H,1H,8H- Perfluoro-1- octanol	10331-08-5	но	No alert found No alert found	No alert found	Acylation:Acylation >> P450 Mediated Activation to Acyl Halides:Acylation >> P450 Mediated Activation to Acyl Halides >> 1,1-Dihaloalkanes	Alpha- and beta-	No alert found	No alert found	Alcohol;Alkyl halide;Perflour															
octanol		F. >			to Acyl Halides >> 1,1-Dihaloalkanes	Reactive			ocarbon derivatives															
		F_ F				Functional Groups																		
		F F																						
		F																						
		F																						
		F																						
		F																					-	
		-																						
		The state of the s				1						1	1	1	1	1						1 '	1 1	

名称 CASRN	Carcinogenicit y (genotox and	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in Primary mu Classification (Arale	vitro in utagenicity mu	vivo utagenicity	Organic 3	直伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色	遺伝毒性 in vitro マ	in vitro コ メット試験	遺伝毒性 vitro 小核	遺伝毒性 vitro DNA	in vitro HPRT試験	in vitro 不 定期DNA合	in vitro 細 胞形質転換	遺伝毒性 逆 /ivo 小核試 vi	性病性 遺伝 ivo DNA損 in viv	等性 遺伝毒性 象色 in vivo 不	遺伝毒性 定 in vivo コ	in vivo突然 発がん性 変異
5:1 423-46-1	nongenotox) alerts by ISS No alert found		No alert found	No alert found	Classification (Ai ale Alpha- and No beta-	mes test) (M erts by ISS ale alert found No	erts by ISS alert found	Alcohol;Alkyl		体異常試験	ウスリン フォーマ試		IX.BX	鎖切断試験		灰	ECR I	9	4 体異	K試験 期DNA合 試験	成 メット試験	
Fluorotelomer alcohol	HD F F F F F F F F F F F F F F F F F F F				beta- Haloether Reactive Functional Groups			nalide;Perflour scarbon derivatives			***************************************											
IH.IH-IH- Eicosfiluoro- I-undecanol	No alert found	No alert found	No alert found	Acylation-Acylation >> P450 Mediated Activation to Acyl Halides-Acylation >> P450 Mediated Activation to Acyl Halides >> 1,1-*Dhaloskanes	Alpha- and No beta- Halocher Reactive Functional Groups	alert found No	alert found	Alcohol;Alkyl nalide;Perflour scarbon derivatives														
IN IN HSB- Perfluoropenta nol	No alert found	No alert found	No alert found	Acyldisch-Acyldisch >> P450 Mediated Activation to Acyl Haldes-Acyldisch >> P450 Mediated Activation to Acyl Haldes Acyldisch >> 1,11-Dihlosikanes	Reactive Functional Groups			derivatives														
3- [651-41-8] (Perflucroctyl) (propand	No alert found	No afert found	No alert found	No alert found	Not classified No			ocarbon derivatives														
IH.IH- 355-28-2 Perfluoro-1- pentanol	F No alert found F F F F F F F F F F F F F F F F F F F	No afert found	No alert found		Alpha- and No beta* Haloether Reactive Functional Groups			nalide;Perflour icarbon derivatives														
IN HIRSH- Headecaflur o-1-monand	No alert found			Acyldrackopletion >> P450 Mediated Activation to Acyl HaldiacAppletion >> P450 Mediated Activation to Acyl HaldiacAppletion >> P4.1 Dehalosifiames to Acyl Haldides >> 1.1 - Dehalosifiames	Reactive Functional Groups			derivatives														
3- (Perfluorobut)	F No slert found F F F F F F F F F F F F F F F F F F F	No alert found	No afert found	No afert found	Not classified No	alert found No	o alert found	Alcohol;Alkyl nalide,Ferflour ocarbon derivatives														

名称 CASRN #	Carcinogenicit y (genotox and	DNA alerts for AMES, GA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro	in vivo	Organic functional	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色	遺伝毒性 in vitro マ	in vitro コ メット試験	遺伝毒性 i	直伝毒性 in	n vitro in	n vitro 不 in 計期DNA合 助	vitro 細 遺伝 形質転換 vivo	こ寄性 遺伝記 小核試 vivo ロ	毒性 遺伝毒性	遺伝毒性 n vivo 不定	遺伝毒性 in vivo コ	n vivo突然 発がん性 変異
	nongenotox) alerts by ISS				Oncologic in vitro Primary mutage Classification (Ames alerts b	test) (Micronucle by ISS alerts by IS	us) groups S		体異常試影	見 ウスリン フォーマ試	) I BAU	試験	廣切断試験	F	ž H	験験	傷	体異常試	) 期DNA合成 試験	メット試験	~~
3:1 375-01-9 Fluorotelomer alcohol	F No alert found	No allert found	No afert found	No elert found	Alpha- and beta- Haloether Reactive Functional Groups	t found No alert fo	nd Alcohol;Alkyl halide;Perflour ocarbon derivatives														***************************************
2:1 422-05-9	F F No alert found	No alert found	No afert found	No alert found	Alpha- and No aler	t found No alert fo	nd Alcohol;Alkyl		Chinese												
Fluorotelomer alcohol	F F F				Alpha- and beta- haloether Reactive Functional Groups		halide;Perflour ocarbon derivatives		hamster Lung (± S9)Negativ e												***************************************
6- (Perfluorohexy ()hexanol	HO No alert found	No alert found	No alert found	No alert found	Not classified No aler	t found No alert fo	nd Alcohol;Alkyl halide;Perflour ocarbon derivatives														
•																					
Fluorotelomer 755-40-8 alcohol 3/2	No alert found	No alert found	No alert found	No alert found	Not classified No aler	t found No alert fo	nd Alcohol, Alkyl halide, Perflour ocarbon derivatives														
7.3 25600-66-2 Fluoroteloner slooted	No alert found		No alert found	No alert found	Not classified No aler		halide;Perflour ocarbon derivatives														
7-1 507-30-2 Fluorotelomer alcottel	F No alert found F F F F F F F F F F F F F F F F F F F	No alert found	No afert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	t found No alert fo	nd Alcohol:Alkyl halide;Perflour ocarbon derivatives														
44. Fluorotationer alcohol	No alert found	No alert found	No alert found	No slert found	Not classified No aler	t found No alert fo	nd Alcohol Alkyl halide/Perflour ocarbon derivatives		4						***************************************						

名称 CASRN	<b>備差</b> Carcinogenicit	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro	in vivo	Organic	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性	遺伝毒性	in vitro ⊐	遺伝毒性	遺伝毒性	in vitro	in vitro 不	in vitro 細	遺伝毒性 1	直伝毒性 遺伝	毒性 遺伝毒性	生_遺伝毒性	in vivo突然 発がん性
	y (genotox and nongenotox) alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS			Oncologic in vitro Primary mutagenicity Classification (Ames test) alerts by ISS	mutagenicity (Micronucleus)	functional groups	遺伝毒性 vitro 復帰突然変異試験	vitro 染色 体異常試験	in vitro マ ウスリン フォーマ試	メット試験	vitro 小核 試験	vitro DNA 鎖切断試験	HPRT試験	定期DNA合 成	胞形質転換 試験	vivo 小核試 v 験	ivo DNA損 in viv 編 体異	ro 染色 in vivo 7 常試験 期DNA合 試験	F定 in vivo コ 対水 メット試験	変異
3- 679-02-7 (Perfluoroprop	F No alert found	No alert found	No alert found	No alert found	Not classified No alert found	No alert found	Alcohol;Alkyl halide;Perflour														
yl)propanol	F—F					5 6 7 7 8 8 8	ocarbon derivatives														
	F—F																				
	F																		b 0 0 0 0 0		
						5 5 6 6 8 8 8													6 8 8 8 8		
Fluorotelomer 54949-74-5	HO No alast found	No alert found	No alert found	No alert found	Not classified No alert found	No alast faces	Aleskal Alles														
alcohol 2:2	F	No alert round	No alert found	No alert round	Not classified No alert found	No alert found	halide;Perflour ocarbon														
	F—F					5 5 7 7 8 8 8	derivatives														
						6 6 7 8 8 8													6 6 6 8 8		
	F					5 6 7 7 8 8 8															
						6 6 7 8 8 8 8															
	OH																				
3- 80806-68-4 (Perfluorohexy	No alert found	No alert found	No alert found	No alert found	Not classified No alert found		halide:Perflour		-	-											
I)propanol	F—F						ocarbon derivatives												6 8 8 8 8 8 8		
	F—F																				
	F—F					8 8 9 8 9 8 8 8 8													B		
	F F																				
	F—F																		b 0 0 0 0 0		
	ю					5 5 6 7 7 8 8															
3- (Perfluoroethyl )propanol	No alert found	No alert found	No alert found	No alert found	Not classified No alert found	No alert found	Alcohol;Alkyl halide;Perflour ocarbon														
propanoi	F—F						derivatives														
	F																		b b c c d d		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
						5 5 7 7 8 8 8															
	но																				
8:1 423-56-3		No alert found	No alert found	No alert found	Alpha- and No alert found	No alert found	Alcohol;Alkyl		-												
Fluorotelomer alcohol	F—F				Alpha- and No alert found beta- Haloether Reactive Functional		halide;Perflour ocarbon														
	F—F				Functional Groups		demandes												b 0 0 0 0 0		
	F—F					5 5 6 6 8 8 8													6 8 9 8 9		
	F—F																		6 6 8 9 9		6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
	F—F					5 5 6 6 7 8 8															
	F—F																		b 0 0 0 0 0		
	но																		B B B B B B B B		
11:1 423-65-4 Fluorotelomer	No slert found	No alert found	No alert found	No alert found	Alpha- and No alert found beta-		halide:Perflour														
alcohol					Haloether Reactive Functional Groups	6 9 9 0 0 0 0 0 0 0	ocarbon derivatives											1	6 9 9 9 9 8		
					Groups														b b b b b b		
	r r																	4 4 9 9 9	B		
	r—																		E		
	r r					8 8 9 8 9 8 8 8 8													B		
	r—r																		b b b b b		
Perfluorobutan 3056-01-7	No alert found	No alert found	No alert found	No alert found	Alpha- and No alert found	No alert found	Alcohol;Alkyl		-												
ol					Alpha- and No alert found beta- Haloether Reactive Functional Groups	8 0 0 0 0 0 0 0 0 0 0 0 0	halide;Perflour ocarbon														
	F—F				Functional Groups		uer Natives												B B B B B B B B B		
	FF																		0 0 0 0 0 0 0 0		
	F—F																		b b c c c c c		
																			0 0 0 0 0 0 0		
	F—F																		5 8 9 8 8 8		
	OH OH																		b B B B B B B B B		
						1			1	1	1	t			1	1					1 1

	alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagen Classification (Ames to alerts by	ISS  alerts by ISS	functional s) groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試影	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 in witro DNA HP 鎖切断試験	vitro in vitro RT試験 定期D 成	o 不 in vitro 和 NA合 胞形質報 試験	遺伝毒性 換 vivo 小核試 験	遺伝毒性 遺伝 vivo DNA損 in viv 傷 体異:	毒性 遺伝毒性 o 染色 in vivo 7 常試験 期DNA台 試験	i 遺伝毒性 定 in vivo コ t成 メット試験	in vivo突然 多 変異	そがん性
IH.H7+- 335-99-9 Dodecafluoror- I-heptanol	P P P P P P P P P P P P P P P P P P P	No alert found	No afert found	AcylationAcylation >> P400 Mediated Activated Activation Acyl HalidesAction >> P450 Mediated Activation to Acyl HalidesAction >> P450 Mediated Activation to Acyl Halides >> 1,1-Ditaloalhanes	to Alphar and m betar Haloether Resolution Groups	found No alert four	d Alcohol;Alkyl halide;Perflour ocarbon derivatives										***************************************				
Perfluoropenta 2706-90-3 noica acid	F No alert found	No alert found	No afert found	No alert found	Alpha- and beta-beta-beta-beta-beta-beta-beta-beta-	found No alert four	d (PFOA)Alkyl halide:Carboxy ic acid:Perflouroc arbon derivatives														
Perfluorocot 335-67-1 anoic acid	F P F P F P P P P P P P P P P P P P P P	No alert found	No alert found	No alert found	Halocher Reactive Functional Groups	***************************************	ic acidPerflouros arbon derivatives	Negative_DH4448   TABETA100.TABST_A1153T_A153T_A153B_  SwerroisiaeDMWP2usrAL±  TABETA100.TABST_A1153T_A153T_WP2usrA  CLESST_A1153T_A153T_A153T_WP2usrA (±59)  Negative]	NH4+塩にト リンパ球、 CHO(+S9) Negative Na+塩]			Tkoell Negative			[C3H 10TT/2報 股 Negative NH4+塩]	C57BL/GJ マウス境 網状辨臓 ンパ球 Negative: [CD-1(Idf) マウス値雄 青髄 Negative NH4+塩.Na 塩]	証号: (Crt.f CDIS Same Doolii	D)- es and ttle	C57BL/6J マウス雄 肝細胞 精製細胞 Negative	は古の何の発展中況を中る日常部	肝になった。 発関、CAR の発動した。 がしてAR である。 がしてAR である。 がしてAR である。 がしてR 化示る・デ連である。 でる。 でる。 でる。 でる。 でる。 でる。 でる。 で
Perfluorohepta 375-85-9 noic acid	F Perfluenced on sealed of	No alert found	No afert found	No afert found	beta* Haloether Reactive Functional Groups		halide-Carboxy io acid/Perflouroc arbon derivatives					V79,Negativ e						***************************************			
Perfluorobutan 375-727-4 oic scid	F F F F F HOOO	No alert found	No afert found	No sfort found	betar Haloether Reactive Functional Groups		halide,Carboxy io acid:Perflouroc arbon derivatives	TASSTA100TA1535,TA1538,TA1539 (±S9) Negative				V79 (±S9) Negative					Fischer344 rat, LI, KI Negative	***************************************			
Perfluorohe 307-24-4 xanoic acid	F F F F F F F F F F F F F F F F F F F	No alert found	No slert found	No slert found	beta* Haloether Reactive Functional Groups		halide,Carboxy ic acid:Perflouror arbon derivatives	TASS TAT 100 WP2-wrk-TASS TAT 100 TF 1055 TAT 137 WP2-wrk-TASS TAT 100 TF 1055 TAT 137 WP2 TAT 105 TA	とト末精血 リンパ球(± S9) Negative		HepG2 Negative	V79(±S9) Negative				SDラット末 柄血 雄 Equivocal/ 超Negative				9.6	発が心兆検なし
Perfluoroctan 678-45-5 edicia acid	Perfluenced to be a considered t	No alert found	No slert found	No start found	Alphar and beat beat Haloether Reactive Functional Groups	found No alert foun	d (PFOA)Alkyl halide;Carboxy io acid:Perflouror arbon derivatives														

名称 CASRN 4	Carcinogenicit y (genotox and nongenotox)	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagenicity (Classification (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus)	Organic functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試動	遺伝毒性 in vitro マ * ウスリン	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 錯切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 試験	遺伝毒性 遺 rivo 小核試 vii 除 但	i伝毒性 遺伝書 vo DNA損 in vivo 体型性	性 遺伝毒性 染色 in vivo 不知 試験 期DNA今6	遺伝毒性 E in vivo コ g メット試験	in vivo突然 発がん性 変異
3:3 356-02-5 Fluorotelomer carboxylic acid	alerts by ISS No alert found	No alert found	No alert found	No alert found	alerts by ISS Not classified No alert found	No alert found	(PFOA)Alkyl halide;Carboxyl ic		IT-PKTH BAG	フォーマ試		B-12A	SK 97WI BOUX			BAGA 1			試験	X > >1 BAGA	
	FF						acid;Perflouroc arbon derivatives														
	F—F																				
Potassium 2395-00-8	HO Perfluorooctan	No alert found	No alert found	No alert found	Not classified No alert found	No alert found	(PFOA)Alkyl												0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Potassium 2395-00-8 perfluorooctan oate	F Permutroctan ioi acid F (PFOA) ((Nongenotox); F F Structural alert for nongenotoxic						halide;Carboxyl ic acid;Perflouroc arbon derivatives														
	F F nongenotoxic carcinogenicity						derivatives														
	FF																				
	K <sup>c</sup> o																				
Perfluoronona 23453-64-7 nedioic acid	HD Perfluorooctan loic acid (PFOA)	No alert found	No alert found	No alert found	Alpha- and No alert found beta- Haloether Reactive Functional Groups	No alert found	(PFOA)Alkyl halide;Carboxyl ic acid;Perflouroc														
	F F alert for nongenotoxic carringenisty				Functional Groups		arbon derivatives														
	F F F																				
	F F																				
2H,2H,3H,3H- 914637-49-3 Perfluorooctan	OH No alert found	No alert found	No alert found	No alert found	Not classified No alert found	No alert found	(PFOA)Alkyl halide;Carboxyl														
oic acid	F—F						ic acid;Perflouroc arbon derivatives														
	F——F																				
	F																				
Perfluorohexan 336-08-3	HO Phtalate (or	No alert found	No alert found	No alert found	Alpha- and No alert found	No alert found	(PFOA)Alkyl														
edioic acid	Phtalate (or buthyl) diesters and monoseters (Nongenotox);				Alpha- and No alert found beta- Haloether Reactive Functional		halide;Carboxyl ic acid;Perflouroc arbon														
	F F Structural alert for nongenotoxic carcinogenicity				Groups		derivatives														
	F																				
	OH ,																				
Sodium 335-95-5 perfluorocotan oate	F Perfluoroctan oic acid	No allert found	No alert found	No alert found	Not classified No alert found	No alert found	(PFOA)Alkyl halide;Carboxyl ic acid;Perflouroc				1										
	F Perfluorocotan oio acid F F P (PFOA) (Nongenotox); F F Structural alert for nongenotoxic carcinogenicity						arbon derivatives														
	FF																				
	F																				
Perfluorodeca 307-78-8 nedioic acid	Na'  Perfluorocotan oic acid (PFOA)	No alert found	No alert found	No alert found	Alpha- and No alert found beta- Haloether Reactive	No alert found	(PFOA)Alkyl halide;Carboxyl														
	F F F F F F F F F F F F F F F F F F F				Haloether Reactive Functional Groups		ic acid;Perflouroc arbon derivatives														
	F nongenotoxic carcinogenicity																				
	F F F																				
	o≠ F																				

名称 CASRN 4	Carcinogenicit	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro	in vivo mutagenicity	Organic j	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 総色	遺伝毒性 in vitro マ	in vitro コ メット対略	遺伝毒性 vitro 小林	遺伝毒性 vitro DNA	in vitro	in vitro 不 定期DNA今	in vitro 細 胞形質転換	遺伝毒性 vivo 小統計	遺伝毒性 遺伝	表毒性 遺伝書	性 遺伝毒性	in vivo突然 発がん性 変異
	nongenotox) alerts by ISS				Oncologic in vitro Primary mutagenicity Classification (Ames test) alerts by ISS	(Micronucleus) alerts by ISS	groups	遺伝毒性 vitro 復帰突然変異試験	体異常試動	サスリン フォーマ試	2 21 BURK	試験	鎖切断試験	THE R. I BALLEY	成	試験	験	傷 体	異常試験 期DNA 試験	合成メット試験	**
8:3 Fluorotelomer carboxylic acid	P No alert found	No alert found	No afert found	No alert found	Not classified No alert found	No alert found	(PFOA)Alkyl halide;Carboxyl io acid;Perflouroc arbon derivatives														
4H- 679-12-9	No alert found	No allert found	No alert found	Acylation:Acylation >> P450 Mediated Activation to	Alpha- and No alert found	No alert found	(PFOA)Alkyl														
Perfluorobutan oic acid	HO F F F F F			Acylatics-Acylation >> P450 Mediated Activation to Acyl Halides-Acylation >> P450 Mediated Activation to Acyl Halides-Acylation >> 1,1-Dhalaskanes	beta* Halecher Reactive Functional Groups		halide;Carboxyl ic acid:Perflouroc arbon derivatives														
7H- Perfluorohepta note sold	Perfluencedan de add de	No slert found	No afert found	AcylationAcylation >> P450 Mediated Activation to Acyl Haldes.Acylation >> P450 Mediated Activation to Acyl Haldes >> 1.1-Dhaleakanes	Reactive Functional Groups		acid/Perflouroc arbon derivatives														
3- (Perfluoreheary figressenic acid	P No alert found P P P P P P P P P P P P P P P P P P P	No alert found	No afert found		Not classified No alert found		ic acid.Perflouroc arbon derivatives												***************************************		
BH- Perfluoroctan dic acid	Perfuncedant in a second perfuncion of the sec	No alert found	No afert found	AcylationAcylation >> P450 Mediated Activation to Acyl Haildes.Acylation >> P450 Mediated Activation to Acyl Haildes >> 1.1-Diffulcultures	Seauties Groups		arbon derivatives														
Ammonium 3825-26-1 perfluorocctan oste	P performance of the control of the		No afert found		Not classified No alert founc		halide:Carboxyl ic acid:Perflouroc arbon derivatives												***************************************		
3- 00705-13-1 (Perfluorobuty) properties and	F No alert found F F F F F F F F F F F F F F F F F F F	No alert found	No afert found	No alert found	Not classified No alert found		(PFOA)Alkyl halide,Carboxyl ide acid:Perflouroc arbon derivatives														

名称 CASRN (	Carcinogenicit v (genotox and	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vit	ro in vivo	Onenicity fu	rganic 道 unctional	伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色	遺伝毒性 in vitro マ	in vitro コ メット試験	遺伝毒性 vitro 小移	遺伝毒性 vitro DNA	in vitro HPRT試験	in vitro 不 定期DNA合	in vitro 細 胞形質転換	遺伝毒性 ½	責伝毒性 遺伝 rivo DNA揚 in vis	毒性 遺伝毒性	生 遺伝毒性 不定 in vivo コ	in vivo突然 発がん性 変異
	nongenotox) alerts by ISS				Oncologic in vita Primary muta Classification (Ame alerts	s test) (Micror s by ISS alerts b	nucleus) gr by ISS	roups	伝毒性 vitro 復帰突然変異試験	体異常試験	ウスリン フォーマ試	) I BAGA	試験	鎖切断試験		成	試験	R I	海 体異	常試験 朔DNA ź 試験	合成 メット試験	^*
Perfluoropenta 376-73-8 nediois axid	No alert found  HO  F  F  F  GH	No afert found	No alert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	lert found No aler	ic	PFOAJAlkyl alide;Carrboxyl : : : : : : : : : : : : : : : : : : :												***************************************		
Perfluorobatan 377-38-8 edicio acid	No alert found	No abert found	No alert found	No alert found	Alpha- and No al beta- Haloether Reactive Functional Groups	lert found H-acception	eptor (FH ham	PFOA)Alkyl alide,Carboxyl icid:Perflouroc ribon erivatives														
Perfluoropropa 422-64-0 nois acid	No alert found	No alert found	No alert found		Alpha- and beta- taleether Reactive Functional Groups		ha io ac ar de	alide;Carboxyl														
3 - 812-70-4 (Perfluorohept; ylproparoic acid	No alert found	No alert found	No alert found	No alert found	Not classified No al	lert found No aler	ic ac ar	icitPerflouroc rbon erivatives														
Perfluoro-14- 375-50-8 diodobutane	No afert found	No afert found	No afert found		Halogenated Linear Alphatic Hydrocarbone Type Compounds		oc de ha ca de	carbon crivatives:Per alogenated arbon erivatives		lymphocyte s (±S9) Negative												
1.6- 375-89-4 Diodoperfuor olexane	F No alert found			No alert found	Halogenated Linear Alighatic Hydrocarbone Type Compounds	lert found No aler		erivatives														
Novalluzro-1 - 423-39-2 iodobutane	F No alert found	No alert found	No alert found	No alert found	Halogenated Linear Alphatic Hydrocarbone Type Compounds	lert found No aler	hz oc de	ikyl T. slide:Perflour Si carbon erivatives:Per alogenated arbon erivatives	A ISSSTA ISSTA ISS													

名称 C	ASRN	佛准	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test)	in vivo mutagenicity (Micronucleus alerts by ISS	Organic il functional groups	責任毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試	遺伝毒性 in vitro マ 験 ウスリン	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 試験	遺伝毒性 vivo 小核試 験	直伝毒性 遺伝 zivo DNA損 in viv 編 体異	等性 遺伝毒 療色 in vivo 常試験 期DNA	主 遺伝毒性 定 in vivo コ r成 メット試験	in vivo突然 変異	発がん性
Heptafluoropro 75 pyl iodide	54-34-7	F F F	islerts by ISS  No alert found No alert found	No slert found	No alert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert foun	alerts by ISS and No alert fourn	Alkyl halide:Perflour ocarbon derivatives:Per halogenated carbon derivatives			フォーマ試								***************************************	試験			
1,6- Dibromododec afluorohexane	18-22-9	Br — F	No afert found No afert found	No slert found	No alert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert foun	No alert found	Alkyl halide/Perflour ocarbon derivatives.Per halogenated carbon derivatives			***************************************								***************************************	***************************************			
2- lodoperfluorob utane	75-51-9	F F F	No alert found No alert found	No slort found	No alert found	Aliphatic Hydrocarbone Type Compounds			Alkyl halide/Perflour ocarbon derivatives;Per halogenated carbon derivatives			***************************************												
1 – 37 Bromoperfluor obutane	75-48-4	Br — F F F F F F	No alert found No alert found	No alert found	No alert found				Alkyl halide/Perflour ocarbon derivatives;Per halogenated carbon derivatives															
1 – 42 Bromoheptaflu oropropane	22-85-5	Br F F	No alert found No alert found	No alert found	No afert found	Linear Aliphatic Hydrocarbone Type Compounds		No alert found	halide/Perflour ocarbon derivatives/Per halogenated carbon derivatives															
Diiodoperfluor ooctane	35-70-6		No alert found No alert found	No afert found	No afert found				Alkyl halide/Perflour ocarbon derivatives/Per halogenated carbon derivatives			***************************************												
1-Chloro-6- 16 iodoperfluoroh exane	8486-97-8	F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No alert found	No afert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert foun	d No alert foun	Alkyl halide/Perflour ocarbon derivatives;Per halogenated carbon derivatives			***************************************												

名称 CASRN #	Carcinogenicit y (genotox and	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagenicity	in vivo y mutagenicity	Organic il	直伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色	遺伝毒性 in vitro マ	in vitro コ メット試験	遺伝毒性 道 vitro 小核 vi	伝毒性 in	n vitro i	in vitro 不 定期DNA合	in vitro 細 胞形質転換、	遺伝毒性 vivo 小核試	遺伝毒性 遺伝 vivo DNA損 in v	毒性 遺伝毒 vo 染色 in vivo	性 遺伝毒性 不定 in vivo コ	in vivo突然 発 変異	ぶん性
	nongenotox) alerts by ISS				Oncologic in vitro Primary mutagenicity Classification (Ames test) alerts by ISS	(Micronucleus S alerts by ISS	groups		体異常試験	ウスリン フォーマ試		試験 銀	切断試験		成	試験	験	傷 体罗	L常試験 期DNA 試験	合成 メット試験		
I - 335-59-0 lodopentadeca fluoroheptane	F No alert found	No alert found	No alert found	No alert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	nd No alert foun	Alkyl halide/Perflour ocarbon derivatives:Per halogenated carbon derivatives															
1- Iodoperfluorop entane	F No alert found  I F F F F F F F F F F F F F F F F F F	No alert found	No alert found		Halogenated Linear Alphatic Hydrocarbone Type Compounds	nd No alert foun	Alkyl halide:Perflour ocarbon derivatives:Per halogenated carbon derivatives															
Heptafluoro 677-69-0 2-iodopropane	No alert found	No alert found	No alert found		Halogenated Linear Alphatic Hydrocarbone Type Compounds	nd No alert found	Alkyl halide:Perflour ocarbon derivatives:Per halogenated carbon derivatives															
1.2- 661-95-0 Disremohexati uoropropane	Br F	No alert found	SIZ-SR2 > DNA adystation-SR2 > DNA adystation > D Vicinal Dhabalamen-SR2 > Letteral SR2 receive mith azindrium indire or polic sufferium in or formation (enzymatic)-SR2 >> Deternal SR2 receives with azindrium and or option sufferium in or formation (enzymatic)-SR2 >> Deternal SR2 receives with azindrium and or option sufferium ion formation (enzymatic) >> Vicinal Dhabashares	No alert found	Heligenated No alert fou Aliphatic Hydrocarbone Type Compounds	nd No alert found	Alkyl halide:Perflour ocarbon derivatives:Per halogenated carbon derivatives				***************************************											
Perflubrodec 307-43-7	, No dert found	No alert found	No alert found	No alert found	Helegonated No alert fou Alert fou Alert fou Alert fou Hydrocarbone Type Compounds	nd No alert found	Alkyl halide/Perflour ocarbon derivatives/Per halogenated carbon derivatives															
Perfluore-1- 355-43-1 iodohexane	F F F F	No alert found	No alert found	No alert found	Halogenated No alert fou Linear Aliphatic Hydrocarbone Type Compounds	nd No alert foun	Alkyl halide.Perflour ocarbon derivatives.Per halogenated carbon derivatives				опинания		1   1   1   1   1   1   1   1   1   1									
Perfuscionessi 335-56-8 branido	Br F F F F F F F F F F F F F F F F F F F	No alert found	No alert found		Halogenated No alert fou Linear Hydrocarbone Type Compounds	0 0 0 0 0 0 0	Alkyl halide/Perflour ocarbon derivatives/Per halogenated carbon derivatives															

名称	CASRN	標准	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and innegenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus alerts by ISS	functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試	遺伝毒性 in vitro マ 験 ウスリン フォーマ討	in vitro コ メット試験	遺伝毒性 vitro 小核 vitro L 試験 鎮切能	性 in vitro NA HPRT試現 試験	in vitro 不 定期DNA 成	in vitro 細 合 胞形質転換 vit 試験	伝毒性 遺 no 小核試 viv 傷	伝毒性 ji 点伝毒性 vo DNA損 in vivo 染 体異常試	遺伝毒性 色 in vivo 不定 験 期DNA合成 試験	遺伝毒性 in vivo コ メット試験	in vivo突然 変異	きがん性
Perfluorohexyl chloride	355-41-9		No alert found No alert found	No elect found	No alert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert foun	No alert found	Alkyl halide;Perflour ocarbon derivatives;Per halogenated carbon derivatives							***************************************				5-40			
Perfluorodecyl iodide	i 423-62-1	r 	No alert found No alert found	No slert found	No alert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert foun	nd No alert found	Alkyl halide:Perflour ocarbon derivatives:Per halogenated carbon derivatives			***************************************				***************************************							
1- Bromopentade cafluoroheptan e	375-88-2		No slert found No slert found	No slert found	No alert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert foun	No alert found	Alkyl halide/Perflour ocarbon derivatives/Per halogenated carbon derivatives														
1.4-Dibromo- 1.1.2.2- tetrafluorobuta ne		F F F	Aliphatic No alert found halogens (Genetical-Strutter of the Committee of	No slert found	SN2:SN2 >> SN2 at an sp3 Carbon atom;SN2 >> SN2 at an sp3 Carbon atom;SN2 >> SN2 at an sp3 Carbon atom >> Aliphatic halides	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	Aliphatio halogens	Aliphatic halogen	Alkyl halide;Perflour ocarbon derivatives;Per halogenated carbon derivatives														
2.3- Dichlorooctafili orobutane	355-20-4 u	F F F	No alert found No alert found	SN2.SN2 >> DNA alkylation;SN2 >> DNA alkylation >> Vicinal Dhadoalkanes;SN2 >> Internal SN2 reaction with aziridrium and/or cyclic sulfonium into fromation (enzymatic);SN2 >> Internal SN2 reaction with aziridrium and learned SN2 reaction with aziridrium and or cyclic sulforium for formation (enzymatic) >> Vicinal Dhaloalkanes		Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert foun	No alert found	Alkyl halide;Perflour ocarbon derivatives;Per halogenated carbon derivatives			***************************************				***************************************							
產加 pentafluoroiod oethane	354-64-3	F F F		ANZ-MID >> Schiff base formation by aldehyde formed after matableic activation MID >> Schiff base formation by aldehyde formed after matableic activation NOS >> Schiff base formation by aldehyd formed after matableic activation >> Osenial Psykhatakane Derivatives/Redical/Redical >> Needles involvation involvation involved present of formation (indexes) >> Osenial Psykhatakane Derivatives/SMIZ-MID >> Anghatakan involved present of the psykhatakane involved p	•	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert foun	No alert found	Alkyl halide-Perflour ocarbon derivatives	Positive(NBHS)													
1H- Perfluorohexar e	355-37-3	F F F F F F F	No slert found No slert found	No sfort found	Anylation Anylation >> PASD Mediated Activation to Anyl Halides Against >> PASD Mediated Activation to Acyl Halides 2> 1,1 – Dihuloalisanse	o Halogenated on Linear Aliphatic Hydrocarbone Type Compounds	No alert foun	nd No alert founc	Alkyl halide:Perflour ocarbon derivatives	TAISS, TAISS, TAISS, TAISO, WP2 ±59) Negative	CHL Cells clone No. 11 (±S9) Negative	mouse lymphoma 1.5178Y (±S9) Negative				***************************************							
		F F																					

名称 CASRN	Carcinogenicit y (genotox and nongenotox) alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagenicity Classification (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus, alerts by ISS	Organic functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 遺伝 vitro 染色 in v 体異常試験 ウス	云毒性 in vitro itro マ メット討 マリン	コ 遺伝毒性 験 vitro 小杉 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	n vitro 不 定期DNA合 胞形 或	itro 細 遺伝毒性 影質転換 vivo 小枝 験	遺伝毒性 遺伝記 xivo DNA損 in vivo 傷 体異知	i性 遺伝毒性 染色 in vivo 不定 試験 朔DNA合成 試験	遺伝毒性 in vivo コ メット試験	in vivo突然 発がん性 変異
(Perfluorom: 80793-17-5 hexy()ethane	F No dert found F F F F F F F F F F F F F F F F F F F	No alert found	No dent found	No alert found	Halogenated Linear Aliphatic Hydrocarbone Tyre Compounds	No alert found	Alkyl	TA1535, TA1537,TA98,TA100, WP2 (±S9) Negative	Chinise hamster lung fibroblasts (V79) (± S9) Negative										
Perfluorecetan 307-34-6 e			No afert found	No alert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds		halide/Perflour ocarbon derivatives	TAISSS.TAISSZTARBETAIOQ.WP2	Chinese Hamster Lumster Cells (± S9)Negativ e										
1 - (Perfluorohexy 133331-77-8 ()octane	~~~####		No afert found		Halogenated No alert found Linear Alphatic Hydrocarbon Type Compounds	No alert found	Alkyl halide:Perflour ocarbon derivatives												
11.22- Tetraflucor 67-67-6 iodogrepane	All phastic had general from the had general from t	No alert found	No afert found	Acytatrov.Acytation >> P450 Mediated Activation to Acyt Haliack.Acytation >> P450 Mediated Activation to Acyt Haliack.Patrov. >> 1.1-Ohalosikanes	Halogenated Aliphatic balogens Aliphatic Hydrocarbon Type Compounds	Alphatic	Alkyl halide:Perflour ocarbon derivatives												
Heptafillorobut 374-98-1 yl ioddde	All photosic had general form of the photosic form	No alert found	No afert found		Halogenated Aliphatic Linear Aliphatic Linear Aliphatic Hydrocarbone Type Compounds	Alphatic	Alkyl halide/Perflour ocarbon derivatives												
(Perfluoresthyl 354-69-8 )methyl iodde	halogens (Cenotos) Structure (Cenotos) Structure (Cenotos) Structure durit for the control durit for the care conogenicity of the care conogenicity of the care conogenicity of the care conogenicity of the care conogenic		No afert found		Halogenated Aliphatic Linear Aliphatic Linear Aliphatic Hilydroachood Type Compounds	Alphatio	Alkyl halide/Perflour ocarbon derivatives												
11(8)+ 336-07-2 Perfluorobesan e	No dert found	No alort found	No afert found	Roylatin/Acquition 12 PdSD Medited Activation to Anyl Haldes-Applient 22 PdSD Medited Activation to Acyl Haldes 22 1,1-Dhalcallanes	Halogeneted No alert found Linear Alphatic Hydrocarbone Type Compounds	No alert found	Alkyl halide:Perflour ocarbon derivatives			***************************************	***************************************								

名等 CASRN	<b>標准</b> Carcinogenicit	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro	in vivo	Organic	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性	遺伝毒性	in vitro ⊐	遺伝毒性	遺伝毒性	in vitro	in vitro 不	in vitro 細	遺伝毒性	遺伝毒性 遺伝	毒性 遺伝毒性	遺伝毒性	in vivo突然 発がん性
	y (genotox and nongenotox) alerts by ISS				Oncologic in vitro Primary mutager Classification (Ames t alerts b	est) (Micronucl / ISS alerts by I	ty functional eus) groups SS	遺伝毒性 vitro 復帰突然変異試験	vitro 染色 体異常試験	in vitro マ 後 ウスリン フォーマ試	メット試験	vitro 小核 試験	vitro DNA 鎖切断試験	HPRT試験	定期DNA合成	b 胞形質転換 試験	vivo 小核試 験	vivo DNA損 in viv 傷 体異	o 染色 in vivo 不 常試験 期DNA合 試験	定 in vivo コ 成 メット試験	変異
1-H- 375-97-3 Perfluorodeca	No alert found	No alert found	No alert found	Acylation:Acylation >> P450 Mediated Activation to Acyl Halides:Acylation >> P450 Mediated Activation to Acyl Halides >> 1,1-Dihaloalkanes	Halogenated No alert	found No alert fo	und Alkyl														
ne	F—F			to Acyl Halides >> 1,1-Dihaloalkanes	Aliphatic Hydrocarbone		ocarbon derivatives														
	F				Type Compounds		denvatives														
	FF FF																				
	F—F																				
	F—F																				
	F																				
	F—F																				
Perfluoronona 375-96-2	No alert found	No alert found	No alert found	No alert found	Halogenated No alert	found No alert fo	und Alkyl halide;Perflo														
ile ile	F—F				Linear Aliphatic Hydrocarbone		ocarbon derivatives														
	F—F				Type Compounds		derivatives														
	F-F																				
	F—F																				
	F—F																				
	F—F																				
	F F																				
	F																				
1H,8H- 307-99-3 Perfluorooctan	No alert found	No alert found	No alert found	Acylation;Acylation >> P450 Mediated Activation to	Halogenated No alert	found No alert fo	und Alkyl halide:Perflo		-		-	-			<u> </u>	-					
Perfluorooctan e	F			Acylation:Acylation >> P450 Mediated Activation to Acyl Halides;Acylation >> P450 Mediated Activation to Acyl Halides >> 1,1-Dihaloalkanes	Aliphatic		halide;Perflo	ur													
	F				Hydrocarbone Type Compounds		derivatives														
	F X F				Compounds																
	F F																				
	F F																				
	F F																				
	F—F																				
	F																				
3:2 1513-88-8	Aliphatic	No alert found	No alert found	SN2;SN2 >> SN2 at an sp3 Carbon atom;SN2 >> SN2 at an sp3 Carbon atom >> Aliphatic halides	Halogenated Aliphatic	Aliphatic	Alkyl halide;Perflo														
Fluorotelomer iodide	halogens (Genotox);Stru			SN2 at an sp3 Carbon atom >> Aliphatic halides	Linear halogen Aliphatic	halogen	ocarbon	ur													
	ctural alert for genotoxic				Hydrocarbone Type		derivatives														
	carcinogenicity				Compounds																
2:2 40723-80-6	Aliphatic	No alert found	No alert found	SN2-SN2 >> SN2 at an sn3 Carbon atom:SN2 >>	Halogenated Aliphatic	Aliphatic	Alkyl			-	-				-						
Fluorotelomer iodide	halogens (Genotox);Stru			SN2;SN2 >> SN2 at an sp3 Carbon atom;SN2 >> SN2 at an sp3 Carbon atom >> Aliphatic halides	Linear halogen Aliphatic	halogen	halide;Perflo ocarbon	ur													
	ctural alert for genotoxic				Hydrocarbone Type		derivatives														
	carcinogenicity				Compounds																
	ř ř																				
1- 075 00 7	M	Ma alast formal	No. alout formal	Andrina Andrina N. Derom Co. 14 C. 17		formal N	and Allo					ļ			-	-					-
1- 375-83-7 Hydroperfluoro heptane	No alert found	No alert round	No alert found	Acylation:Acylation >> P450 Mediated Activation to Acyl Halides;Acylation >> P450 Mediated Activation to Acyl Halides >> 1,1-Dihaloalkanes	nalogenated No alert	round No alert fo	und Alkyl halide;Perflo ocarbon	ur													
neptane	F—F			to Acyl Halides // 1,1-Dinaloalkanes	Hydrocarbone		derivatives														
	F—F				Type Compounds																
	F—F																				
	F—F																				
	F——F																				
	FF																				
	F F																				
1-lodo- 1H,1H,2H,2H- perfluorohepta	Aliphatic halogens (Genotox):Stru ctural alert for	No alert found	No alert found	SN2;SN2 >> SN2 at an sp3 Carbon atom;SN2 >> SN2 at an sp3 Carbon atom >> Aliphatic halides	Halogenated Aliphatic Linear halogen Aliphatic	Aliphatic halogen	Alkyl halide;Perflo ocarbon	ur													
perfluorohepta ne	(Genotox);Stru ctural alert for				Hydrocarbone		ocarbon derivatives														
	genotoxic carcinogenicity				Type Compounds																
	- 11111																				
	1 1 1 1 1																				
										1	1	1			1	1					1

名称 CASRN (	構造 Carcinogenicit y (genotox and	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagenicity Classification (Ames test) alerts by ISS	in vivo mutagenicity	Organic functional	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色	遺伝毒性 in vitro マ	in vitro コ メット試験	遺伝毒性 vitro 小核	遺伝毒性 vitro DNA 値打版できまた	in vitro HPRT試験	in vitro 不 定期DNA合	in vitro 細 胞形質転換	遺伝毒性 vivo 小核試 vi	低毒性 遺伝語 vo DNA損 in vivo	性 遺伝毒性 染色 in vivo 不知	遺伝毒性 定 in vivo コ	in vivo突然 発がん性 変異
Perfluorodeca 307-45-9	nongenotox) alerts by ISS No alert found		No alert found	No alert found	Classification (Ames test) alerts by ISS Halogenated No alert found Linear	(Micronucleus) alerts by ISS No alert found	groups		体異常試験	ウスリン フォーマ試		IX.EX	鎖切断試験		灰	EXEM I	EK S	体與3	試験期DNA合用 試験	ズ メット試験	
ne					Linear Aliphatic Hydrocarbone Type Compounds		halide,Perflour ocarbon derivatives														
1-lodo- 2043-52-9	P .	No alert found	No alert found	SN2;SN2 >> SN2 at an sp3 Carbon atom;SN2 >> SN2 at an sp3 Carbon atom >> Aliphatic halides	Halogenated Aliphatic	Aliphatic	Alkyl halide;Perflour												5 5 6 7 7 8 8 8 8		4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
1H.H.24/24- perfluoronoman	General Stru- ctural later of current later of generations car or ongenicity			SM2 at an apa Cartoon atom // Alphatoc hances	Linear Alighatic Hydrocarbone Type Compounds	halogen	nailoc/Pernour ocarbon derivatives														
(Perfluoro-n- 77117-48-7 octyl)ethane	F No alert found	No alert found	No alert found	No alert found	Halogenated No alert found	No alert found	Alkyl														
					Linear Alphatic Hydrocarbone Type Compounds		halide:Perflour ocarbon derivatives														
Methyl 4H 556-32-1 perflorobutan outs	No alert found	No afert found	No alert found	Acylation-Acylation >> P450 Mediated Activation to Acyl Halides-Acylation >> P450 Mediated Activation to Acyl Halides-Acylation >> 1,1-Dihaloskanes	Haloether Reactive Functional Groups		ic acid ester.Perflouro carbon derivatives														
Methyl 13039-26-1 perfluorpenta nosta	F No alert found		No alert found	No alert found	Alpha and No alert found beta Halosther Reactive Functional Groups	No alert found	Alkyl halide:Carboxyl ic acid ester:Perflouro carbon derivatives														
Methyl 424-18-0 perfluorchesson outs	F Perharocotan F P P P P P P P P P P P P P P P P P P P		No alert found		Alpha and No alert found beta Halosther Reactive Functional Groups		ic acid ester,Perflouro carbon derivatives														
Ethyl 59+ 2785-50-8 octafluoropent.	No alert found	No alert found	No alert found	Acylators.Acylation >> P450 Mediated Activation to Acyl Haldes-Acylation >> P450 Mediated Activation to Acyl Haldes-Acylation >> P.1.1-Dinatoskanes	Alpha and bota" Halochher Reactive Fractional Groups		Alkyl halide:Carboxyl ic acid ester:Perflouro carbon derivatives														

名称	CASRN	<b>柳</b> 淮	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Glassification	in vitro mutagenicity (Ames teet)	in vivo mutagenicity (Micronucleus alerts by ISS	Organic i	責任毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体型学材	遺伝毒性 in vitro マ 除 ウスリン	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎮切斯試验	in vitro HPRT試験	in vitro 不 定期DNA合	in vitro 細 胞形質転換 試験	遺伝毒性 vivo 小核試 除	遺伝毒性 遺伝 vivo DNA損 in v 佐	伝毒性 遺伝 vivo 染色 in vi 型常試験 細い	毒性 遺伝毒 vo 不定 in vivo NA会成 メットだ	性 in vivo	∘突然 発が	パん性
Methyl pentafluoropro pionate	378-75-6	F F	ringenous after by XS.  No alert found No alert found	No alert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	alerts by ISS No alert foun	No alert found	Alkyl halide;Carboxyl ic acid ester;Perflouro carbon derivatives		m <del>a</del> nsu	フォーマ試		p-4-EX	沙文学》四位学		Ph.	BATK I		m 19-1	IN STATE	TOPE	ven.		
Ethyl perfluoropropi onate	426-65-3	CH <sub>3</sub>	No alert found No alert found	No slert found	No slort found	Alpha- and bota- Haloether Reactive Functional Groups	No alert foun	d No alert found	Alkyl halide;Carboxyl ic acid ester;Perflouro carbon derivatives																
Diethyl perfluoroglutar	424-40-8	H <sub>3</sub> C	No alert found No alert found	No alert found	No alert found	Alpha- and beta-	No alert foun	d No alert found	Alkyl halide;Garboxyl																
ate		NG.				Jupan and beta Haloether Reactive Functional Groups			ic acid ester/Perflouro carbon derivatives																
Methyl perfluorobutan oate	356-24-1	F F F CH <sub>3</sub>	No alert found No alert found	No atent found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert foun	d No alert found	Alkyl halide;Carboxyl io acid ester;Perflouro carbon derivatives																
Ethyl perfluoropenta noate	424-36-2	F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No alers found	No afart found	Alpha- and beta- Haloether Reactive Functional Groups	No alert foun	d No alert found	Alkyl halide;Carboxyl ic acid ester;Perflouro carbon derivatives																
Methyl SH- perfluoropenta noate	54822-22-9	CH <sub>5</sub>	No afert found No afert found	No alert found	Acylotion-Acylotion >> P450 Mediated Activation Acyl HoliceAcylotion >> P450 Mediated Activation Acyl HoliceAcylotion >> P450 Mediated Activation to Acyl Halides >> 1.1-Dhaloshanes	Reactive Functional Groups			ester;Perflouro carbon derivatives																
2.23.3- Tetrafluoropro pyl trifluoroacetat e	107551-72-4	F	No afert found No afert found	No atent found	Apyletion Apyletion > 2960 Mediated Activation Apyl HoliceApyletion > 1950 Mediated Activation Apyletion A	a to Alpha- and tion beta- Haloether Reactive Functional Groups	No alert foun	d No alert found	Alkyl halide:Carboxyl ic acid ester:Perflouro carbon derivatives																

名称 CASRN #	Carcinogenicit y (genotox and	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity	Organic functional	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 休豊舎ジャ	遺伝毒性 in vitro マ ウェル・	in vitro コ メット試験	遺伝毒性 vitro 小核 財政	遺伝毒性 vitro DNA 结切取にまする	in vitro HPRT試験	in vitro 不 定期DNA合	in vitro 細 道 胞形質転換 v 試験	貴伝毒性 遺ivo 小核試 viv	伝毒性 遺伝毒 o DNA損 in vivo	生 遺伝毒性 食色 in vivo 不足 対略 知PAIA へっ	遺伝毒性 in vivoコ	in vivo突然 発がん性 変異
Methyl 132424-36-3 2H,2H,3H,3H-	nongenotox) alerts by ISS No alert found	No alert found	No alert found	No allert found	Classification (Ames test) alerts by ISS Not classified No alert foun	No alert found	Alkyl halide:Carboxyl		19 美茶試器	フォーマ試		机板	級別問題		let.	even E	× 1%	体異常	net MUNA省原 試験	トント試験	
perfluorohepta noate							ic acid ester Perflouro														
	r V						carbon derivatives														
	m 1/1/2																				
	- U																				
Ethyl 3108-24-5	F Perfluorooctar	No alert found	No alert found	No alert found	Alpha- and No alert foun	No alert found	Alkyl														
perfluorooctan oate	F F (PCOA)  (Nongenotax)  F F Structural  alert for nongenotaxi  E F R COA (Nongenotaxi  C C C C C C C C C C C C C C C C C C C				Alpha- and No alert foun beta- Haloether Reactive Functional Groups		ic acid ester;Perflouro														
	F F carcinogenicit				Groups		derivatives														
	F—F																				
	F—F																				
	j																				
Ethyl 30377-52-7	HC Perfluorocctar	No alert found	No alert found	No alert found	Alpha- and No alert foun	No alert found	Alkyl														
perfluorononan oate	r Permiprocata in aid r (PFOA) r (Nongenotox); Structural r alert for nongenotoxic carcinogenicit;				Alpha- and beta- Haloether Reactive Functional Groups		halide;Carboxyl ic acid ester;Perflouro														
	Structural alert for nongenotoxic				Functional Groups		carbon derivatives														
	r——r																				
	r																				
Ethyl 41430-70-0 perfluorohepta	F Perfluorocctar	No alert found	No alert found	No alert found	Alpha- and No alert foundata-	No alert found	Alkyl														
perfluorohepta noate	F F (PFOA) (Nongenotox);	No alert found			beta- Haloether Reactive Functional		ic acid														
	F F Structural alert for nongenotoxic				Functional Groups		carbon derivatives														
	F F carcinogenicity																				
	F																				
	i																				
Methyl 376-27-2	H <sub>3</sub> C Perfluorooctar	No alert found	No alert found	No alert found	Alpha- and No alert foun	No alert found	Alkyl														
perfluorooctan oate					Alpha— and beta— Haloether Reactive Functional		halide;Carboxyl ic acid ester;Perflouro														
	F F F (Nongenotox); F F F Structural alert for nongenotoxis programment of the carcinogenicity from F F F F F F F F F F F F F F F F F F F				Functional Groups		carbon derivatives														
	F — F carcinogenicit																				
	FFF					0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0															
Ethyl 356-27-4	CH <sub>3</sub> No alert found	No alert found	No alert found	No alert found	Alpha- and No alert foun	No alert found	Alkyl	***************************************													
perfluorobutan oate	F No dict today				Alpha- and beta- Haloether Reactive Functional Groups		ic acid ester:Perflouro														
	F—F				Functional Groups	B B C B B C B B C B B C B B C B B B B B	carbon derivatives														
	F—F																				
						0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0															
8:2 39108-34-4	H <sub>3</sub> C No slert found	No alert found	No alert found	No alert found	Not classified No alert form	No alert form	(PFOS)Alkyl		-			1									1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
8:2 39108-34-4 Fluorotelomer sulfonic acid	r				Not classified No alert foun		halide;Perflour ocarbon derivatives;Sul														
	rr						fonic acid;Surfactan ts - Anionic														
	r——r																				
	r					B B B B B B B B B B B B B B B B B B B															
	U OH																				

名称 CASRN (	Carcinogenicit y (genotox and nongenotox) alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagenicity Classification (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus	Organic functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ ウスリン	in vitro コ メット試験	遺伝毒性 jā伝毒性 jāck jāck jāck jāck jāck jāck jāck jāck	毒性 in vit DNA HPR I断試験	tro in vitro T試験 定期DN 成	不 in vitro 細 IA合 胞形質転換 試験	遺伝毒性 遺 vivo 小核試 viv 験 傷	伝毒性 遺伝毒性 o DNA損 in vivo 染 体異常試	遺伝毒性 色 in vivo 不定 験 期DNA合成	遺伝毒性 in vivo コ メット試験	n vivo突然 発力 変異	ん性
4:2 Fluorotelomer sulfonic acid	alorts by ISS	No alert found	No alert found	No alert found	alerts by ISS Not classified No alert found	No alert found				フォーマ試								試験			
Perfluero 2 113507-82-7 ethosyethanes ulfonic acid	No alert found	No alert found	No aiert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups		(PFOS)Alkyl halide;Perflour ocarbon derivatives;Sul fonic acid.Surfactan ts – Anionic														
Perfluorohe 355-46-4 xanesulfonic acid	P No alert found	No alert found	No alert found	No alert found	Not classified No alert found		(PFOS)Alkyl halide;Perflour ocarbon derivatives;Sul fonic acid:Surfactan ts - Anionic				濃度依存的 な損傷度体 存性はない 存性はない									実験は相	動物で
Perfluerohapia 375-92-8 nesulfonic acid	F F F F F F F F F F F F F F F F F F F	No alert found	No alert found	No alert found	Not classified No alert found		(PFOS)Alkyl halide,Perflour ocarbon derivatives;Sul fonic said:Surfactan ts – Anionic														
Perfluorobut: 375-73-5 anesulfonic acid	F No alert found	No alert found	No alert found	No alert found	Not classified No alert founds	No alert found	(PFOS)Alkyl halide;Perflour ocarbon derivatives;Sul fonic acid:Surfactan ts - Anionic	TA100 Negative, TA98 Equivocal (± 59)://TA1035, TA1037, TA98,TA100,MF2 urrA (± 59) Negative			HepG2 Negative					rat雌雄末 柄血 Negative				12.6	061ಕ
6.2 27619-97-2 Pluorotelomer sulfonia acid	F No alert found	No alert found	No alert found	No alert found	Not classified No stert found	No alert found	(PFOS)Alkyl halide;Perflour ocarbon derivatives;Sul fonic acid;Surfactan ts = Anionic		Chinese hamster Ovary (CHO)(± S9) Positive										Crl:CD(SD) ラット肝、胃 Negative/( TG489準 急GP適 会の力道 カリウム塩		
Potassium 29420-49-3 perfluorobutan esulfonate	F No alert found	No alert found	No siert found	No alert found	Not classified No alert found	No alert found	(PFOS)Alkyl halide/Perflour ocarbon derivatives;Sul fonic acid:Surfactan	HA1535, TA1537, TA98, TA100, TA102, WPZuvrA (±S9) Negative	Chinise hamster Ovary, lung fibroblasts (V79) (± S9)												
	F F F O S S O O' K'						ts - Anionio		Negative										***************************************		

名称 CASRN	標章 Carcinogenicit y (genotox and nongenotox) alertz by ISS	DNA alerts for AMES, CA and MNT by OASIS DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagenicity Classification (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus)	Organic functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ ウスリン フォーマロ	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 in v vitro DNA HPF 鎖切断試験	itro in vitro RT試験 定期D 成	不 in vitro f NA合 胞形質素 試験	⊞ 遺伝毒性 抵換 vivo 小核試 験	遺伝毒性 vivo DNA損 in vivo 染色 体異常試験	遺伝毒性 直 in vivo 不定 説 期DNA合成 メット 試験	海性 in v voコ 変す h試験	ivo突然 発がん性
Trifluorometha 1483-13-6 nesulfonio acid	No alert found F F F O S O	No alert found No alert found	No alert found	Not classified No slert found	No alert found	(PFOS)Alkyl halide;Perflour ocarbon derivatives;Sul fonic acid;Surfactan ts - Anionic	TA1535, TA1537,TA98,TA100, WP2uvrA (±39) Negative	CHL Cells clone No. 11 (±S9) Negative	lymphoma L5178Y								p. ex		
Potassium 2795-39-3 perfluorocot anesulfonat e	OH	No alert found No alert found	No slert found	Not classified No alert found		(PFOS)Alkyl halide;Perflour ocarbon derivatives;Sul fonic acid;Surfactan ts – Anionic	ネズミテフス度、酵母、大精衛(±59) Negative	Eト全血培養リンパ切 (土SB) Negative	1				ラットg 代培書 Negsti	干初 細胞 ve	mouse骨髓 Negative				SDラット 肝細に増加 加、肝に腫瘍 加、甲状腫 は 変数 を を 生 生 生 生 生 生 生 生 生 生 生 生 生 生 生 生 生
Perfluorocct 1763-23-1 anesulfonic acid	F No alert found  F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No afert found	Not classified No alert found		(PFOS)Alkyl halide/Perflour ocarbon derivatives;Sul fonic acid;Surfactan ts – Anionic		Negative		Hep GZ 濃度依存性は 関確ではな い positive あり	Negative			Positive( 性 ATSDR)	1 Negativeと されている が以下の報 告例あり/ ppt delta Tgマウス雄 骨髄 Negative: Wistarラット 末何カット 末梢血 Positive		Wista コカップ ア増 Wista 来稿 Posit	arラット spt ハトスコ Tgつ Tgつ コarラット MM 3 は tive 度の向ま	delta 動物の慢発 本性発統 た性試験 tativ(突 おいて 変異体第(デー酸等の が関係して で発がんプ ロモーター として作用
Potassium 3871-99-6 perfluorchean esulforrate	P No alert found	No alert found No alert found	No alert found	Not classified No alert found		(PFOS)Alkyl halide:Perflour ocarbon derivatives;Sul fonio acid:Surfactan ts - Anionio													
Perfluorobutan 8913-91-4 esufforio anhydride	No alet found	No alert found No alert found	No alert found	Not classified No slert found	path3-H- acceptor	(PFOS)Alkyl halide;Perflour ocarbon derivatives;Sul fonio acid:Surfactan ts - Anionio							***************************************						
Trifluoroacebyl 68602-57-3 criflate	F No alert found F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No slert found	Not classified No alert found	acceptor	(PFOS)Alkyl halide;Perflour ocarbon derivatives;Sul fonio acid:Surfactan ts - Anionio													
Softum perfluorode 2006-15-7 perfluorode 2006-15-7 esulfonate	No alert found	No afert found No afert found	No alert found	Not classified No alert found		(PFOS)Alkyl halide;Perflour ocarbon derivatives;Sul fonic acid;Surfactan ts – Anionic													

名称	CASRN	桐油	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and innegenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus alerts by ISS	functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ サスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験 鎖切断部	in vitro A HPRT試験 試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 vivo / 試験 験	i性 遺伝毒性 核試 vivo DNA損 傷	遺伝毒性 遺信 in vivo 染色 in v 体異常試験 期間	伝毒性 遺伝 vivo 不定 in viv DNA合成 メット 験	毒性 in vi voコ 変異 試験	ivo突然 発 異	がん性
Perfluoroctar esulfonate	1 45298-90-6	F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No alert found	No alert found	Not classified	No alert found	d No alert found	(PFOS)Alkyl halide;Perflour ocarbon derivatives;Sul fonic acid:Surfactan ts – Anionic			24 (84	***************************************										
Ethyl perfluorobutyl ether	163702-05-4	F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No afert found	No afert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	d No alert found	Alkyl halide:Ether moiety:Perflou rocarbon derivatives														
Difluoromethyl IH. IH- perfluoropropy ether	56860-81-2	FFF	No alert found No alert found	No afert found	No afert found	Alpha- and beta- Halloether Reactive Functional Groups	No alert found	d No alert found	Alkyl halide:Ether moiety:Perflou rocarbon derivatives														
Methyl IH, IH- perfluor opropy ether	378-16-5	F F F CH <sub>8</sub>	No alert found  No alert found	No afert found	No afert found	Alphar and betar Haloether Reactive Functional Groups	No alert found	d No alert found	Alkyl halide:Ether moiety:Perflou rocarbon derivatives														
IH.IH.SH- Perfluoropenty I-1.1,22- tetrafluoroethy lether	,	F F F	activation/SML22 Acquisition involving a learning group after metabolica activation 20 Centinal Polyhalandhare carbon atom after this ([gladathione) conjugation/SML2 Naclosophilic substitution at 50 carbon atom after this (glutathione) conjugation 32 Germinal Pelyhalandhare Derivatives	Radaci Radaci > ROS femantion after GSH depletion-Radica > ) PIOS femantia after GSH depletion > Deminal Polyhalashare Derivatives SRCS-SNZ > Arcitation virolving a more properties of the properties of the properties of the incoming a leaving group after metabolic activation >> German Pulyhalashare Derivatives SSZ >> Nucleophilic substitution agic actions attorn the foliation of the polyhalashare Derivatives SSZ >> SNZ	Apy Haider-Acylation >> P450 Mediated Activel to Acyl Haides >> 1,1-Dhaloskanes 1 Dhaloskanes	ion beta- haloether Reactive Functional Groups			halide.Ether moiety.Perflou rocarbon derivatives														
Perfluorobutyl methyl ether		F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No afert found	No afert found	beta- Haloether Reactive Functional Groups		d No alert found	halide.Ether moiety.Perflou rocarbon derivatives														
2H-Porfluoro- 5-methyl-3,6- dioxanonane	3330-14-1	F F F F F	No slert found  F  F	No afert found	SNI SNI > Carbenium for Famedor/SNI >> Carbenium for Famedor/SNI >> Carbenium for Famedor >> Alpha halo ethers (including alpha halo thioethers)	Alpha- and beta- Haloother Reactive Functional Groups	No alert found	d H-saceptor- path3-H- acceptor	Alkyl halide/Ether moiety/Perflou rocarbon derivatives				***************************************										

名称 CASRN I	Carcinogenicit y (genotox and nongenotox) alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test)	in vivo mutagenicity (Micronucleus)	Organic ; functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試明	遺伝毒性 in vitro マ ウスリン フォーマジ	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 試験	遺伝毒性 vivo 小核試 験	遺伝毒性 żivo DNA損 in viv 斯	毒性 遺伝毒性 o 染色 in vivo 不 常試験 期DNA台 試験	遺伝毒性 定 in vivo コ 成 メット試験	in vivo突然 発がん性 変異
Difluoromethyl 35042-99-0 2.2,3,3- tet afluoroprop yl ether	alerts by ISS  No alert found	No alert found	No alert found	Acylation/Acylation >> P450 Mediated Activation to Acyl Halides.Acylation >> P450 Mediated Activation to Acyl Halides.>> 1,1+-Dhaloskanes			No alert found				フォーマ試									\$A\$\$		
(244 — 16627-68-2 Personally) (14.134- perfluoropropyl )either	F	Acylation involving a leaving group after metabolic activation;SN2 >> Acylation involving a leaving group after metabolic activation >> Geminal Polyhaloalkane Derivatives;SN2 >> Nucleophilic substitution at sp3 carbon atom after thiol (chitations). conjugation;SN2 >>	RadicalRadical >> ROS formation after GSH depletion/Radical >> ROS formation after GSH depletion >> German (1)	Acylation:Acylation >> P450 Mediated Activation to Acyl Halides:Acylation >> P450 Mediated Activation to Acyl Halides:>> 1,1-Chrolashance	Alpha- and beta- Haloether Reactive Functional Groups	No alert found		Alkyl halide.Ether moisty.Perflou rocarbon derivatives														
2.2.3.3: Tetrafluoropo pyl ether	No alert found	No slert found	No slort found	Acylation:Acylation >> P450 Mediated Activation to Acyl Haldes:Acylation >> P450 Mediated Activation to Acyl Haldes:>> 1.1**Ohnlosikanes	Alpha- and n beta- Haloether Reactive Functional Groups	No alert found	No alert found	Alkyl halide.Ether moiety.Perflou rocarbon derivatives														
Methyl 2912H- 376-98-7 perfluordoutyl other	No alert found	No alert found	No slort found	No alert found	betar Haloether Reactive Functional Groups	No alert found		halide,Ether moiety,Perflou rocarbon derivatives												***************************************		
Methyl 3H- perfluorosogro pyl ether	No alert found	No alert found	No alert found	Acytator-Acytaton >> P450 Mediated Activation to Acytator-Acytaton >> P50 Mediated Activation to Acyt Haldea-Acitorian >> P450 Mediated Activation to Acyt Haldea-Acytator to Acyt Haldea >> P.1-Dhalaolanes-SNI-SNI >> 10 Acytator >>	n heta-	No alert found	No alert found	Alkyl halide-Ether moiety-Perflou rocarbon derivatives														
Perhance3- 3330-15-2 (IH- perhancethox ))propane	No alert found			SNI-SNI-) Carbenium for Formation SNI )> Carbenium for Formation >> Alpha halo ethers (including alpha halo thoethers)	betar Haloether Reactive Functional Groups	No alert found		halide_Ether moiety_Perflou rocarbon derivatives														
12-2 356-39-4 bid,1,22-356-39-4 brandhowath oxylethase	F	Acylation involving a leaving group after metabolic activation; SN2 >> Acylation involving a leaving group after metabolic activation >> Geminal Polyhaloalkane Derivatives; SN2 >> Nucleophilic substitution at sp3 carbon atom after thiol (chitathions). conjugation; SN2 >>	Radoud Risolaci 3) PiOS formation after GSH depletion/Radoud 3) PiOS formation after GSH depletion/Radoud 3) PiOS formation of Committee of Committe	Acytein-Acytein >> P450 Mediated Activation to Acytein to Acytein to Acytein Service (Acytein Service) Acyte	o Alphar and hetar Haloether Reactive Functional Groups	No alert found	path3-H-	Alkyl halide.Ether moiety.Perflou rocarbon derivatives														

名称 CASRN	y (genotox and nongenotox) alerts by ISS		DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutager Classification (Ames t alerts by	y ISS alerts by ISS	functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 v 試験	遺伝毒性 遺 rivo 小核試 viv 験 傷	医毒性 in vivo 象 体異常記	遺伝毒性 色 in vivo 不定 験 期DNA合成 試験	遺伝毒性 in vivo コ メット試験	n vivo突然 発がん性 変異
(IH.IH- perfluorection) (2H- ether ceethyl)		Acylation involving a leaving group after metabolic activation;SN2 >> Acylation involving a leaving group after metabolic activation >> Geminal Polyhaloalikane Derivatives;SN2 >> Nucleophilic substitution at sp3 carbon atom after this (feat tathings) consistention;SM2 >>	Radeal Place and The Conference of the Section Place and Polyhelectron and Polyhelectron and Polyhelectron at page and print metabolic acustom 20 Demind Polyhelectron at page acustom and metabolic place and print place and print place acustom 20 place and polyhelectron at page acustom and print triol (gladeshore polypedocal Polyhelectron place and Polyhelectron Polyhe	Acyation-Acyation >> D40 Mediated Activation to Acy Hildine-Acyation >> D400 Mediated Activation to Acy Hildine-Acyation >> 1.1-Ohalushumes	Alpha- and bota- bota- Haloether Reactive Functional Groups	found No alert found	Alkyl halide:Ether molety:Perflou rocarbon derivatives												***************************************		
7H- Perfluorohapta noyi eldorride	Acyl haldes (Genota 2) For F	No alert found		Halide Angolation >> Direct Addition of an Apyl Halide >> Apyl halide Angolation >> P800 Mediated Activation to Apyl Halidea Angolation >> P800 Disholations to Apyl Halidea >> 1,11 Disholations	Benzoyi Type Compounds		halide/Alkyl halide/Perflour ocarbon derivatives														
Perfluirconoma 82447-23-1 noyl chloride	P (Gendack) Structural start for curval start for curval start for conductors for cond	No alert found	SNE-SNE >> Direct acylation involving a leaving group SNE 2>> Direct acylation involving a leaving group >> Acyl Halides	Halide >> Acyl halide	Compounds	lides Acyl halides	Acyl halide;Alkyl halide;Perflour ocarbon derivatives														
Perfluorocitan 335-66-0 oyl fluoride	F (General Section 2) F F F F F F F F F F F F F F F F F F	No afert found	SN2SN2 >> Direct applation involving a leaving group SN2 >> Direct applation involving a leaving group >> Apyl Halides	Acystiancy/aptien >> Direct Addition of an Acyl Halide Acystan >> Direct Addition of an Acyl Halide >> Acyl halide	Acyl and Acyl hal Benzzolf Type Compounds	ides Acyl halides	Acyl halide;Alkyl halide;Perflour ocarbon derivatives														
Herafluoroglut. 678–77–3 anyl. chloride	G (Genotacy) Set for generalized curval after for generalized car drong generalized car drong generalized car drong generalized car drong generalized			Halide Anglation >> Direct Addition of an Anyl Halide >> Anyl halide	Benzoyl Type Compounds	Acyl halides Acyl halides	Acyl halide:Alkyl halide:Perflour ocarbon derivatives														
Perfluoreadipo 338-06-1 yl chloride	(Genotacy) after for curval after for production after for production and consequently are producted as the product of the production and consequently are producted as the pro			Halide Acylation >> Direct Addition of an Acyl Halide >> Acyl halide	Benzoyi Type Compounds	ides Acyl halides	halide.AlityI halide.Perflour ocarbon derivatives														
Pentadecafflor 335-64-8 occtangly chloride	F F (General Section of Section o	No alert found	SN2SN2 >> Direct acylation involving a leaving group.SN2 >> Direct acylation involving a leaving group.>> Acyl Halides	AppletionAppletien >> Direct Addition of an Appl HalidocApplation >> Direct Addition of an Appl HalidocApplation >> Direct Addition of an Appl Halidoc>> Appl halide	Acyl and Benzovi Type Compounds	ides Acyl halides	Acyl halide;Alkyl halide;Perflour ocarbon derivatives														

名称 CASRN	Carcinogenicit DNA alerts for AMES, CA and MNT by O (genotox and nongenotox) alerts by ISS		DNA binding by OECD		in vitro mutagenicity (Ames test) alerts by ISS	in vivo C mutagenicity fu (Micronucleus) g alerts by ISS	rganic unctional roups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試態	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 試験	遺伝毒性 vivo 小核試 験	遺伝毒性 vivo DNA損 ir 傷	責伝毒性 並 n vivo 染色 ii 本異常試験 ii	遺伝毒性 in vivo 不定 ir 期DNA合成 試験	遺伝毒性 ir i vivo コ ji ット試験	n vivo突然 発が/ 変異
Perfluorositutar 878-78-4 yl difluoride	Any haides Government Steps Clared alect for Countries C	SN2SN2 >> Direct acylation involving a leaving group-SN2 >> Direct acylation involving a leaving group >> Acyl Halides	Angleiser Angletien > Direct Addition of an Apyl Halide Angletinn > Direct Addition of an Apyl Halide >> Acyl halide  Acyl halide	Acyl and Benzoyl Type Compounds	Acyl halides	Acyl halides A h h	cyl alide;Alkyl alide;Perflour carbon erivatives															
2.2- Bisf-trifluorome thylipropionyl fluoride	Acyl haldes SN2:SN2 >> Direct acylation involving a life (Genetox) Strue groups SN2 >> Durect acylation involving a clural alert for power acylation involving a generotic care invogenicity	leaving SN2:SN2:>> Direct scylation involving a leaving group:SN2:>> Direct scylation involving a leaving group  Direct scylation involving a leaving group >> Acyl Halides	Acylation/Acylation >> Direct Addition of an Acyl Halide-Acylation >> Direct Addition of an Acyl Halide >> Acyl halide	Acyl and Benzoyl Type Compounds	Acyl halides		.cyl alide;Alkyl alide;Perflour carbon erivatives				***************************************											
5H- 813-03-6 Octafloroppent anoyl fluoride	And haldes   SN2.SN2 >> Direct acytation involving a light for control of the con	leaving SN2-SN2 >> Direct acylation involving a leaving group SN2 >> Acyl Halides Direct acylation involving a leaving group >> Acyl Halides	Acylation:Acylation >> Direct Addition of an Acyl Haide-Acylation >> Direct Addition of an Acyl Haide >> Acyl haide-Acylation >> Direct Madition of an Acyl Haide >> Acyl haide-Acylation >> Direct Madition of an Acyl Maditated Activation to Acyl Haides >> 1.1- Divalcalkanes	Acyl and Benzoyl Type Compounds	Acyl halides	h	cyl alide:Alkyl alide:Perflour carbon privatives															
Perfluorohepta 52447-22-0 ngyl chloride	Acy haldes  F  F  Common Struct  Com	SN2-SN2 >> Direct acylation involving a leaving group SN2 >> Direct acylation involving a leaving group >> Acyl Halides	Acylation Acylation >> Direct Addition of an Acyl Halide Acylation >> Direct Addition of an Acyl Halide >> Acyl halide	Acyl and Benzoyl Type Compounds	Acyl halides	h	.cyl alide;Alkyl alide;Perflour carbon erivatives			***************************************												
(Perflueroctyl 89373-67-1 )propancyl chloride	Apy haldes  General Struct  Ge	SNZ-SNZ >> Direct acylation involving a leaving group SNZ >> Direct acylation involving a leaving group >> Acyl Halides	Acylation/Acylation >> Direct Addition of an Acyl Halide Acylation >> Direct Addition of an Acyl Halide >> Acyl halide	Acyl and Benzoyl Type Compounds	Acyl halides	h	oyl alide:Alkyl alide:Perflour carbon erivatives															
Heptafluorobat 375-16-6 ynyl Chloride	Apy halidas    SN2.SN2 >> Direct acylation involving a life processor of the processor of t	leaving SNZ-SNZ >> Direct acylation involving a leaving group-SNZ >> Leaving group Direct acylation involving a leaving group >> Acyl Halides	Acylation/Acylation >> Direct Addition of an Acyl Halide Acylation >> Direct Addition of an Acyl Halide >> Acyl halida >> Acyl halida	Acyl and Benzoyl Type Compounds	Acyl halides		oyl alide:Alkyl alide:Perflour carbon erivatives															
Perfluoro-1,8-151772-59-6 dioxaheptanois acid	No alert found No alert found No alert found	No afert found	No afert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	path3-H- h acceptor ic	GenX)Alkyl alide:Carboxyl acid:Ether ociety:Perflou ocarbon erivatives		VI													

名称 CASRN	Carcinogenicit y (genotox and nongenotox) alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic ir Primary n Classification (	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus) alerts by ISS	Organic functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試影	遺伝毒性 in vitro マ ウスリン フォーマ討	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	n vitro 細 造 形質転換 viv 机脉 脉	伝毒性 遺伝 o 小核試 vivo 傷	毒性 遺伝毒性 DNA損 in vivo 染色 体異常試影	遺伝毒性 in vivo 不定i 期DNA合成 試験	遺伝毒性 in vivo コ in vivo	ı vivo突然 発がん性 変異
Perfuser(4- methoxylutan ois acid)utan	No alert found	No alert found	No alert found	No alert found	Alpha- and beta- beta- Haloether Reactive Functional Groups	No alert found	No alert found	(GenX)Alkyl halide;Carboxyl ia acid:Ether moiety.Perflou rocarbon derivatives														
Perfluero-3- methoxypropa noic acid	No alert found	No allert found	No afert found	No alert found	Alpha- and beta- lbeta- lfslockher Reactive Functional Groups	No alert found	path3-H-	(GenX)Alkyl halide;Carboxyl ic said;Ether moiety;Perflou rocarbon derivatives														
Perfluore-2- methyl-3- cochessarrole acid	No alert found	No alert found	No alert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups		acceptor	(GenX)Alkyl halide/Carboxyl ie acid;Ether moiety.Perflou rocarbon derivatives	*アンモニウム塩のみ(CAS82037-80-3	)*アンモニウ ム塩のみ	*アンモニウ ム塩のみ						*7	ツモニウ 塩のみ	*アンモニウム塩のみ	*アンモニウ ム塩のみ		*アンモニ ム塩のみ
Perfusor 2.5 - 13252-14-7 dimethy1-3.6 dioxamonanoia acid	No alert found	No alert found	No dert found	SNI SNI >> Carbenium for Formation/SNI >> Corbenium for Formation/SNI of Corbenium for Premation >> Alpha halo ethers (including alpha halo thicethers)	Alpha- and hota- thata- Haloether Reactive Functional Groups	No alert found	H-acceptor- path3-H- acceptor	(GenX)Alkyl halide:Carboxyl io acid:Ether moiety.Perflou rocarbon derivatives														
Perfuero-36-55821-21-1 diseascenter 1,8-dois acid	No dert found	No alert found	No afert found	No efert found	betar Haloether Reactive Functional Groups		path3-H- acceptor	(GenX)Alkyl halide:Carboxyl io asid:Ether moiety:Perflou rocarbon derivatives														
Perfuero 330582-41-9 3.69- trioxatridecano le acid	No alert found		No afert found		Alpha- and Neta- heta- risloether Reactive Functional Groups			derivatives														
Perfusor-36- 137780-69-9 dioxadecanoic acid	F No alert found	No alert found	No afert found	No afert found	Alpha- and beta- leta- Haloether Reactive Functional Groups	No alert found	H-acceptor- path3-H- acceptor	(GenX)Alkyl halide:Carboxyl io acid:Ether moiety:Perflou rocarbon derivatives														

名称	CASRN	桐油	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus alerts by ISS	functional groups	直伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ サスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験 鏡	毒性 in vit DNA HPR I断試験	tro in vi T試験 定期 成	tro 不 in v IDNA合 胞i	itro 細 遺伝毒t 影質転換 vivo 小枝 験	生 遺伝毒性 g試 vivo DNA 傷	遺伝毒性 損 in vivo 染色 体異常試験	遺伝毒性 in vivo 不定 期DNA合成 試験	遺伝毒性 n vivo コ メット試験	n vivo突然 変異	<b>必がん性</b>
Perfluoro- 3,6,9- trioxaundecan e-1,11-dioic acid	55621-18-6	0 F F F O F F O F F F O F F F O F F F O F F F O F F F O F F O F F F O F F O F F O F F O F F O F F O F	No alert found No alert found	No alert found	No alert found	Alphar and betar Haloether Reactive Functional Groups	No alert found	H-acceptor-	(GenX)Alkyl halide;Carboxyl io acid;Ether moiety,Perflou rocarbon derivatives													***************************************		
Perfluoro-4- isopropoxybuta noic acid	801212-59-9		No afert found No afert found	No alert found	SNI:SNI >> Cerbenium Ion Formation:SNI >> Carbenium Ion Formation >> Alpha halo ethers (including alpha halo thicethers)	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	No alert found	(GenX)Alkyl halide;Carboxyl is asid:Ether moiety.Perflou rocarbon derivatives															
(2,5,8- trimethyl- 3,6,9- trioxadodecan oic) acid	65294-16-8	X	No alert found No alert found	No alert found	SM (SM ) > Certenium lan Formation SM ) > Certenium lan Formation > Alpha halo ethers (including alpha halo thioethers)	Haloether Reactive Functional Groups	No alert found	acceptor	(GenX)Alkyl halide;Carboxyl io acid;Ether moiety.Perflou rocarbon derivatives															
3,6,9- trioxadecanoic acid	151772-59-7	F F F F F F F F F F F F F F F F F F F	No afert found No afert found	No after t found	No slert found	Alphar and betar Haloether Reactive Functional Groups	No alert found	acceptor	(GenX)Alkyl halide;Carboxyl ic acid;Ether moiety;Perflou rocarbon derivatives															
(Perfluorocctyl )ethyl acrylate		NG A	No afert found No afert found	No after t found	Michael addition/Michael addition >> Pelarined Alexere-Wichael addition (Alloward addition >> Pelarined Alexere-Wichael addition >> Alpha, beta- ureathered attors	Groups			Acrylate-Allken e moiety-Alkyl halide-(Darboxyl ic acid ester/Perflouro carbon derivatives															
IH.IH.BH- Perfluorenceyi acrylate		·		No afert found	addison/filoheel addison >> Polarised Alberter- Michael addison/Filoheel addison >> Polarised Alberter-Michael addison >> Polarised Alberter-Michael addison >> Alpha, beta- unestisented extens	n Reactive Functional Groups	No alert found		e moiety.Alkyl halide:Carboxyl ic acid ester:Perflouro carbon derivatives															
2.2.3.3- Tetrafluoropro pii acrylate	7383-71-3	HC F	No alert found No alert found	No after t found	Anylation Anylation 39: 79:850 Mediated Activated Andlated Activation to Acyl Hallices Anylation 39: 79:80 Mediated Activation to Acyl Hallices 39: 11-Dhalacakenes Michael addition-Michael addi	a Acrylate n Reactive Functional Groups	No alert found	No alert found	Acrylate/Alkeyl naide;Carboxyl io acid ester;Perflouro carbon derivatives															

	Carcinogenicit y (genotox and nongenotox) alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	alerts by ISS	functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 試験	遺伝毒性 vivo 小核試 vi 験 傷	伝毒性 wo DNA損 in vivo f 体異常数	主 遺伝毒性 色 in vivo 不定 机験 期DNA合成 試験	遺伝毒性 in vivo コ メット試験	in vivo突然 発がん性 変異
2- (S2591-27-2 (Perfluorobuty) ) ethyl acrylate	No alert found	No alert found	No alert found	Michael addition/Michael addition/ 3> Polarised Alberse-Michael addition/Michael addition (3>) Agina Polarised Alberse-Michael addition (3>) Agina, beta unsaturated esters	Acrylate Reactive Functional Groups	No alert found	No alert found	Acrylate:Alken e moiety:Alkyl halide;Carboxyl ic acid ester:Perflouro carbon derivatives														
IH.IH- Perfluorootyl acrylate	No alert found	No alert found	No alert found	Michael addition/Michael addition >> Polarised Alberser Michael addition >> Polarised Alberser Michael addition >> Polarised Alberser Michael addition >> Alberser Michael	Acrylate Reactive Functional Groups	No alert found		Acrylate:Alken e moiety:Alkyl halide:Carboxyl ic acid ester:Perflouro carbon derivatives														
IN IN SSLSH- Perlisoro-1.5- pentanedid discrylate	No alert found	No alert found	No alert found	Michael addition/Michael addition >> Pularised Albenes-Michael addition Michael addition (Albenes-Michael addition >> Apha, beta unsaturated exters	Acrylate Reactive ar- Functional Groups	No alert found	No alert found	Acrylate;Alken e moiety;Alkyl halide;Carboxyl io acid ester;Perflouro carbon derivatives														
18.19.55t- Per Buoroposty I acrylate	No alert found	No alert found	No alert found	Applation Anylation >> P450 Mediated Astivation Any Halles Applation >> P450 Mediated Astivation Any Halles Applation >> P450 Mediated Astivation to Anyl Halles >> 11-Othorat American Mediated addition/Hoheal addition >> Pediatrical Alternative Advances - Michael addition Andles Addition >> Alpha Detarrow Mediated Sectors >>> Alpha Detarrow Mediated Sectors >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	to Acrylate on Reactive Functional Groups	No alert found	No alert found	Acrylate:Alken e moiety:Alkyl halide:Carboxyl ic acid ester;Perflouro carbon derivatives														
(BH 2953-85-3 ] Perfluorchesyl junettyl acrylate	No alert found	No allert found	No alert found	Anylation/Anylation >> 1959 Mediated Activation to Anylation Anylation >> 1959 Mediated Activation to Anylation Anyl	to Acrylate on Reactive Functional Groups	No alert found	No alert found	Acrylate;Alken e moiety;Alkyl halide;Carboxyl ic acid ester;Perflouro carbon derivatives														
TH INSK 8H- Perfluorchean discrylate	No alert found	No alert found	No alert found	Michael addition/Michael addition 39 Polarised Albrene *Michael addition Michael addition 393 and addition 393 Polarised Albrene-Michael addition 393 Alpha, beta unsaturated actors	Acrylate Reactive Functional Groups	No alert found	No alert found	Acrylate:Alken e moiety.Alkyl halide:Carboxyl ic acid ester:Perflouro carbon derivatives														
1H,1H- Perfluorebudyl 424-64-6 acrylate	No alert found	No affort found	No afert found	Michael edition Michael edition 37: Pediatried Adverse Michael edition Michael edition Michael edition 37: April edition	Acrylate Reactive arrangement Groups	No alert found		Acrylate:Alken e moiety:Alkyl halide:Carboxyl io acid ester:Perflouro carbon derivatives		4	4											

名称 CASRN	Carcinogenicit y (genotox and nongenotox) alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus) alerts by ISS	Organic ji functional groups	責伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試影	遺伝毒性 in vitro マ サスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro in HPRT試験 定 成	n vitro 不 in v E期DNA合 胞形 龙 試馬	vitro 細 遺伝語 形質転換 vivo /J 験	事性 遺伝毒f 小核試 vivo DN 傷	性 遺伝毒性 IA損 in vivo 染色 体異常試験	遺伝毒性 遺 in vivo 不定 in 期DNA合成 メ 試験	伝毒性 in vivoコ 変 小試験	zivo突然 発がん性 異
1H.1H- 356-88-5 Perfluoropropy I acrylate	No slert found	No allert found	No alert found	Michael addition/Michael addition >> Polarised Allenes-Michael addition/Michael addition >> Polarised Alkenes-Michael addition >> Alpha, beta- unsaturated esters	Acrylate Reactive	No alert found	No alert found	Acrylate;Alken e moiety;Alkyl halide;Carboxyl ic acid ester;Perflouro carbon derivatives			- Tall				***************************************	HADADADADADADADADADADADADADADA		***************************************		u		
	FFF														***************************************			***************************************				
2- (Perfluoroctyl Jethyl methacrylate	No alert found	No alert found	No afert found	Michael addition/Michael addition >> Polarised Albames-Michael addition-Michael addition >> Polarised Polarised Albames-Michael addition >> Alpha, beta- uresturated exters	Acrylate Reactive Functional Groups	No alert found		Alkene moiety:Alkyl halide:Allyk:Car boxylic acid ester:Methacry late:Perflouroc arbon derivatives														
2-Perfluorohery Detry methacryste	No alert found	No afert found	No alert found	Michael addition/Michael addition >> Polarised Aburer-Michael addition/Michael addition >> Alpha, beta-unsaturated exters	Reactive	No alert found		moiety:Alkyl : halide:Allyl:Car S boxylic acid v ester:Methacry S late:Perflouroc v arbon T	99;TA1535,TA183,TA88,TA100Wp2u "ATL±1" STA183,TA183,TA198,TA100WP2u "ATL±1" STA183,TA198,TA100WP2u "ATL±1" STA183,TA198,TA100,WP2uvrA (±59) degative	S9)Negativ e /(TG473):H PBL - S9:Positiv e/(TG473, GLP):CHO (+S0)	S9) Negative/( TG476準 鏡GLP適 合), L5178Y -S9 Negative, +S9ambiguo us//mouse lymphoma L5178Y Negative (- S9)						ICRマ 雌雄、 Negati		ICRマウス、 雌雄、骨髄 Negative			
IN IN SH- Perfluoropenty I methacrylata	H.C. No alert found	No alert found	No alert found	AppliationAppliation >> P650 Mediates Assiyation to Appl Halifack-P641ation >> P450 Mediated Activation to Appl Haliface >> 1-1-Chalandakanes Michael to Appl Haliface >> 1-1-Chalandakanes Michael addition/Michael addition >> Palarias Michael addition/Michael addition >> Polyarias Michael addition/Michael addition >> Polyarias Michael addition Michael addition >> Palpha, bitter unsaturated exters	to Acrylate in Reactive Functional Groups	No alert found		Alkene T moiety/Alkyl halide/Alkyl/Car boxylio acid 3 ester/Methacry ( late/Perfource arbon derivatives	ABB, TAIO, TAIO2, TAISS, TAISS7 (explicit Ambiguing of S), Indigenous Negative (159); TAISS, TAIS (TABB, TAIO), WP2 urrA Negative ± 59)				lymphocyte (±S9) Negative									
IH. IH. 9H- 1841-46-9 perfluoronomy methacrylate	No alert found	No alert found	No afert found	ApolationApolation >> P450 Mediated Activation to Apyl Halides Apolation >> P450 Mediated Activation to Apyl Halides >> D-140 Mediated Activation to Apyl Halides >> L1-Dhalidakanes Michael addition/Michael Administration >> Palarida Allament Allames—Michael addition >> Alpha, beta- unsaturated exters	Acrylate on Reactive Functional Groups	No alert found		Alkene moisty-Alkyl halide-Allyk-Car boxylio acid ester-Methacry late-Perflouroc arbon derivatives														
(Perfluoreprep 19895-31-3 ylmethy) methacrylate	No alert found	No alert found	No afert found	Michael addition Michael addition >> Polarized Althone-Michael addition Althone Michael Addition Althone Michael Addition Althone Michael addition >> Alpha, beta-unsaturated extens	Reactive Functional Groups	No alert found		moiety/Alkyl haide;AlkylCar boxylio acid ester:Methacry late;Perflouroc arbon derivatives														
IH.IH- 4515-53-5 Perfluoropy I methacrylate	No alert found	No alert found	No afert found	Michael addition Michael addition >> Polarized Althones-Michael addition Michael addition >> Polarized Althones-Michael addition >> Alpha, beta-unsaturated extens	Acrylate Reactive Functional Groups	No alert found	No alert found	Alkene moiety-Alkyl halide-Allyk-Car boxylic acid ester-Methacry late-Perflouroc arbon derivatives														

	alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vi Primary muta Classification (Am	itro in vivo agenicity mutagenicit res test) (Micronucle ts by ISS alerts by IS	Organic y functional us) groups S	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試影	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験 f	伝毒性 in v ro DNA HPI 切断試験	ritro in RT試験 定 成	witro 不 in E期DNA合 胞 或 訓	vitro 細 遊形質転換 Vivo R除	云毒性 遺伝者 o 小核試 vivo D 傷	毒性 遺伝毒性 DNA損 in vivo 染色 体異常試験	遺伝毒性 in vivo 不定 ii 期DNA合成 試験	遺伝毒性 in vivo コ i メット試験	in vivo突然 発がん性 変異
(Perfluorohept 3934-22-4 y/methyl methacrylate	No alert found	No alert found	No afert found	Michael addition/Michael addition >> Polarised Administration of the Michael Administration of the Michael addition (Albael addition) >> Alpha, beta unsaturated exters	Acrylate No a	No alert found	M Alkene moiety.Alkyl halide.Allyk.Car boxylic acid ester.Methacry late.Perflouroc arbon derivatives														
(Perfluorohoxy I)methyl methacrylate	No alert found	No alert found	No afert found	Michael addition/Michael addition >> Polarised Aßener-Michael addition/Michael addition >> Polarised Polarised Aßener-Michael addition >> Alpha, beta unsaturated exters	Acrylate No a Reactive Functional Groups	alert found No alert fou	and Alkene moiety.Alkyl halidex.AlkyCor boxylic acid ester.Methacry late.Perfource arbon derivatives								***************************************						
III.11/7/F 2281-99-6 Perfluorohigy I methacrylate	CH, No alert found	No alert found	No afert found	Acylation-Acylation >> P650 Mediated Activation N Acyl Halides-Aydrain >> P450 Mediated Activation to Acyl Halides >> I-1-Obhaloshames-Michael to Acyl Halides >> I-1-Obhaloshames-Michael acidition-Michael Administration of Admin	Acrylate No a I Reactive Functional Groups	alert found No alert fou	nd Alkene moiety-Alkyl moiety-Alkyl moiety-Alkyl posylic acid ester-Methacry late/Perflouroc arbon derivatives														
IH.H.124.22F- 1789-84-4 Perfluorobey methacrylate	No alert found		No afert found	Michael addison/Michael addison >> Polarised Administration of the Conference of the	Functional Groups	No alert found	halide:AllykCar halide:AllykCar ester:Methacry late:Perflourou arb:Perflourou derivatives								***************************************						
Perfluorotride   72829-94-8 anois acid	oic acid (PFOA) (Beogenotia)	No alert found	No afert found	No afert found	beta- Haloether Reactive Functional Groups	alert found No alert fou	halide;Carboxyl ic acid;Perflouroc arbon derivatives;Sur factants Anionic								***************************************						
Perhandetra 376-06-7 decamos acid	(PFOA) (Regenotal) (Regenotal) (Regenotal) (Regenotal) (Regenotal) (Regenotal) (Regenotal) (Regenotal) (Regenotal)		No afert found	No afert found	beta- Haloether Reactive Functional Groups	No alert found	halide;Carboxyl is is acid;Perflouroc arbon derivatives;Sur factants - Anionis		S9) Negative// Chinese hamster lung cells (±S9) Negative												
Perfuorounde 2058-94-8 canoic acid	Per fluor occlar  Per fluor occlar  (PEDA)  (Hongenotox),  First and alert for nongenotoring or	No alort found	No alert found	No afert found	Haloether Reactive Functional Groups	alert found No alert found	and Alkyl halidecCarboxyl ic scidPerflouroc acidPerflouroc arbon derivatives:Sur factants – Anionsic		A CHIL/IU (± S9) Positive//C hinese hamster lung cells (±S9) Positive		HepG2 Negative				***************************************					***************************************	

名称 CASRN #	Ræ	Carcinogenicit I y (genotox and nongenotox) alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity n (Ames test)	in vivo mutagenicity (Micronucleus)	Organic functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 遺 vitro 染色 in 体異常試験 ウ	伝毒性 in vi vitro マ メット スリン	itroコ 遺 ト試験 vit 試	云毒性 遺 o 小核 vite 検 鎖	毒性 in vit DNA HPR I断試験	tro in vitro T試験 定期DN 成	不 in vitro 細 IA合 胞形質転 試験	遺伝毒性 換 vivo 小核試 験	遺伝毒性 jic jic jic jic jic jic jic jic jic jic	性 遺伝毒性 染色 in vivo 不足 試験 期DNA合成	遺伝毒性 in vivo コ メット試験	in vivo突然 発がん性 変異
進加 Perfluorchead 67805-19-5 ecanoic acid	<u></u>	alerts by ISS Perfluoroctan loic acid (PFOA) ((Nongenotox): Structural alert for nongenotoxic carcinogenicity	No alert found	ANZ-ANZ >> Schiff base formation by aidehyde formed after metabolic activation-ANZ >> Schiff base formation by aidehyde formed after metabolic activation >> Schiff base formation by aidehyde formed after metabolic activation >> General Polyharobane formation (marchia activation >> General Polyharobane  -> General Polyha	No alert found	Alpha— and beta— Haloether Reactive Functional Groups	alerts by ISS No alert found	No alert found	Alkyl halide:Carboxyl ic acid:Perflourod arbon derivatives:Sur factants – Anionic	TA100,TA1535,TA98,TA1537,WP2urrA (±59)Wegative	CHL/IU(± S9) Negative	r - 국왕(	jative Ne	gative			ADS. (1911)			試験		
施加 Perfuroscatal 16517-11-6 ccarolic solid	<u></u>	Perfluorocctan oic soid (PFOA) (Nongenotox); Structural alert for nongenotoxic carcinogenicity	No alert found	AMCARD '> Boilf base formation by adolyside formed after metabolic activation AID '> Boilf the formation by adolyside formed after metabolic activation AID '> Boilf the command by adolyside formed after metabolic activation >> Desmind Polysidesideane Deminatives Riddiesidesideane Boildiesideane Boildiesideane (market) ABOILDIESIDEANE AID ABOILD	No slert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	No alert found	Alkyl halide;Carboxyl ic acid:Perflourou arbon derivatives;Sur factants – Anionic	TA100,TA1535,TA98,TA1537,WP2uvrA ±59) Negative	( CHL/IU Weakly Positive	Neg	ative Ne	gative								
1870 Perfluenciade 307-55-1 canada acid	r	Perfluoroctan oic acid (PFOA) (Nongenotox); Structural alert for nongenotoxic carcinogenicity	No slert found	ANZ-ANZ >> Schiff base formation by aidehyde formed after metabols activation.ANZ >> Schiff base formation by aidehyde formed after metabols activation.PNZ >> Schiff base formation by aidehyde formed after metabols activation >> General Polyhinolahea formation (index polyhinolahea polyhinolahea formation (index polyhinolahea polyhinolah	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	No alert found	halide;Carboxyl ic acid:Perflouroc	TASB. TA100. TA1535, TA1532 TA1538 S20-r4 pidM101; TASB.TA100, TA1535, TA1538, WP2ivrA ±59)Negative	CHL/IU (± S9) Positive	Heg	og2 V7	a(±S9) (ative								
Perfluerodeca 335-76-2 noic acid		Perfluorocctan oic acid ((PFOA) (Nongenotox); Structural alert for nongenotoxic carcinogenicity	No alert found	No afert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	No alert found	halide:Carboxyl	TABR TAIO,TAISS,TAISS,TAISS,TAISS, WPZ un4 (±89) Megatur/TAISS, TAISS,TABR TAIO (±59) Negative			V7 Ne	s(±S9) gative				Harian SD ラット末橋 血 雌蕊 Negative				
Perfluences 375-95-1 note acid	F F F F F F F F F F F F F F F F F F F	Perfluoroctan iois acid ((PFOA) ((PFOA) (Nongenotox); Structural alert for nongenotoxic carcinogenicity		No afert found	No alert found	beta" Haloether Reactive Functional Groups	No alert found		halide;Carboxyl ic acid;Perflouroc arbon derivatives;Sur factants – Anionic	TA98.TA100.TA1535.TA1532.TA1538.TA98.TA100.WPZvvr2 (±59) Negative		Mod incr a cy	删胞 Ne dest ease at /totoxic c.: G2細胞	a(±S9) TK gative Po	細胞 itive			Harian SD ラット末梢 血雌雄 Negative				
9H- Perfusoronan noe acid	F F F F F F F F F F F F F F F F F F F	Perfluoroctan oic acid (PFOA) (PFOA) (Nongenotox); Structural alert for nongenotoxic carcinogenicity		No afert found	Appleine/Apolation >> R60 Mediated Astronton to Appleine	Reactive Functional Groups			sactPerfloured arbon derivatives;Sur factants – Anionic			***************************************										
11-H- (1765-48-6) Perfusional and	, <b>"</b> >	Perfluoroctan oic acid ((PPOA) ((PPOA) (Nongenotox); Structural alert for nongenotoxic carcinogenicity	No alert found	No afert found	Acylaton-Aystain >> P450 Mediated Activation t Agry Halides-Aystain >> P450 Mediated Activation t Agry Halides-Aystain >> P450 Mediated Activation to Agry Halides >> 1.1-Ohalidahares	Alpha- and heta- Haloether Reactive Functional Groups	No alert found	No alert found	Alkyl halide:Carboxyl io acid:Perflourou arbon derivatives:Sur factants – Anionic			***************************************										

名称 CASRN	Carcinogenicit I y (genotox and	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagenicity Classification (Ames test) alerts by ISS	in vivo mutagenicity	Organic il	直伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色	遺伝毒性 in vitro マ	in vitro コ メット試験	遺伝毒性 vitro 小核	遺伝毒性 vitro DNA 値対形できます	in vitro HPRT試験	in vitro 不 定期DNA合	in vitro 細 胞形質転換	遺伝毒性 道 vivo 小核試 v	責伝毒性 遺伝 rivo DNA損 in viv	毒性 遺伝毒性 o染色 in vivo 不	遺伝毒性 定 in vivo コ	in vivo突然 発がん性 変異
Pentafluoropro 354-76-7	nongenotox) alerts by ISS No alert found I	No alert found	No alert found	No alert found	Classification (Ames test) alerts by ISS Not classified No alert found	alerts by ISS No alert found	Alkyl		体英宗武功	フォーマ試		試験	製切断試験		N.	記帳	by 14	6 M-X	系試験 期DNA台 試験	メット試験	
pionamide	F				Not classified No alert found		halide;Haloacet amide;Organic amide and thioamide;Perfl ourocarbon														
	F						derivatives														
Heptafluorobut 662-50-0	H <sub>2</sub> N O	No alert found	No alert found	No alert found	Not classified No alert found	No alert found	Alkyl														
yramide	F—F						amide and thioamide;Perfl ourocarbon														
	F—F						derivatives														
	F																				
Perfluorooctan 423-54-1 amide	H <sub>2</sub> N O No alert found i	No alert found	No alert found	No alert found	Not classified No alert found		halide:Haloacet														
	FF						amide;Organic amide and thioamide;Perfl ourocarbon derivatives														
	F——F																				
	F																				
Nonafluoropen 13485-61-5 tanamide	No alert found I	No alert found	No alert found	No alert found	Not classified No alert found		amide:Organic										1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
	F——F						amide and thioamide;Perfl ourocarbon derivatives														
	F—F																				
	HĨN																				
Perfluoropenta 355-81-7 namide	No alert found I	No alert found	No alert found	Acylation:Acylation >> P450 Mediated Activation to Acyl Halides:Acylation >> P450 Mediated Activation to Acyl Halides >> 1,1-Dihaloalkanes	Not classified No alert found		amide and thioamide;Perfl														
	F						ourocarbon derivatives														4
	F																				
Perfluorooctan 3492-23-7	F No alert found I	No alert found	No slert found	No alert found	Not classified No alert found	No alert found	Alkyl											4 4 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9			
edioic diamide	No alert found I						halide;Haloacet amide;Organic amide and thioamide;Perfl ourocarbon														4
	F F F						derivatives														
	F F																				
Octafluoroadip 355-66-8 amide	NH, No alert found I	No allert found	No alert found	No alert found	Not classified No alert found	No alert found	Alkyl halide;Haloacet											# 1			
	F. F.						amide;Organic amide and thioamide;Perfl ourocarbon derivatives														
	F F																				
	0—F																				
																		1			

April 1997   Apr	名称	CASRN	標准	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox)	DNA binding by OASIS	DNA binding by OECD	Primary Classification	in vitro mutagenicity (Ames test)	in vivo mutagenicity (Micronucleus	functional	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試	遺伝毒性 in vitro マ 験 ウスリン	in vitro コ メット試験	遺伝毒性 vitro 小核 xitky 鎬	伝毒性 in ro DNA Hi 切断試験	vitro i PRT試験	in vitro 不 定期DNA合 成	in vitro 細 遺伝 胞形質転換 vivo / 試験 験	i性 遺伝毒 N核試 vivo DN 傷	i性 遺伝毒性 NA損 in vivo 染色 体異常試験	遺伝毒性 in vivo 不定 期DNA合成	遺伝毒性 in vivo コ メット試験	n vivo突然 変異	能がん性
AND PROPERTY OF THE PROPERTY O	N-	89932-74-1	1	alerts by ISS	No alert found	No alert found		alerts by ISS	alerts by ISS	Alkyl			フォーマ試				-					試験			
And the second s	Methylperfluor									halide;Haloacet amide;Organic															
## April 1997   Property of the control of the cont			FF				9			thioamide;Perfl															
Part			F—F							ourocarbon derivatives															
## Part of the Control of the Contro			F—F				9																		
## Part of the Control of the Contro			F—F				6 6 6 7 7																		
# Part of the part			F—F				9																		
## A PART   PART							1 1 1 1 1 1 1																		
A Marine			I N				9																		
## A PART   PART	Éti Parfluoropanta	2706-91-4	Cn <sub>3</sub>	No slart found No slart found	AN2-AN2 >> Schiff have formation by aldebude formed after	No slart found	Not classified	No slart foun	d No slart foun	Albol		_													
## A PART OF THE P	ne sulfonic	2,000 01 4	F	No and Cround No and Cround	metabolic activation:AN2 >> Schiff base formation by aldehy	vde	Not chassined	NO BIETE TOBIT	u itto aicit ioaii	halide;Perflour															
The content of the			F—F		Derivatives;Radical;Radical >> Radical mechanism via ROS formation (indirect);Radical >> Radical mechanism via ROS		9			derivatives;Sul															
## A PARTIE WATER AND			F—F		formation (indirect) >> Geminal Polyhaloalkane Derivatives:SN2:SN2 >> Aculation involving a leaving group																				
Second			F—F		after metabolic activation:SN2 >> Acylation involving a leaving	ng																			
March   Marc			F—F		Derivatives;SN2 >> Nucleophilic substitution at sp3 carbon atom after thiol (glutathione) conjugation;SN2 >> Nucleophili	io																			
13   14   15   15   15   15   15   15   15					substitution at sp3 carbon atom after thiol (glutathione)																				l
Part																									l
Marchane   1997   Marchane			o=s=o				9																		l
Part																									
## Private of the Pri		68259-12-	-1	No alert found No alert found	AN2;AN2 >> Schiff base formation by aldehyde formed after metabolic activation;AN2 >> Schiff base formation by aldehy	r No alert found yde	Not classified	No alert foun	d No alert foun	halide;Perflour															
Part of the control o			r - r		formed after metabolic activation >> Geminal Polyhaloalkane Derivatives:Radical:Radical >> Radical mechanism via ROS					ocarbon				1											
## Company of the com			rr		formation (indirect) >> Geminal Polyhaloalkane					fonic acid;Surfactan															l
Moderate (1877) 1			r—-r		Derivatives; SN2; SN2 >> Acylation involving a leaving group after metabolic activation; SN2 >> Acylation involving a leaving	ng				ts - Anionic															
## PRODUCTION 1973-12   Production   Product			rr		group after metabolic activation >> Geminal Polyhaloalkane Derivatives;SN2 >> Nucleophilic substitution at sp3 carbon																				l
Part					substitution at sp3 carbon atom after thiol (glutathione)	ic	1 1 1 1 1 1 1 1																		l
Holorow Wilson W			rr		conjugation >> Geminal Polyhaloalkane Derivatives		4 4 9 9 9																		l
Holorow Wilson W			r—r																						l
Sign of the control o			HO-5=0				4 4 9 9 9																		l
Sign of the control o	追加 Perfluorodec	335-77-3		No alert found No alert found	AN2:AN2 >> Schiff base formation by aldehyde formed after	No alert found	Not classified	No alert foun	d No alert foun			-													
Ball Publisher St. 1970 20 20 20 20 20 20 20 20 20 20 20 20 20					formed after metabolic activation >> Geminal Polyhaloalkane	p				ocarbon															l
See Professional Part See See See See See See See See See Se					Denvatives;Radical;Radical >> Radical mechanism via ROS formation (indirect);Radical >> Radical mechanism via ROS					fonic															l
ASS Publication 1 79050-15 Communication 1 790			rr		Derivatives:SN2:SN2 >> Aculation involving a leaving group																				l
ADDRIVED TO STATE AND					after metabolic activation; SN2 >> Acylation involving a leaving group after metabolic activation >> Geminal Polyhaloalkane	ng																			l
## Professional Pr					atom after thiol (glutathione) conjugation SN2 >> Nucleophili	ic																			l
decision 2 in the control of the control of the formation of the formation of the control of the formation of the control of t			r—r		substitution at sp3 carbon atom after thiol (glutathione) conjugation >> Geminal Polyhaloalkane Derivatives																				l
decision 2 in the control of the control of the formation of the formation of the control of the formation of the control of t			r				9																		l
decision 2 in the control of the control of the formation of the formation of the control of the formation of the control of t			0===0				9																		l
decision 2 in the control of the control of the formation of the formation of the control of the formation of the control of t	通加 Perflueroup	749786-1	ÓII	No alert found No alert found	AN2:AN2 >> Schiff base formation by aldehyde formed after	r No alert found	Not classified	No alert foun	d No alert foun	Alkyl		-			-										
Service Control Production of Control Production and Control Production of Control Produ	decane	1			metabolic activation; AN2 >> Schiff base formation by aldehy	yde				halide;Perflour															l
Description (2012) 2014 August to recover a ferring great for a control scale and control	sultonic acid				Derivatives;Radical;Radical >> Radical mechanism via ROS					derivatives;Sul fonic															l
SED Printence of Type 25-5 Comment of the Comment of Co			rr		formation (indirect) >> Geminal Polyhaloalkane Derivatives:SN2-SN2 >> Applation involving a leaving group					acid;Surfactan															l
Bit Parliamento 2770-29-5 Analysis found to the found in			1		after metabolic activation; SN2 >> Acylation involving a leaving group after metabolic activation >> Geminal Polyhaloalkane	ng																			l
All ARIA 20 Solf base formation by ableight formed and models processing and proc			r		Derivatives:SN2 >> Nucleophilic substitution at sp3 carbon	in																			l
### Portfunction (P) 79789-39-5   No elect found where the found with the found w					substitution at sp3 carbon atom after thiol (glutathione)																				l
All ARIA 20 Solf base formation by ableight formed and models processing and proc																									l
Secone sufferinc acid  In the sufferince acid  In the suff			-																						l
decene sulforic acid  International section AND 2 Solidif ace formation by adolption Billion acid  International section AND 2 Solidif ace formation by adolption molecular accordance International section AND 2 Solidif ace formation International section AND 2 Solidif ace formation accordance International section AND 2 Solidif ace formation accordance			Į,								***************************************														
Demonstrates (Ratical Related) > Related mechanism us 100 to Members (Indicated) > Related mecha		79780-39	r	No alert found No alert found	ANZ;AN2 >> Schiff base formation by aldehyde formed after metabolic activation;AN2 >> Schiff base formation by aldehy	r No alert found yde	Not classified	No alert foun	d No alert foun	halide;Perflour															
Annual Content			<del></del>		Derivatives;Radical;Radical >> Radical mechanism via ROS		1			derivatives;Sul															
Bib   Perfluorotrid   791563-99-   Contract Found   No elect found   No					formation (indirect);Radical >> Radical mechanism via ROS formation (indirect) >> Geminal Polyhaloalkane					fonic acid;Surfactan															
### Perfluorotrial 791553-89-  accord 8  ### Sulforic acid  ### Sulfor			-		Derivatives; SN2; SN2 >> Acylation involving a leaving group after metabolic activation; SN2 >> Acylation involving a leaving	ng				ts - Anionic				1											
istom after third (plutethinous) conjugation SIZ >> Mucleophilis indications are there the (plutethinous) conjugation SIZ Assistance and with the tile (plutethinous) conjugation SIZ Assistance and the second state of the plutethinous and the second state of the					group after metabolic activation >> Geminal Polyhaloalkane																				
### Destination of the contract of the contrac			1		atom after thiol (glutathione) conjugation; SN2 >> Nucleophili substitution at sp3 carbon atom after thiol (glutathione)	io								1											
ecane 8 sulfonic acid  sulfonic acid  sulfonic acid  sulfonic acid  formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical mechanism (midrest) Radical mechanism via RDS formation (midre					conjugation >> Geminal Polyhaloalkane Derivatives									1											
ecane 8 sulfonic acid  sulfonic acid  sulfonic acid  sulfonic acid  formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical mechanism (midrest) Radical mechanism via RDS formation (midre			<del> </del>																						
ecane 8 sulfonic acid  sulfonic acid  sulfonic acid  sulfonic acid  formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical sulformation (midrest) Radical mechanism via RDS formation (midrest) Radical mechanism (midrest) Radical mechanism via RDS formation (midre																									
Sulforic acid  Sulforic acid  Generate State Sta			9-	No alert found No alert found	AN2;AN2 >> Schiff base formation by aldehyde formed after	No alert found	Not classified	No alert foun	d No alert foun	Alkyl halide:Pfl-:		1													
			=		formed after metabolic activation >> Geminal Polyhaloalkane	9				ocarbon															
	onic delu				formation (indirect)-Padical >> Padical machanism via POS					fonic															
					Derivatives;SN2;SN2 >> Acylation involving a leaving group					ts - Anionic															
			=		group after metabolic activation >> Geminal Polyhaloalkane	''s																			
			1 :		atom after thiol (glutathione) conjugation: SN2 >> Nucleophili	ic																			
					substitution at sp3 carbon atom after thiol (glutathione) conjugation >> Geminal Polyhaloalkane Derivatives		9																		
			=																						
			<b>.</b>				9																		
92			J.																						

名称	CASRN	柳油	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity	in vivo mutagenicity	Organic ji functional	直伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色	遺伝毒性 in vitro マ	in vitro コ メット試験	遺伝毒性 vitro 小核	遺伝毒性 vitro DNA	in vitro HPRT試験	in vitro 不 定期DNA合	in vitro 細 胞形質転換	遺伝毒性 vivo 小核試	遺伝毒性 遺伝 vivo DNA損 in v	伝毒性 遺伝 vivo染色 in vi	毒性 遺伝書 vo 不定 in vivo	性 in viv	vo突然 発	がん性
			nongenotox) alerts by ISS			Classification	(Ames test) alerts by ISS	(Micronucleus alerts by ISS			体異常試動	き ウスリン フォーマ試		試験	鎖切断試験		成	試験	联	傷体	異常試験 期Di 試験	NA合成 メットii ii	式験		
38,10 Ammonium perfurocotan ezulfonate		F F F F H41	No afert found No afert found	ARCAMO >> Soft flace formation by deleytin formed after metabolic activation AVC >> Soft flace formation by deleyting metabolic activation AVC >> Soft flace formation by deleyting formation and the metabolic activation >> Cominal Polyhalosilane Convincion flace and flade a) > Reduce metabolic activation and the soft formation (indirect) >> Cominal Polyhalosilane convincion (indirect) >> Cominal Polyhalosilane Convention (indirect) >> Cominal Polyhalosilane Convention (indirect) >> Cominal Polyhalosilane Convention >> Cominal Polyhalosilane >> Cominal Polyhalosilane Convention >> Cominal Polyhalosilane >> Cominal Polyhalosilane Convention >> Cominal Po	No aftert found	Not classified	No alert found	No alert found	Alkyl halide/Perflour ocarbon derivatives;Sul fonic acid:Surfactan ts - Anionic												***************************************			***************************************	
施加 Perfluoronoma nesulfonate	174511-07-4		No afert found No afert found	ARZAM >> Soft Hase formation by adelyyde formed after metabolic activation AVZ >> Soft has formation by adelyyde formed after metabolic activation AVZ >> Soft has formation by adelynformed after metabolic activation >> General Polyhalashaes Defended and the second of the avgreen and a soft has a	«	Not classified	No alert found	No alert found	Alkol halide:Perflour ocarbon derivatives:Sul fonic acid:Surfactan ts - Anionic																
IH.IH- 4 Perfluoropropy Iamine	122-03-7	F F F	No afert found No afert found	No alert found	No alert found	Nitrogen Mustards Reactive Functional Groups	No alert found	No alert found	Aliphatic amine, primary,Alkyl halide,Amine, primary,Perflo urocarbon derivatives																
1H.IH- S Heptafluorobut ylamine	874-99-2	FFF	No afert found No afert found	No afert found	No alert found	Nitrogen Mustards Reactive Functional Groups	No alert found	No alert found	Aliphatic amine, primary-Alkyl halide:Amine, primary-Perflo urocarbon derivatives															***************************************	
1H.IH- 4 Perfluorohepty Iamine	123-49-4		No afert found No afert found	No afert found	No alert found	Nitrogen Mustards Resolve Functional Groups	No alert found	No alert found	Aliphatic amine, primary-Alkyl halide,Amine, primary-Perflo urocarbon derivatives															***************************************	
IH.IH- Perfluoroctyl amine	907-29-9	F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No afert found	No afert found	Nitrogen Mustards Reactive Functional Groups	No alert found	No alert found	Aliphatic amine, primary-Alkyl halide:Amine, primary-Perflo urocarbon derivatives																
IH.IH- Perfluoronoryl amine	355-47-5	F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No alert found	No alert found	Nitrogen Mustards Reactive Functional Groups	No alert found	No alert found	Aliphatic amine, primary,Alkyl halide,Amine, primary,Perflo urocarbon derivatives				***************************************												

		標准	Carcinogenicit   DNA alerts for AMES, CA and MNT by OASIS y (genotox and inorgenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus alerts by ISS	Organic functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試明	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小枝 xitk 類	表毒性 in o DNA HF 可断試験	vitro ir PRT試験 5	vitro 不 期DNA合	n vitro 細 造伝道 也形質転換 vivo 小 試験	i性 遺伝毒 核試 vivo DN 傷	性 遺伝毒性 IA損 in vivo 染色 体異常試験	遺伝毒性 in vivo 不定 期DNA合成 試験	遺伝毒性 in vivo コ メット試験	n vivo突然 変異	<b>분がん性</b>
IH.IH- Perfluorohexyl amine	355-34-0	F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No sfert found	No alert found	Nitrogen Mustards Reactive Functional Groups	No alert foun	d No alert found	Aliphatic amine, primary,Alkyl halide;Amine, primary,Perflo urrocarbon derivatives															
1H,1H- Perfluoropenty lamine	355-27-1	FFF	No afert found No afert found	No alert found	No alert found	Nitrogen Mustards Reactive Functional Groups			amine, primaryAlkyl halide:Amine, primaryPerflo urocarbon derivatives										***************************************					
1H,1H,2H- Perfluorocyclo pentane		F	(Poly) No abert found Histographic Ocyclobranes (horsements). In abert found Histographic Ocyclobranes (horsements). In abert for nongenototic convinuements)	No stert found	No alert found	Type Compounds			ane.Perflouroc arbon derivatives	TAISSS, TAISST, TABB,TAI00, WP2	human lymphocyt s (±S9) Positive	B												
Perfluoro-1,2- dimethylcycloh exame	306-98-9	F F F F	(Poly) No abort found Halogenated Cycloidames Cycloidames Structural abort for nongenototic programming professor for a reningenitry F	No aler't found	No afert found	Not classified	No alert foun	d No alert found	Alkyl halide:Cycloalk ane:Perflouroc arbon derivatives	TAISSS, TAISS), TARST TARR TAIO. WPZowrA (±S9) Negative	Chinise Hamster Lung Cells (士 S9)Negativ e								***************************************					
Perfluoro-1,3- dimethylcycloh exame		F F F F	(Poly) No siert found Hologensted Cyclodianes (Polysochura Stronburs) (Polysoc	No alert found	No afert found			d No alert found	halide,Cycloalk ane,Perflourod arbon derivatives	TA1535,TA1537,TA98,TA100,WP2 (± \$9)Negative	CHO (± S9)Negativ e	,												
Perfluoror I 2- dimethylcyclob utane		F F F	(Poly) No alert found Halogenated Cyclodames (Notementon). No alert for monogenotaic carcinogenicity	No alert found	No afert found			d No alert found	halide, Cycloalk ane, Perflouroc arbon derivatives															
Perfluorometh ylcyclohexane	355-02-2	F F F F	(Poly) No alert found Habigement of Optional American Management of Structural alert for representation or continue and the C	No afert found	No afert found	Not classified	No alert foun	d No alert found	Alkyl halide:Cycloalk ane:Perflouroc arbon derivatives						***************************************				***************************************					

名称 CASRN (	Carcinogenicit E y (genotox and	ONA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagenicity Classification (Ames test) alerts by ISS	in vivo mutagenicity	Organic ji functional	直伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色	遺伝毒性 in vitro マ	in vitro コ メット試験	遺伝毒性 vitro 小核	遺伝毒性 vitro DNA	in vitro HPRT試験	in vitro 不 定期DNA合	in vitro 細 道 胞形質転換 v	直伝毒性 遺 ivo 小核試 vi	伝毒性 遺伝毒 to DNA損 in vivo	生 遺伝毒性 染色 in vivo 不足	遺伝毒性 in vivo コ	in vivo突然 発がん性 変異
Perfluorometh 1805-22-7	nongenotox) alerts by ISS	lo alert found	No alert found	No alert found	Ulassification (Ames test) alerts by ISS Not classified No alert found	(Micronucleus) alerts by ISS No alert found	groups		体異常試験	ワスリン フォーマ試		試験	頭切断試験		NK.	asset - 是	* 19	体異常	減缺 期DNA合成 試験	メット試験	
Perfusormenth 1805-22-7 ylsyslopentane	(Pay) Holigogranded Oyolosikanses (Nemerotion) (Nemerotio	o den'i locala	No. and L. Young	Too and a sound	Not classified No alert found		Any halide:Cycloalk ane:Perflourou arbon derivatives										***************************************				
Perfusor- 1.13-7-10-5 1.13-10-10-10-10-10-10-10-10-10-10-10-10-10-	(Poy)  (P	lo alert found	No alert found	No allert found	Not classified No alert found		Alkyl halide:Cycloalk ane:Perflouroc arbon derivatives														
2(Perfluoro 2- 90899-87-4 propy/lethanol	No slert found II	is alert found	No alert found	No allert found	Not classified No alert found		Alcohol:Alkane, branched with tertiary carbom:Alkyl halide:Perflour ocarbon derivatives														
2 - 355-22-6 Perfluorepreys I-2-propanol	F F F F F CH <sub>3</sub>	o alert found	No alert found	No alert found	Alphar and No alert found betar Haloether Reactive Functional Groups		Alcohol:Alkane, branched with tertiary carbon:Alkyl halide;Perflour ocarbon derivatives														
3/Perfluoro - 2 - 239463-96-8 buty/lpropand	No alert found if		No afert found	No alert found	Not classified No alert found		branched with tertiary carbon.Allvyl halide.Perflour ocarbon derivatives														
3 - 28819-73-6 (Perfluoroispr) opyfaropanel	No slert found 8	lo slert found	No alert found	No alert found	Not classified No alert found		branched with tertiary carbon:Alkyl halide/Perflour ocarbon derivatives										***************************************				
Headilurer 2- methyl-2- propanol	F F F F F F F F F F F F F F F F F F F	lo alert found	No alert found	No alert found	Alpha- and No alert found Not alert found Not alert found Company of the Not alert found Groups		Alcohol/Alkane, branched with tertiany carbon:Alkyl halide/Perflour ocarbon derivatives														

名称(	CASRN	根金	Carcinogenicit DNA alerts for AMES, CA and N (genotox and nongenotox) alerts by ISS	MNT by OASIS DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus	Organic il functional groups	提供寄性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ ウスリン	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	直伝毒性 in itro DNA H 貞切断試験	vitro in PRT試験 定成	vitro 不 in 期DNA合 胞 試	vitro 細 遺伝毒 形質転換 vivo 小 験	性 遺伝毒性 ki試 vivo DNA排 傷	遺伝毒性 遺 lin vivo 染色 in 体異常試験 挺	遺伝毒性 遺伝 n vivo 不定 in v IJDNA合成 メッ	a毒性 in v ivoコ 変! ト試験	ivo突然 発 異	がん性
Nonafluoro- tert-butanol	2378-02-1	F GH F	alerte by ISS  No alert found  No alert found	No stert found	No afert found	Alpha- and beta- Haloether Reactive Functional Groups	alerts by ISS No alert found	No alert found	Alcohol:Alkane, branched with tertiary carbom/Alkyl halide/Perflour ocarbon derivatives			フォーマ試								ii ii	it the second se			
2-(4H- Perfluorobuty() -2-propanol	2673-15-6	HJC CH <sub>3</sub>	No alert found No alert found	No afert found	AgilationAgilation >> P659 Mediated Activation Agil Halder,Agilation >> P650 Mediated Activation to Agyl Haldes >> 1.1—Disalositanes et Agil Haldes >> 1.1—Disalositanes	Alpha- and tion beta- Haloether Reactive Functional Groups	No alert found	No alert found	Alcohol/Alkane, branched with tertiary carbon/Alkyl halide/Perflour ocarbon derivatives															
Methyl 3 heptafluoropro pylketone	355-17-9	F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No slert found	No afert found	Reactive Ketone Reactive Functional Groups	No alert found	No alert found	Alkyl halide,Ketone; Perflourocarbo n derivatives															
Methyl perfluoropentyl ketone	2708-07-8	F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No afert found	No afert found	Reactive Ketone Reactive Functional Groups	No alert found		Alkyl halide:Ketone; Perflourocarbo n derivatives															
Methyl 4H - 9 perfluorebutyl ketone	93449-49-1	F F F F	No alert found No alert found	No afert found	Acylation-Acylation >> PEID Mediated Activation Acyl Halides-Acylation - PEID Mediated Activation Acyl Halides >> 1,1-Ditalcallares	Groups			halide:Ketone; Perflourocarbo n derivatives															
(Perfluorobutyl )-2-butanone		F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No stert found	No sfert found				Alkyl halide:Ketone; Perflourocarbo n derivatives															
Methyl 3 perfluoroethyl ketone	374-41-4	F F F	No alert found No alert found	No slert found	No afert found	Reactive Ketone Reactive Functional Groups	No alert found	No alert found	Alkyl halide:Ketone; Perflourocarbo n derivatives										***************************************					

		標准	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus alerts by ISS	Organic functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ サスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 xitk 類以	毒性 in vitr DNA HPRT	o in vitr 試験 定期E 成	o 不 in vitro DNA合 胞形質 試験	a細 遺伝毒性 転換 vivo 小核調 験	遺伝毒性 遺伝 t vivo DNA損 in viv 傷 体異	毒性 遺伝毒性 in vivo 不 常試験 期DNA合 試験	遺伝毒性 in vivo コ 式 メット試験	in vivo突然 変異	発がん性
Ethyl perfluoropenta nyl ketone	383177-55-7	F F F F	No alert found No alert found	No alert found	No alert found	Reactive Ketone Reactive Functional Groups	No alert found	No alert found	Alkyl halide:Ketone; Perflourocarbo n derivatives														
Perfluoropropy I trifluorovinyl ether	1623-05-8	Öth	Structural later for a later found later for a later f	No alert found	No alert found	Alpha- and beta- Halcether Reactive Functional Groups	No alert found		Alkene moiety-Alkenyl halide-Alkyl halide-Perflour ocarbon derivatives Un saturated perhalogenate d carbon derivatives	TA97.TA98. TA100.TA1535. WP2 overAL±S9Megative//Positive(NIHS)	human lymphocyte (± (59)Negativ e	1											
Perfluorohept- 1-ene	355-63-5	F F F F	Structural alart for a fact found alart for for found factors for flavors for flavors for flavors for flavors for flavors for flavors flavors flavors for flavors flav	No alert found	No alert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert found		Alkene moiety-Alkenyl halide-Alkyl halide-Perflour ocarbon derivatives:Un saturated perhalogenate d carbon derivatives														
Perfluorohex- 1-ene	755-25-9	F F F F	Structural all after found alert for a fact for found alert for found alert for found alert for found for fo	No aler't found	No alert found	Halogenated Linear Alighatic Hydrocarbone Type Compounds	No alert found		Alkene moiety-Alkenyl halide-Alkyl halide-Perflour ocarbon derivatives;Un saturated perhalogenate d carbon derivatives														
Perfluorohex- 1-ene	1767-94-8	F F F	Structural alart for magnetic found alart for magnetic for magnetic for found found found found found found found found found fou	No alert found	Angelsion-Angelson >> P650 Mediated Activation Angl HalidesAngelston >> P650 Mediated Activated to Angl Halides >> 1,1-Dhaloshanes	to Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert found		Alkene moiety-Alkenyl halide-Alkyl halide-Perflour ocarbon derivatives:Un saturated perhalogenate d carbon derivatives														
Perfluoroct- 1-ene		F F F F F F F F F F F F F F F F F F F	Structural No alert found alert for alert for found alert for found alert for found alert found for found found found found found found for found fo	No alert found	No alert found	Linear Alphatic Hydrocarbone Type Compounds			moiety/Alkenyl halide:Alkyl halide:Perflour ocarbon derivatives:Un saturated perhalogenate d carbon derivatives														
Perfluoro-1- decene	35328-43-9		Structural No alert found and the found	No alert found	No slort found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert found	No alert found	Alkene moiety:Alkenyl halide,Alkyl halide,Perflour ocarbon derivatives;Un saturated perhalogenate d carbon derivatives						***************************************								

名称 CASRN	nongenotox) alerts by ISS					in vitro mutagenicity (Ames test) alerts by ISS			遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ joスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 v 試験	遺伝毒性 逆 vivo 小核試 vi 験 係	I伝毒性 遺伝器 vo DNA損 in vivo 体異常	性 遺伝毒性 染色 in vivo 不知 試験 期DNA合成 試験	遺伝毒性 E in vivo コ t メット試験	in vivo突然 発がん性 変異
2H-Perfluoro- 920-68-1 2-progenol	No alert found	No afert found	No alert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	No alert found	Alcohol:Alkane, branched with secondary carbon:Alkyl halide:Perflour ocarbon derivatives	TA 1853, TA 1537, TA 1538, TA97, TA88, TA 100, WPZ UvrA (± S9)Negative													
1H, IH-3H- Perfluorobutan ol	No alert found I		No afert found		Alpha- and beta- Haloether Reactive Functional Groups	No alert found		Alcohol:Alkane, branched with secondary carbon:Alkyl halide;Perflour ocarbon derivatives				100 July 100										
2-fade- Ith IR-3.3-3.5-3.5- - IR-3.3-3.5- - IR-3.3-3-3-1- - IR-3.3-3-1- - IR-3.3-3-1	F Alphatic hadgens (Genetal)Stru (Ferritary Control of Ferritary Control	Relacial Relacial >> ROS (formation ether CSSH depletion indirect-Relacial >> ROS formation ether CSSH depletion indirect-Relacial >> ROS formation ether CSH depletion indirect-Ros >> Hasbacobius SSIE-RSS >> Allystation by proceed metabolicality formed ether £2 reaction RSS >> Hasbacobius depletion and defaulty formed ether £2 reaction >> Hasbacobius defaulty formed ether £2	Radical Related 32 NDS formation after CBH depletion (indirect) Pfiscal 2- NDS formation after CBH depletion (indirect) 23 Miscalcohold: SBL282 32 Alkylation by apoide metabolizatily frome dare CET reaction(322) 22 Alkylation by embedding the control of the CET reaction 22 Alkylation by operation metabolizatily formed after EZ reaction 22 Habilotocholo services and the control of the CET reaction 22 Habilotocholo (indirect) 22 Pfiscalcoholo (indirect) 23 Pfiscalcoholo (indirect) 24 Pfiscalcoholo (indirect) 24 24 Pfiscalcoholo (indi	SN2-SN2 >> SN2 et an ep3 Carbon atom SN2 >> SN2 at an ep3 Carbon atom >> Aliphatic halldes	Alpha- and beta- Haloether Reactive Functional Groups	Aliphatic halogens	halogen	Alcohol;Alkane, branched with secondary carbon;Alkyl halide;Perflour ocarbon derivatives				***************************************										
1- Perfluorogropy lethanol	No alert found I		No slert found		beta- Haloether Reactive Functional Groups	No alert found		branched with secondary carbon.Alkyl halide.Perflour ocarbon derivatives														
1 - 374-40-3 Pentafluoreth ylethanol	No alert found I		No afert found	No alert found	beta- Haloether Reactive Functional Groups	No alert found		branched with secondary carbon/Alkyl halide/Perflour ocarbon derivatives												***************************************		
IN.II.II.1828- 914637-05-1 Perfusor-2- heptanol	F No alert found I F F F F F F F F H COH		No slert found		Haloether Reactive Functional Groups	No alert found		secondary carbon/Alkyl halide:Perflour ocarbon derivatives														
Operfluorobusty I 9430-53-4 bethere	No alert found II	No alert found	No afert found	No alert found	Halogenated Linear Afghatic Hydrocarbone Type Compounds	No alert found		Alkene moiety,Alkyl halide,Perflour ocarbon derivatives	TAISS5, TAISS7, TAS8, TAI00, WP2 (±S9) Negative	Chinese hamster Overy (CHO)(± S9) Negative	mouse lymphoma L5178Y cells(±S9) Negative											

名称 CASRN	構造 Carcinogenicit y (genotox and nongenotox) alertz by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus)	Organic functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ サスリン	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 in 定期DNA合 ii 成 ii	n vitro 細 遺 也形質転換 viv 試験 験	伝毒性 遺伝 vo 小核試 vivo i	毒性 遺伝毒性 DNA損 in vivo 染 体異常試	遺伝毒性 色 in vivo 不定 験 期DNA合成	遺伝毒性 in vivo コ メット試験	n vivo突然 発がん性 変異
1.6- Diviruple of floor obessane	alorts by ISS  No alert found  NG	No afert found	No alert found	No alert found	Alphatics by ISS Halogenated Linear Alphatic Hydrocarbone Type Compounds	No alert found	Alkene moiety,Alkyl halide;Perflour ocarbon derivatives	TA1535, TA1537,TA98,TA100, TA102, WP2uvrA (±S0) Negative	peripheral human lymphocyte s (± S9)Negativ e	フォーマ試 mouse lymphoma L5178Y (±S9) Negative									試験		
IH.1H2H- Perfluoro-1- decene	No alert found	No alert found	No alert found	No alert found	Halogenated No alert found Linear Aliphatic Hydrocarbone Type Compounds		Alkene moiety:Alkyl halide;Perflour ocarbon derivatives														
1.4- Divinylenthor obutane	No alert found	No alert found	No alert found	No alert found	Halogenated No alert found Linear Alphatic Mydrocurbone Compounds		Alkene moiety-Alkyl halide:Perflour ocarbon denivatives														
(Perfluenhept, 25431-45-2 yilethene	No alert found	No alert found	No alert found	No alert found	Halogenated No alert found Linear Alphatic Hydrocombone Type Compounds		Alkene moiety.Alkyl halide.Perflour ocarbon derivatives														
I.9- Divirylperfluor ooctane	No slert found	No alert found	No alert found	No alert found	Halogenated No alert found Linear Algibatic Hydrocarbone Type Compounds	No alert found	Alkene moiety-Alkyl halide:Perflour ocarbon derivatives							***************************************							
Hexafluoroisop 13171-18-1 ropyl methyl ether	No alert found	No alert found	No alort found	No alert found	Alpha- and beta- ltaloether Reactive Functional Groups		Alkane, branched with secondary carbon;Alkyl halide;Ether moiety;Perflou rocarbon derivatives	TAISS, TAI00; all common straines used in Ames assay (±S9) Negative													
(Sth. Perfluoropopy) (O.H.H.+ perfluoroethy) ether	H <sub>3</sub> C F F No alert found	No alert found	No alert found	No slert found	Alphar and beta beta Halosther Reactive Functional Groups	No alert found	Alkane, branched with secondary carbon;Alkyl												4		
	F F F				Groups		moiety:Perflou rocarbon derivatives					***************************************					***************************************		***************************************		

Married   Marr	名称 CASRN (	概章 Carcinogenicit y (genotox and	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary	in vitro mutagenicity	in vivo mutagenicity	Organic X functional	直伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色	遺伝毒性 in vitro マ	in vitro コ メット試験	遺伝毒性 vitro 小核	遺伝毒性 vitro DNA 値対形になる	in vitro HPRT試験	in vitro 不 定期DNA合	in vitro 細 胞形質転換	遺伝毒性 逆	I伝毒性 遺伝 vo DNA損 in viv	等性 遺伝毒性 o 染色 in vivo 不	遺伝毒性 定 in vivo コ	in vivo突然 発がん性 変異
The state of the s	Ethyl 2H- perfluoropropyl ether	inorgenotoxi) alerts by ISS No alert found	No alert found	No alert found	No alert found	Alpha- and beta- Haloether Reactive	(Ames test) alerts by ISS No alert found	No alert found	Alkane, branched with secondary carbon;Alkyl halide;Ether moiety;Perflou rocarbon		体異常試驗	サスリンフォーマ試		ELEX.	類切断試験		IX.	ECON !	ex 9		K試験 期DNA台 試験	成メット試験	
Notice of the control	2H- perfluoropropyl	No alert found	No alert found	No alert found	No alert found	beta- Haloether	No alert found		branched with secondary carbon;Alkyl halide:Ether														
Production   Not below   Not	NA NA 2000 28-8	FF	No. of the Lond						rocarbon derivatives														
Production for the filtering of the filt	Perfluorodgro pyl ether	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF				betar Haloether Reactive Functional Groups			branched with secondary carbon, Alley! halide, Ether moiety, Perflou rocarbon derivatives														
Coloromothyl 7509-29-9   No dert found No de	Sevoflurane 28523-96-6	No alert found	No alert found	No alert found	SNI_SNI_> Carbonium los FormationSNI >> Carbonium for remation >> Alpha halo ethers (including alpha halo thicethers)	Haloether Reactive Functional	No alert found		secondary carbon,Alkyl halide,Ether moiety,Perflou rocarbon derivatives														
Vicitory Indiana  F F F F F F F F F F F F F F F F F F F	uorohexyl)ethy	F——F	No alert found	No slert found						AISSS TAISS7, TASSLTAIGO, TAIG2 ±59) Negative	Chinese hamster lung fibroblasts( V79) (± S9) Negative	mouse lymphoma L5178Y cells (±S9) Negative											
Trinestypidi) 63734-52-3 F No alert found No alert	Dichtoromethyl 73809-38-6 ((Jarkhurchis ylettyylailare	F - F F F G - G - G - G - G - G - G - G	No afert found	No alert found					ocarbon derivatives;Sila ne														
	Trimethylally 68734-62-3 performation and conditionate	No alert found	No alert found	No alert found	No alert found	Not classified	No alert found		derivatives, dila									A					4

	CASRN	標准	Carcinogenicit   DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary Classification (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus) alerts by ISS	Organic functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試影	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験 鏡切断部	in vitro HPRT試験 験	in vitro 不 定期DNA合 成	in vitro 細 遺伝道 胞形質転換 vivo 小 試験 験	性 遺伝毒性 ii 核試 vivo DNA損 ii 傷	遺伝毒性 遺伝 in vivo 染色 in viv 体異常試験 期DN 試験	i性 遺伝毒性 不定 in vivo コ A合成 メット試影	in vivo突然 変異	発がん性
2- (Perfluorooctyl )ethyldimethyl chlorosilane	74612-30-9	F	No alert found No alert found	No alert found	No slort found	Not classified No alert found	d No alert found	Alkyl halide;Perflour ocarbon derivatives;Sila ne													
(Heptafluoropr opyltrimethyls ilane	3834-42-2	F F F F H <sub>2</sub> C S - CH <sub>3</sub>	No alert found No alert found	No sfert found	No alert found	Not classified No alert foun		ocarbon derivatives; Sila ne													
Perfluoroisobu tyric acid		HO F F	No alert found No alert found	No alert found	No alert found	Net dassified No alert four		tertiary carbon/Alkyl halide;Carboxyl ic acid/Perflouroc arbon derivatives													
3-(Perfluoro- 2- butyl)propanoi c acid		F F F F OH	No alert found No alert found	No afert found	No alert found	Not classified No alert fours		Alkane, branched with tertiary carbon/Alkyl halide;Carboxyl ic acid/Perflouroc arbon derivatives													
Perfluoro-3,7- dimethyloctan oic acid			No silent found No silent found	No sfert found	No alert found	beta** Haldecher Phasefore Phasefore Consider Consider		branched with tertiary carbon:Alkyl halide:Carboxyl ic acid:Perflouroc arbon derivatives													
Perfluoro-2- propyl/soetic acid	17327-33-2	F F F F F F F F F F F F F F F F F F F	No silent found No silent found	No slent found	No alert found	Not classified No alert found		terbary carbon/Alkyl halide;Carboxyl ic acid:Perflouroc arbon derivatives													
4.4- bis(Trifluorom ethyl)-4- fluoropropanoi c acid	243139-62-0	F F O	No alert found No alert found	No afert found	No afert found	Not classified No alert found		Alkane. branched with tertiary carbon/Alkyl halide:Carboxyl ic acid:Perflouroc arbon derivatives													

名称 CASRN	<b>標準</b> Carcinogenicit	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic	in vitro	in vivo	Organic	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性	遺伝毒性	in vitro ⊐	遺伝毒性	遺伝毒性	in vitro	in vitro 不	in vitro 細	遺伝毒性	遺伝毒性 道	医毒性 遺	伝毒性 遺	伝毒性 in	vivo突然 発がん性
	y (genotox and nongenotox) alerts by ISS				Oncologic Primary Classification	mutagenicity (Ames test) alerts by ISS	mutagenicity (Micronucleus) alerts by ISS	functional groups	遺伝毒性 vitro 復帰突然変異試験	vitro 染色 体異常試	in vitro マ 後 ウスリン フォーマ試	メット試験	vitro 小核 試験	vitro DNA 鎖切断試験	HPRTEUM	定期DNA台成	一胞形質転換 試験	vivo 小核試 験	vivo DNA損 in 傷 体	vivo 梁色 in b 異常試験 期 試	rvivo 不定 in IDNA合成 メ 抗験	vivoコ g ット試験	ж,
1H.1H.3H- 6401-02-1 Perfluoropropsy I triflate	F bennyl etc. of sulphonic or sulphonic or plangharian	at sp3-carbon atom >> Sulfonates and Sulfates	SIZSB2 > Allyation, rusicopalities abstitution at a 37-carbon automSI2 > Allyation, rusicopalities substitution at ag3-carbon atom >> Sulforates and Sulfates	Acylation/cylation >> P450 Mediated Activation Acyl Haldeckyologist >> P450 Mediated Activation (Acyl Haldeckyologist >> P450 Mediated Activation (Acyl Haldeck >> > 1.1-Dhalcolfianes	Not classified	Alkyl (C<5) or benzyl ester of sulphonic or phosphonic	Alkyl (C<5) or benzyl ester o sulphonic or phosphonic	Alkyl halide;Perflour															
3H.3H- 6401-00-9 Perfluoropropy I triflate	F Allyl (OCS) or bencyl ester of suphrace or F F F Section 1 Secti	at sp3-carbon atom >> Sulfonates and Sulfates	SM2-SM2 >> Abylation, rupleophilic substitution at gp3-ranhon is stomSM2 >> Abylation, rupleophilic substitution at ap3-ranhon at sm3 SM2 forustes and Sulfates	No allert found	1 1	benzyl ester of sulphonic or phosphonic	benzyl ester o sulphonic or phosphonic	Alkyl halide/Perflour ocarbon derivatives:Sul fonate ester															
2.2.2- Trifluorcestryl perfluordodaten coefforate	F Alay (0 (5) or bencyl ester of bencyl ester of bencyl ester of person of the control of the co		No alert found	No sfort found		benzyl ester of sulphonic or phosphonic	benzyl ester o sulphonic or phosphonic	Alkyl halide/Perflour ocarbon derivatives:Sul fonate ester															
IN.1H- Hepathaurobush yl triflate	F Aby (CCS) or beny (cCS) or sulphons or phosphons or phosphons or phosphons or ophosphons or ophosp	carbon atom:SN2 >> Alkylation, nucleophilic substitution at sp3-carbon atom >> Sulfonates and Sulfates	- IBE_SBY_> Abylation, nucleoplinic addititution at a3*-carbon at mortSBY > Abylation, nucleoplinic addititution at sp3*-carbon atom >> Sulforates and Sulfates	No alert found	Not classified	benzyl ester of sulphonic or	benzyl ester o sulphonic or	Alkyl halide:Perflour ocarbon derivatives;Sul fonate ester															
IN.IH- 83349-32-9 Perfluorobityl perfluorobitan exulforate	F Abyl (CS) or benyl etail of subhosio or subhosi or subhosio or subhosi		No afert found	No alert found	Not classified	Alkyl (C<5) or benzyl ester of sulphonic or phosphonic acid	Alkyl (C<5) or benzyl ester o sulphonic or phosphonic acid	Alkyl halide/Perflour ocarbon derivatives:Sul fonate ester								\$							
38/20 1.12.22 - S54-97-0 pentaflacroeth areautionyifluo ride	F No alert found  O S O F F F F F		AND-AND 2) Soliff base formation by allohyde formed after metabolic activation AID 2) Soliff base formation by allohyde formed after metabolic activation AID 2) Soliff base (minimal polyhadakare) formation (particular after metabolic activation by Central Polyhadakare) Entral Commation (General Dolghadakare) Entral tenderal polyhadakare (privation-SIGMA2) 2- Naplation involvata a leaving group Derivatives-SIGMA2) 2- Naplation involvata a leaving group Derivatives-SIGMA2 2- Naplation involvation at a Gardenia and Central Commanda and Central Commanda and Central Centra		Not classified			halide/Perflour ocarbon derivatives;Sul fonyl halide	Positive(NHS)														
Perfluorebutan 375-72-4 easifory) fluoride	F No alert found  O—S—O  F——————————————————————————————	No afert found	SN2SN2 >> SN2 attack on sulfur atom;SN2 >> SN2 attack on sulfur atom;SN2 >> Sn2 attack on sulfur atom >> Sulfonyl Halides	No alert found	Not classified	No alert found	No alert found	Alkyl halide/Perflour V ocarbon derivatives;Sul fonyl halide	TAISSS TAISS)TAGETAIGO WPZuwrA/pKMIDI (±S9) Negative	human lymphocyt s (±S9) Negative	B												

名称	CASRN	桐油	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox)	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test)	in vivo mutagenicity (Micronucleus)	Organic functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ き ウスリン	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 遺( 胞形質転換 試験 験	a毒性 遺伝 小核試 vivo 傷	毒性 DNA損 in vivo 染性 体異常試験	遺伝毒性 in vivo 不定 後期DNA合成	遺伝毒性 in vivo コ メット試験	in vivo突然 変異	発がん性
Perfluorooctan	307-35-7	-	nongenotox) alerts by ISS  No alert found No alert found	SN2-SN2 >> SN2 attack on sulfur atom:SN2 >> SN2 wheek on	No alert found	Not classified	alerts by ISS No alert found	alerts by ISS	Alkyl	TA98,TA100 (±S9) Negative		フォーマ試		-							試験			
esulfonyl fluoride	307-33-7	0 = 0 = 0 F F F F	NO are t tourio No are t tourio	SN2:SN2 >> SN2 attack on sulfur atom:SN2 >> SN2 attack on sulfur atom >> Sulfornyl Halides	NO BIEFT FORM	Not classified	No alert Touria	No alert found	Alkyl halide;Perflour ocarbon derivatives;Sul fonyl halide	1A30, 1A100 (±35) Negauve														
		F F F																						
Perfluoro-1-	2001.04.0	F—F	No alert found No alert found			Not classified	N																	
butanesulfonyl chloride	2881-04-0	0=s=0 FF	NO SIERT TOURD NO SIERT TOURD	SN2-SN2 >> SN2 attack on sulfur atom:SN2 >> SN2 attack on sulfur atom >> Sulfornyl Halides	No siert tound	Not classmed	No alert found		halide;Perflour ocarbon derivatives;Sul fonyl halide															
		F F F										***************************************												
Perfluoro-1- octanesulfonyl chloride	423-60-9	Ė J o=ij=o	No alert found No alert found	SN2:SN2 >> SN2 attack on sulfur atom;SN2 >> SN2 attack on sulfur atom >> Sulfonyl Halides	No alert found	Not classified	No alert found	No alert found	Alkyl halide;Perflour ocarbon															
		F F F							ocarbon derivatives;Sul fonyl halide			***************************************												
		F—F																						
1H,1H,8H,8H- Perfluorooctan e-1,8-diol	90177-96-1	HO—F	No alert found	No alert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	No alert found	Alcohol;Alkyl halide;Dihydrox yl derivatives;Per flourocarbon derivatives						1									
		HO F F F F F F F F F F F F F F F F F F F	•									***************************************												
Hexafluorosmy lene glycol	376-90-9	₩— Д	No alert found No alert found	No alert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	No alert found	Alcohol:Alkyl halide;Dihydrox yl derivatives;Per flourocarbon derivatives															
		F										***************************************												
1H,1H,10H,10H - Perfluorodeca ne=1,10-diol	754-96-1	ю	No alert found No alert found	No alert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	No alert found	Alcohol;Alkyl halide;Dihydrox yl derivatives;Per flourocarbon		***************************************													
						Groups			derivatives															
1H,1H,6H,6H- Perfluoro-1,6- hexanediol	355-74-8		No alert found No alert found	No alert found	No alert found	Alpha- and beta- Haloether Reactive	No alert found	No alert found	halide:Dihydrox															
HEXABIPEDIDI		HO F F F F F F F F F F F F F F F F F F F				Haloether Reactive Functional Groups			yl derivatives;Per flourocarbon derivatives															
		a																						

名称	CASRN	標准	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test)	in vivo mutagenicity (Micronucleus	Organic ji functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試証	遺伝毒性 in vitro マ 険 ウスリン	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 並 胞形質転換 v 試験	直伝毒性 i ivo 小核試 v 余	責伝毒性 遺伝 rivo DNA損 in vit 編 体型	毒性 遺伝毒f vo 染色 in vivo 常試験 期DNA	生 遺伝毒性 F定 in vivo コ S成 メット試験	in vivo突然 変異	発がん性
1H-Perfluoro- 1,1- propanediol	422-63-9	F 	nongenous/ salert by ISS No alert found No alert found	No alert found	No alert found	Alpha- and beta- Haloether Reactive	alerts by ISS No alert foun	alerts by ISS	Alcohol;Alkyl halide;Dihydrox yl derivatives;Per flourocarbon		> <max< th=""><th>フォーマ試</th><th>-</th><th></th><th>-A SWIBOUT</th><th></th><th></th><th></th><th></th><th>-</th><th>試験</th><th></th><th></th><th></th></max<>	フォーマ試	-		-A SWIBOUT					-	試験			
		F F HO OH				Functional Groups			derivatives															
Perfluoroctan esulfonamide	1 754-91-6	F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No slert found	No alert found	Not classified	No alert foun	d No alert found	Alkyl halide/Perflour ocarbon derivatives;Sul fonamide															
N-	4151-50-2	0=s=0 Nų	No alert found No alert found	No slert found	No alert found	Not classified	No alert foun	d No alert found	Alkyl															
Ethylperfluoro octane sulfonamide		r r r r r r r r r r r r r r r r r r r							halide/Perflour ocarbon derivatives:Sul fonamide															
N- Methylperfluor ooctanesulfona mide	31506-32-8	F F F F F F F F F F F F F F F F F F F	No afert found No afert found	No slert found	No alert found	Not classified	No alert foun	d No alert found	Alkyl halide/Perflour ocarbon derivatives;Sul fonamide															
Perfluorohexan esulfonamide		F	No afert found No afert found	No slert found	No alert found	Not classified	No alert foun	d No alert found	Alloyi halide:Perflour ocarbon derivatives:Sul fonamide															
Tetrafluoro-2- (perfluoropent oxy)propan-1- ol	78693-85-3	F F F F F F F F F F F F F F F F F F F	No afert found No afert found	No slert found	SNISNI >> Confereium lon Formation(SNI) >> Confereium lon Formation(SNI) >> Confereium lon Formation(SNI) >> Confereium long long long long long long long long	betar Haloether Reactive Functional Groups		acceptor	Alcohol-Akyl halide,Ether moiety,Perflou rocarbon derivatives															
IH, IH- Perfluoro- 3.6.9- trioxadecan- I-ol	147492-57-7		No alert found No alert found	No alert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert foun	d H-acceptor- path3-H- acceptor	Alcohol:Afkyl halide;Ether moiety:Perflou rocarbon derivatives															
		un				-						1	1											

名称	CASRN	標達	Carcinogenicit y (genotox and nongenotox) alerts by ISS	A alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test)	in vivo mutagenicity (Micronucleus	Organic functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ st ウスリン	in vitro コ メット試験	遺伝毒性 遺 vitro 小核 vit 試験 鎖	伝毒性 in v ro DNA HPF 切断試験	itro in vitro RT試験 定期D 成	不 in vitro # NA合 胞形質転 試験	遺伝毒性 道 換 vivo 小核試 v 験	遺伝毒性 遺伝語 ivo DNA損 in vivo 体異常	事性 遺伝毒性 染色 in vivo 不定 試験 期DNA合成	遺伝毒性 in vivo コ メット試験	in vivo突然 変異	<b>たがん性</b>
2- (Perfluoroprop asy)-HI, IH- perfluoropropa nol	26537-88-2	HO F F F	alerts by ISS  No alert found No	alert found	No alert found	SNI-SNI >> Carbenium Ion Formation:SNI >> Carbenium Ion Formation >> Alpha halo ethers (including alpha halo threethers)	Alpha- and beta- Haloether Reactive Functional Groups	alerts by ISS No alert found	H-acceptor- path3-H-	Alcohol:Alkyl halide:Ether moiety:Perflou rocarbon derivatives			フォーマ試				***************************************				試験			
IH.IH- Perfluore-2.5- dimethyl-3.6- dioxanonan-1- ol	14548-74-4	+++	No alert found No	alert found	No alert found	SNI-SNI >> Certenium for Formation SNI >>> Carbenium for Formation (SNI >>> Carbenium for Formation >>> Alpha halo ethers (including alpha halo thicesthers)	Alpha= and beta= Halicether Reactive Functional Groups	No alert found	H-acceptor- path3-H- acceptor	Alcohol:Alkyl halide,Ether moiety,Perflou rocarbon derivatives														
Perfluoraisohe 3 xane	355-04-4		No alert found No	alert found	No stert found	No alert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert found	i No alert found	Alkane, branched with it tertiary carbon.Alkyl halide;Perflour ocarbon derivatives	TAIS35, TAIS37, TA88,TAI00, WPZ	Chinese hamster Ovary (CHO) (± S9) Negative					***************************************							
Perfluoro-2,3- dimethylbutan e	354-96-1	F F F F F F F F F F F F F F F F F F F	No alert found No	alert found	No slert found	No alert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert found	i No alert found	Alkane, branched with tertiary carbon/Alkyl halide/Perflour ocarbon derivatives							***************************************							
2-(2- Iodoethyl)perfi uoropropane	99324-96-6	F	Aliphatic No halogens (Genetox).Stru citural alert for genetoxic carcinogenicity	alert found	No slert found	SNESN2 >> SNE2 at an ead Carbon atom/SNE2 >> SNE2 at an ep3 Carbon atom >> Alphatic haldes	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	halogens	Aliphatic halogen	Alkane, branched with tertiary carbon,Alkyl halide,Perflour ocarbon derivatives														
Perfluoro(2- methy/pentane)	30320-28-6	F F F	No alert found No		No slert found	No alert found	Linear Alphatic Hydrocarbone Type Compounds			branched with tertiary carbon Alkyl halide/Perflour ocarbon derivatives														
進加 4,8-Dioxa- 3 3H- perfluorono nanoic acid 1	<b>4</b> 958445-44-		No alert found No	afert found	No stert found	SNISMI >> Carbenium for FormationSNI >>> Carbenium for Formation >> Alpha halo ethers (including siphs halo thicethers)	Alpha- and beta- Halloether Reactive Functional Groups	No alert found		Alkyl halide:Carboxyl io acid:Ether moiety:Perflou rocarbon derivatives	MP2uvrA(±S9) Negative	EFJン/頃 (±S9) False Positive	<b>R</b>			V79	(±S9) ative		NMRI BRマ ウス香酸 (雌雄) Negative	Wistar 背離( Negat	ラット 随途 we			

名称	CASRN	<b>机</b> 油	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus alerts by ISS		遺伝毒性 vitro 復帰突然変異試験		フォーマ試		遺伝毒性 vitro 小核 試験	遺伝毒性 i vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成			1	試験	遺伝毒性 in vivo コ メット試験		
進加 Ammoniu m perfluoro- 2-methyl- 3- oxahexano ate	3		No alert found No alert found	ARZAM >> Solft base formation by ulderlyth formed after metabolic activation AVZ >> Solft base formation by address formation by address formation by address formation by address formation in the production and the production for a formation and the production formation and the production formation and the production and the productio	•	Alphar and betar Haloether Reactive Functional Groups	No alert found	H-acceptor- path3-H-	Alkyl halide;Carboxyl halide;Carboxyl io asid:Ether moiety;Perflou rocarbon derivatives	ネズミチフス圏(±S9) Negative	S9(-	L5178Y/TI +(±S9) Negative	X			***************************************		能名	P.K. 骨 田胞 pative	マウス、骨 軽細筋 Negative	ラット Negative	***************************************	5	示: 輝と娘の 永建生泉 発生、泉田 ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・
isit 2.3.3.9— tetrafluoro—2- (riffuoro-theomethy (propanoicacid Joctafluorobut ane-1.4— diylester	1	\$\\\\\\ <u>\</u>	No alert found No alert found	ANZ-ANZ >> Sohiff base formation by adoltycle formed after metabolic activation/ANZ >> Sohiff base formation by adolty formed after metabolic activation >> Sohiff base formation by adolty formed after metabolic activation >> Sohiff base formation by adolty formed after metabolic activation >> General Production of the production formation (indirect)*> December 30 Production mechanisms or consistent activation of the production and after metabolic activation >> General Production memory production activation of the production of	ie S	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	No alert found	Alkane, branched with tertiary carbon-Alkyl halide-Carboxyl is acid ester/Perflouro carbon derivatives	Positive(NBS)		***************************************												
Methyl 3,3,3- trifluoro-2- (trifluoromethy ()propionate		F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No slert found	No alert found	Not classified	No alert found	No alert found	Alkane, branched with tertiary carbon/Alkyl halide/Carboxyl io acid ester/Perflouro carbon derivatives							***************************************								
Methyl tetrafluoro-2- (trifluoromethy l)propionate	680-05-7	F O OH	No alert found	No elect found	No alort found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found		Alkane, branched with tertiary carbon,Alkyl halide,Carboxyl io acid ester;Perflouro carbon derivatives			***************************************				***************************************						***************************************		
Perfluorobutyr aldehyde	375-02-0	O F F F F F	Simple Mo aftert found safetyde (Genetics)Stru clutual since the genetics of genetics of carreinogenicity	No slert found	Swiff base formers/Swiff base formers >> Direct Acting Swiff Base Formers/Swiff base formers >> Direct Acting Subfif Base Formers >> Mone aldehydes			Simple al dehyde	Aldehyde:Alkyl halide/Perflour ocarbon derivatives			***************************************										***************************************		
Perfluoropenta nal		O F F F F F F F F F F F F F F F F F F F	Simple No abert found aidehyde (Genetoc).Stru ctural alert for genedoxic carcinogenicity	No alert found	Acylation Acylation >> P450 Mediated Activation to Acyl Holices Acylation >> P450 Mediated Activation to Acyl Holices Acylation >> P450 Mediated Activation for Acylation acylat	ff g		Simple al de hyde	Aldehyde: Alkyl halide;Perfleur ocarbon derivatives															
Perfluorohexan al	754-79-0	\ <u> </u>	Simple No alert found addressed to a contract of the contract	No alert found	Softh base formers, Softh base formers >> Direct Acting, Softh Base Formers, Softh base formers >> Direct Others, Acting Softh Base Formers >> Mono Jackydes Softh Base Formers >> Mono Jackydes	Aldehyde Typ Compounds	e Simple aldehyde	Simple al de hyde	Aldehyde:Alkyl halide;Perflour ocarbon derivatives							***************************************								

名称 CASRN	nongenotox) alerts by ISS			DNA binding by OECD		in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus) alerts by ISS	Organic ji functional groups	直伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ サスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 試験	遺伝毒性 živo 小核試 vi 験	i伝毒性 vo DNA損 in vivo 体異?	性 遺伝毒性 染色 in vivo 不知 試験 期DNA合成 試験	遺伝毒性 ぎ in vivo コ 式 メット試験	in vivo突然 発がん性 変異
H.L.H+ Hopfallhorebut 1785-92-0 Hoppavide	Frontière and Communication of Communica	SR:58U.2 Milyation, direct acting enouides and settled State (Ambient State (Ambient State (Ambient State (Ambient direct acting enouides and related SV) Epoxidos, Aziridines, Thiranes and Oxetanes	SN2:NIV 2: Ablydation, direct acting grounders and intent-SN2: 20: Shalphation, direct acting provides and related 2:> Epoxides, Aziridines, Thiranes and Oxetanes	SNESHUS > Overet Acting Eposides and related SNESHUS > Direct Acting Eposides and related SNESHUS > Eposides	Epoxide Reactive Functional Groups	Epoxides and aziridines	Epoxides and aziridines	Alkyl halide:Epoxide: Perflourocarbo n derivatives:Sat urated heterocyclic fragment			29 (84)									and a		
3- (Perfluenchezy 1-12- eponypropane	Exception and Committee and Co	SRESHE: ) Allylation afrest acting goodes and indicated SNE 2) Allylation direct acting goodes and related SNE 2) Allylation direct acting goodes and related 3) Eposides. Advidinst, Thiranes and Overlanes	SNE2NY >> Allylation, direct acting epoides and related SNE >> Allylation, direct acting epoides and related >> Epoides, Azirdenes, Thiransa and Outstans	SNE2NE >> Direct Acting Eposides and related related SNE2 >> Direct Acting Eposides and related >> Eposides	Epoxide Reactive Functional Groups	Epoxides and aziridines	Epoxides and aziridines	Alkyl halide:Epoxide; Perflourocarbo n derivatives:Sat urated heterocyclic fragment														
3- (Perfluorooctyl )-1.2- properoxide	Eposide and advises (Genetal Start) usual after for cardingeniaty	SR2-SR2 >> Allylation, direct acting eposides and related SR2 >> Allylation, direct acting eposides and related SR2 >> Allylation, direct acting eposides and related >> Eposides, Aziridnes, Thiranes and Oxetanes	SNZ-SNZ >> Allylation, direct acting eposides and related SNZ >> Allylation, direct acting eposides and related >> Eposides, Astridenss, Thilinens and Ovetanes	SNZ-SNZ >> Direct Acting Epoxides and incluted-SNZ >> Direct Acting Epoxides and related >> Epoxides	Epoxide Reactive Functional Groups	Epoxides and aziridines	Epoxides and aziridines	Alkyl halide:Epoxide: Perflourocarbo n derivatives:Sat urated heterocyclic fragment														
3-(Perfluore- 2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2	F F F F F F F F F F F F F F F F F F F	No alert found	No alert found	No afert found	Not classified	d No alert found	H-acceptor- path3-H- acceptor	Alcohol/Alkane, branched with secondary carbon-Alkyl halide/Dhydrox yl derivatives;Per filourocarbon derivatives														
3-(Purfusor 1892-91-2   Targoyl-1-2   propanediol 2	F No alert found	No alert found	No alort found	No afact found	Not classified	d No slert found	nath3-H-	Alcohol/Alkane, branched with secondary carborn/Alkyl halide/Dihydrox yl derivatives;Per flourocarbon derivatives														
1 - Gerifunchior de Victoria d	No alert found			No alert found			path3-H- acceptor	branched with secondary carbon:Alkyl halide:Dihydrox yl derivatives;Per flourocarbon derivatives														
2.22- 6226-25-1 Trifluoroethyl triflate	F busyl case of busyl case of busyl case of busyl case of subdenic or a case of the case o	SSE-SSEV 2-Allystein-nucleophile substitution at sp3- corns nucleosity (Allystein-nucleophile substitution at sp3-carbon stom 2-> Suffernates and Suffates	SVESSUS > Alkylation, nucleophilis substitution at eg3-varbon attem32 > Alkylation, nucleophilis substitution at eg3-varbon atom32 > Alkylation, nucleophilis substitution at eg3-varbon atom >> Sulforates and Sulfates	No alert found	Not classified	d Alkyl (C<5) or benzyl ester of sulphonic or phosphonic acid	Alkyl (C <s) or<br="">benzyl ester o' sulphonic or phosphonic acid</s)>	Alkyl Thalide:Sulfonat P	ABB TAI \$3.7 WP2 UsrA(±\$9) egetive. TAI \$3.55(±\$9) continue. TAI \$0.00 (*\$9)Megative. (-\$9) continue. TAI \$1.00 (*\$9)Megative. (-\$9) continue. //Positive. (MHS)													

	y (genotox and nongenotox) alerts by ISS		DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	alerts by ISS	alerts by ISS	functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試調	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 v 試験	遺伝毒性 jivo 小核試 wi 條	伝毒性 遺伝毒性 o DNA損 in vivo i 体異常	i直伝毒性 注色 in vivo 不定 試験 試験	遺伝毒性 in vivo コ メット試験	in vivo突然 発がん性 変異
2.2 Diffurorethyl triflate	F benzyl ester of physics or phosphoric or p	Acylation involving a leaving group after metabolic activation; SN2 >> Acylation involving a leaving group after metabolic activation >> Germinal Polyhaloslikani	isubstitution at sp3-carbon atom;SN2 >> Alkylation, nucleophilic substitution at sp3-carbon atom >> Sulfonates and Sulfates;SN2 >> Nucleophilic substitution at sp3 carbon atom in after thiol (glutathione) conjugation;SN2 >> Nucleophilic substitution at sp3 carbon atom after thiol (glutathione)	Acyl Halides;Acylation >> P450 Mediated Activatio to Acyl Halides >> 1,1-Dihaloakanes	o Not classified n	Alkyl (C<5) or benzyl ester of sulphonic or phosphonic	Alkyl (C<5) or benzyl ester of sulphonic or	Alkyl halide:Sulfonat e ester										***************************************				
Trifluoremethy 3582-05-6 trifluoremetha nesul fonate	F September Sept	carbon atom;SN2 >> Alkylation, nucleophilic substitutio at sp3=carbon atom >> Sulfonates and Sulfates	SUCSEY 2) Multiplice, nucleophile substitution at a3°-cateon and administration at a3°-cateon and administration produced and administration at a3°-carbon atom >> Sulfonates and Sulfates	No silent flound		phosphonic acid	Benzyl ester of sulphonic or phosphonic acid	halide:Sulfonat e ester														
[2- (Perfluorohery (lettr)[t-timeth oxyothere	No dert found		No dert found	No afert found				kyl halide;Perflour ocarbon derivatives;Sila ne	TAIS35, TAIS37, TASS TAI00, TAI02 (±:59) Negative									***************************************				
Triethox/(serf 51851-37-7 luorehex/lith y/briane	No dert found			No slort found				kyl halide:Perflour ocarbon derivatives:Sila ne	TA1535, TA1537,TA98,TA100, TA102, (±.59) Negative	Chinese hamater lung fibroblasts 79 (± S9)Negative	lymphoma L5178Y (±S9) Negative							***************************************				
Dimethoxymet 85857-17-6 hyf(Gerfluch) ay/lestly(Isalian a	No dert found		No dert found	No slort found	Not classified			kyl halide:Perflour ocarbon derivatives:Sila ne										***************************************				
Perfluorobutan 336-59-4 cic anhydride	No dert found		No dert found	No alert found	Not classified		path3-H- acceptor	anhydride.Alkyl halide:Perflour ocarbon derivatives														
2H- Perfluoropropa noic arhydride	F No dert found	No slort found	No dert found	Acyteino-Ayottein >> P450 Mediated Achtesten to Acyteino-P450 Mediated Activation Acyt Haldes-Ayottein >> P450 Mediated Activation to Acyt Haldes >> 1.1-Ohalcestures	o Not classified	No alert found	H-acceptor- path3-H- acceptor	Acid anhydride:Alkyl halide;Perflour ocarbon derivatives										***************************************				

名称 CASRN	Carcinogenicit y (genotox and nongenotox) alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagenicity Classification (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus) alerts by ISS	Organic infunctional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ サスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 ; 胞形質転換 v 試験	遺伝毒性 vivo 小核試 験	直伝毒性 遺伝 rivo DNA損 in vi 傷 体界	毒性 遺伝毒 vo 染色 in vivo 常試験 期DNA 試験	生 遺伝毒性 不定 in vivo コ 合成 メット試験	in vivo突然 発がん性 変異
Pentallucrigora 356-42-3 panois anhydride	No airt found	No alert found	No alert found	No alert found	Not classified No alert found	H-acceptor-	Acid anhydride-Alkyl halide/Perflour ocarbon derivatives							***************************************							
2- (Perfluorocctyl )ethantisid	No alert found	No slert found	Radical Radical >> Radical mechanism via ROS formation (Indirect) Radical >> Radical mechanism via ROS formation (Indirect) >> Thirds	No slort found	Not classified No afert found	No alert found	Alkyl halide;Perflour ocarbon derivatives;Thi ol							***************************************							
2- (Perfluorohesy i)ethanethiol	No alert found	No alert found	(Indirect)Radical >> Radical mechanism via ROS formation (Indirect) >> Thicls	No alert found	Not classified No afert founce	No alert found	Alkyl halide:Perflour ocarbon derivatives:Thi ol														
2- (Perfluorobaty)  ethanethiol	No dert found		(indirect) Radical >> Radical mechanism via ROS formation (indirect) >> Thicks	No alert found	Not classified No alert founce	No alert found	halide/Perflour ocarbon derivatives;Thi ol														
3- IS2182-92-4 Methoxyperfu ord2- cov12- mathypertane	alert for nongenotation of nongenotation	No alert found		SHISMI > Catesinum los FromstercRMI >> Catesinum los FromstercRMI >> Catesinum los Fromsterc >> Alpha halo ethers (Including alpha halo thisesthers)	Alpha and No alert found beta Halocether Reactive Pruntional Groups		moiety/Perflou rocarbon derivatives		ivegative	regative				***************************************							
3- Ethoxyperfluor discovered with the state of the state	index for consideration of the			SMI SMI > Caterium for Fornator SMI >> Alpha Pala of theres (including alpha halo thicethers)	Alpha and botal beta Halocuber Reactive Functional Groups		tertiary carbon/Alkyl halide;Ether moiety;Perflou rocarbon derivatives	TAISSETAIS37TA98, TAI00, WP2	CHL/IU (± S9) Negative	lymphoma L5178Y cells(±S9) Negative				***************************************							
Perfluenciacidus (83702-08-7 fyl methyl ether	No alert found	No alert found	No alert found	No afert found	Alpha and botal beta Halocether Resource Functional Groups		Alkane, branched with tertiary carbon/Alkyl halide:Ether moiety/Perflou rocarbon derivatives							***************************************							

名称(	CASRN	標達	Carcinogenicit DNA alerts for AMES, CA a y (genotox and nongenotox) alerts by ISS	and MNT by OASIS DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test)	in vivo mutagenicity (Micronucleus	Organic 3 functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試	遺伝毒性 in vitro マ 験 ウスリン	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 道 胞形質転換 v 試験	責伝毒性 rivo 小核試 険	遺伝毒性 遺伝 vivo DNA損 in vi 傷 体異	毒性 遺伝毒f ro 染色 in vivo 2 常試験 期DNA	生 遺伝毒性 不定 in vivo コ 合成 メット試験	in vivo突然 変異	発がん性
Pentafluoropro 4 pylamidine	<b>422-62-8</b>	FFF	aloris by ISS  No alort found No alort found	No afert found	No afert found	Not classified	alerts by ISS No alert foun	d No alert found	Alkyl halide:Amidine: Perflourocarbo n derivatives			フォーマ試									試験			
Perfluorobutyr 3 ylamidine	375-19-9	F F F F	No alert found No alert found	No afert found	No alert found	Not classified	No alert foun	d No alert found	Alkyl halide:Amidine: Perflourocarbo n derivatives			***************************************												
Perfluoroctan : amidine	307-31-3	H <sub>2</sub> N NH	No alert found No alert found	No alert found	No afert found	Not classified	No alert four	d No alert found	Alkyl halider.Amidine: Perflourocarbo n derivatives															
tris(Trifluoroet 6 hoxy)methane	58244-27-2	F F F	No alert found No alert found	No alert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert foun	d No alert found	Alkyl halide.Ether moiety			***************************************												
Flurothyl	333-36-8	F	No alert found No alert found	No alert found	No alert found	Alphar and betar Haloether Reactive Functional Groups	No alert foun	d No alert found	Alkyl halide;Ether moiety			***************************************												
Trifluoro-1- methoxy-2- (trifluorometho xy)ethane	996-56-5	F F F F F F F F F F F F F F F F F F F	No slert found No slert found	No alert found	SNI_SNI_Y Debresion for Formation_SNI_Y Catherium for Formation_Y Alpha fide others including Alpha fide Uthersters)	s beta- Halocether Reactive Functional Groups		acceptor	halide,Ether moiety															
2H.3H- Perfluoropenta ne	138495-42-8	F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No afert found	No afert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert foun	d No alert found	Alkane, branched with p secondary carbon, Alkyl halide; Perflour ocarbon derivatives	TA1535, TA97, TA98,TA100, WP2 unr MMI 01 (±S9) Negative	A human lymphocyt s (±S9) Negative	mouse lymphoma L5178Y (± S9) Negative												

	名称	CASRN	柳油		Carcinogenicit y (genotox and nongenotox) alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagenicity Classification (Ames test)	in vivo mutagenicity (Micronucleus	functional	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試明	遺伝毒性 in vitro マ ウスリン	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 試験	遺伝毒性 vivo 小核試 験	遺伝毒性 遺伝語 in vivo 以 体異的	性 遠伝毒性 染色 in vivo 不 試験 期DNA合	遺伝毒性 g in vivo コ メット試験	in vivo突然 発がん性 変異
	IH,2H,2H- Perfluorobutan e	86884-16-4	F		alerts by ISS No alert found	No alert found	No afert found	No alert found	alerts by ISS Halogenated Linear Alphatic Hydrocarbone Type Compounds	alerts by ISS			Y	フォーマ試					***************************************				試験	Y	
	1- (Perfluorohexy 1)-2- iodopropane	38550-34-4	F		Aliphatic halogens (Genotox);Stru ctural alert for genotoxic carcinogenicity	No afert found	No afert found	SN2.SN2 >> SN2 at an sp3 Carbon atom:SN2 >> SN2 at an sp3 Carbon atom >> Aliphatic halides	Halogenated Alphatic Linear halogens Hydrocarbone Type Compounds	Aliphatic halogen	Alkane, branched with secondary carbon;Alkyl halide;Perflour ocarbon derivatives														
追加	trifluoroiodome thane	2314-97-8	F	<b>—</b> F		Communication of the Communica			Halogenated No alert foun Linear Alphatel Anglested are to the Type Compounds	f No alert foun	Alkyl halide	Pesitive(NBHS)													
	trifluoromethyl hypofluorite	373-91-1	F	<b>—</b> F	No alert found	AEDAER >> Electrophic addition to CC doub bound AED >> Electrophic addition to CC doub >> Perfluorinated Hypothurstess GE2SE2 >> El usabstution at all and asid servento national substution at all and asid servento nation and participated Hypothurstes >> Perfluorinated Hypothurstes	AEZAEZ >> Electrophic addition to GTC double bondAEZ >> lectrophic addition to GTC double bond AEZ >> lectrophic hyperlineres EZSEEZ >> Electrophic addition to GTC double bond >> sp2-rearbon atomacSEZ >>> Electrophic addition on sp3 and sp2-rearbon atomacSEZ >>> Electrophic addition at sp3 and stores    22-rearbon atomacSEZ >>> Perfluorinated Hyperfluorities    23-rearbon atomacSEZ >>>>> Perfluorinated Hyperfluorities    24-rearbon atomacSEZ >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	No atent found d	Not classified No alert foun	i No alert found	Alkyl halide	Pesitive(NBHS)													
	1,1,3,3- Pentafluorobut ane	406-58-6	F-F	-    F	No alert found	No afert found	No alert found	No after found	Malgenated No alert foun Linear Aliphatic Hydrocarbone Type Compounds	i No alert foun	Alkyl halide														
	Perfluoro-4,6- nonanedione		F	FFF	No alert found		No alert found	No afert found	Ketone Reactive Functional Groups		Alkyi halide:Diketone Ketone:Perflo urocarbon derivatives														
	3H,3H- Perfluorohepta ne-2.4-dione	20583-66-8	F — F — F — F	F	No alert found	No alert found	No slert found	No slert found	Reactive No alert foun Ketone Reactive Functional Groups	H-acceptor- path3-H- acceptor	Alkyl halide;Diketone; Ketone;Perflo urocarbon derivatives														

名称 CASRN	像強 Carcinogenicit y (genotox and nongenotox) alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagenic Classification (Ames tes	in vivo mutagenicity t) (Micronucleu SS alerts by ISS	Organic functional ) groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	量伝毒性 in itro DNA H 員切断試験	i vitro ii IPRT試験	n vitro 不 定期DNA合 成	in vitro 細 逆 胞形質転換 vi 試験	直伝毒性 ivo 小核試 viv 条 傷	云毒性 遺伝毒性 o DNA損 in vivo 第 体異常記	遺伝毒性 色 in vivo 不定 験 期DNA合成 試験	遺伝毒性 in vivo コ メット試験	n vivo突然 発がん性 変異
34:34+ Perfluor-2-4- hexanedione	F F F No alert found	No alert found	No afert found	No alert found	Reactive Notation Reactive Functional Groups	H-acceptor- path3-H- acceptor	Alkyl halide:Diketone Ketone;Perflo urocarbon derivatives				***************************************										
2.2-bitTrifluorom ethylo-2- naid enymetric acid	No alert found	No alert found	No afert found	No alert found	Ajohar and ho alert for health of the haloether Reactive Functional Groups	pund H-acceptor- path3-H- acceptor	Alcohol-Alkane, branched with tertiary carbon-Alkyl halide.Carboxyl ic acid.Perflouroc arbon derivatives														
3.3-Bis (witherome hydroxyropio nic acid	No dert found	No alert found	No afert found	No alert found	Alpha- and ho alert for help the help t	bund H-acceptor path3-H- acceptor	Alcohol:Alkane, branched with tertiary carbon:Alkyl halide;Carboxyl ic acid:Perflouroc arbon derivatives														
IH.IH.IIH.IIH 330562-44-2 Perfluorotetra ethylene glycol	No alert found	No alert found	No dert found	No afert found	Alphar and betar Haloether Reactive Functional Groups	H-acceptor- path3-H- acceptor	Alcohol-Alkyl halide,Dihydrox yl derivatives,Eth er moiety,Perflou rocarbon derivatives				***************************************										
18t H8489- 23301-42-4 Perfluor-36-6 dioxacctane- 1.8-dol	No alert found	No alert found	No afert found		beta* Haloether Reactive Functional Groups	H-acceptor- path3-H- acceptor	Alcohol:Alkyl halide:Dihydrox yl derivatives;Eth er moiety:Perflou rocarbon derivatives				***************************************										
N.N-dimethyl- 1559-50-1 2H- perfluoresthan amine	F F	No alert found	No afert found	Apylatin-Apylatin V P 850 Mediated Activation I Apylatine Apylatine Apylatine Apyl Hiddex Apilatine V P850 Mediated Activation to Apyl Haides 29 1.1-Dhaidashames SNI SNI SV Individual Apylatine SNI SNI SNI SV Individual Apylatine SNI SNI SNI DO Formation 39 Aliphatic tertiary amines	n mustaros Reactive Functional Groups	No slert foun	amine, tertiary/Alkyl halide:Amine, tertiary/Perflou rocarbon derivatives														
Perfluentine 338-83-0	No dert found	No alert found	No dert found	No afert found	Alpha- No alert for Melandy Melandy Melandy Meland Groups Mirroge in Mustands Reactive Functional Groups	No slert foun	I Aliphatic amine. tertiary,Alkyl halide,Amine. tertiary,Perflou rocarbon derivatives														

	alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS		Oncologic in Primary r Classification (	alerts by ISS	alerts by ISS	functional groups		遺伝毒性 vitro 染色 体異常試影	遺伝毒性 in vitro マ サスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 試験	遺伝毒性 vivo 小核試 vi 験 4	直伝毒性 ivo DNA損 in vivo 体異?	i性 遺伝毒性 染色 in vivo 不 試験 期DNA合 試験	遺伝毒性 in vivo コ メット試験	in vivo突然 発がん性 変異
35.7.8- P223-68-4 Tetrachisroper fluoroctamic acid	P No slert found	No alert found	SNE2SE2 > DNA allystationSNE2 > DNA stylution > V briefal Dislandaments SNE2 > Internal SNE2 reaction with azirdinum and or cycle suffortium ion formation (enzymatic) SNE2 > Internal SNE2 >	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	No alert found	Alkyl	TA1535, TA1537, TA1538, TA98, TA160(±S9) Negative													
3.58-19 Trichloroperful 2108-54-9 Trichloroperful correlevancic acid	F No dert found  G F F F F F F F F F F F F F F F F F F	No allert found	SSE2SEZ > DNA displation-SNE2 > DNA displation >> Vicine Displation and SNE2 > Internal SNE2 reaction with artificinium and/or cyclic suffortium in formation (enzymatic)-SNE2 >> Internal SNE2 reaction with artificinium and/or cyclic suffortium in formation (enzymatic)-SNE2 >> Vicine Displation and or cyclic suffortium in formation (enzymatic) >> Vicine Displation and or cyclic suffortium in formation (enzymatic) >> Vicine Displation are suffered in the suffe	No alert found	Alphamand betament Halocther Reactive Functional Groups	No alert found	No alert found	Alkyl halide;Carboxyl ic acid;Perhaloge nated carbon derivatives	TAISSS, TAISS7, TAISS8, TA98, TAIOXI±S9) Negative													
Alyd 15242-17-6 perfluoroisopro pyl ether	No alert found	No alert found	No afert found	SNI-SNI-) Curbenium for Formation SNI >> Carbenium for Formation >> Alpha halo ethers (including alpha halo thioethers)	Alpha- and beta- lata- Haloether Reactive Functional Groups	No alert found		Alkene moiety:Alkyl halide:Allyt-Eth er moiety:Perflou rocarbon derivatives														
3-(22.3)- 681-68-5 Tetrafluoropro poxy)prop-1- ene	No alert found	No alert found	No afert found	Acylator-Acylation >> P450 Mediated Activation to Acyl Halidas-Acylation >> P450 Mediated Activation to Acyl Halidas-Acylator >> 1,1-Dhalosikanes	n beta- Haloether Reactive Functional Groups			moiety,Alkyl halide;AllytEth er moiety,Perflou rocarbon derivatives														
2- 252237-40-4 (Perfluorehery I)ettylehospho nic acid	No slert found	No alert found	No alert found	No afert found	Organophosph 9 orus Type Compounds	No alert found		(Thio)Phospho nic acid derivatives:Alk yl halide;Perflour ocarbon derivatives;Ph osphonic acid	[Nasig TA1535, TA1537, TA98, TA10 WP2uvrA(±S9) Negative]	0.			[Na雄 V79(±S9) Negative ]									
(IP-prisoned: 80220-63-9 yillethylologia pinonia acid spinonia acid spin		No alert found	No slort found	No sfert found	Organophosph Porus Type Compounds			nic acid derivatives;Alk yl halide;Perflour ocarbon derivatives;Ph osphonic acid														
Hecafloroppro 2641-34-1 pene loide trimer	Any haldes (Genotos) Structural alert for start alert for star	No alert found	SN2-SN2 >> Direct adjation implying a leaving group-SN2 >> Direct adjation involving a leaving group >> Acyl Halides	Acytatorukoplation >> Direct Addition of an Acyt Halidica-Acytation >> Direct Addition of an Acyt Halidica->> Acyt halidic SNI-SNI >> Carbenium Ion Alpha halo ethers (including alpha halo thosethers)	pha- and		acceptor- path3-H-	Acyl halide:Akyl halide:Ether moiety.Perflou rocarbon derivatives														

		標達	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus alerts by ISS	Organic functional ) groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試影	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 xitte 小核 類切能	性 in vitro NA HPRT試 試験	in vitro 不 度期DNA 成	in vitro 細合 胞形質転換 試験	遺伝毒性 vivo 小核試 験	直伝毒性 ivo DNA損 in vivo s 体異常	遺伝毒性 色 in vivo 不定 I験 朔DNA合成 試験	遺伝毒性 in vivo コ メット試験	in vivo突然 変異	発がん性
Perfluor (2- methyl-3- ocahesanoyl) fluoride	2062-98-8		Acyl haldes (Genetal-Servi Genetal-Servi Genetal-Servi Genetal-Servi Genetal-Genetal-Servi Genetal-Gen	SNESSEY 2: Direct exploition implying a leaving group SNE 2:0 Direct acylation implying a leaving group 2:2 Acyl Halides	AcyteinorAcytein >> Direct Addition of an Acyt Halide-Acyteinor-Direct Addition of an Acyt Halide >> Acyt halide  Acyteinor Acyt Halide >> Acyt Halide Acyt Halide >> Acyt Halide Acyt Halide >> Acyt Halide Acyt Hal	Acyl and Benzoyl Type Compounds Al pha- and beta- Haloether Reactive Functional Groups	Acyl balides	Acyl halides;H- acceptor- path3-H-	Acyl halide;Alkyl halide;Ether moiety;Perflou rocarbon derivatives														
Perfluoro-6,6- dimethylhepta ne=3,5-dione		F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No afert found	No alert found	Reactive Ketone Reactive Functional Groups	No alert found	H-acceptor- path3-H- acceptor	Alkyl halide:Diketone: Ketone:Perflo urocarbon derivative:stert -Butyl														
(Heptaflucrobu tanoyi)pivaloyi methane		F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No afert found	No after tound	Reactive Functional Groups	No alert found	H-acceptor- path3-H- acceptor	Alkyl halide;Diketone ;Ketone;Perflo urocarbon derivatives;tert -Butyl														
9-Chloro- perfluorononan olo acid	965-79-2	F F F F F F F F F F F F F F F F F F F	Perfunceation No after found in a circumstance (MPOA)  (MPOA)  Structural aiert for incorporation or incorporation or incorporation our incorporation or incorp	No afert found	No alert found	Alphar and betar Haloether Reactive Functional Groups	No alert found	No alert found	J Alkyl halide/Carboxyl isic Perflourou arbon derivatives;Per halogenated carbon derivatives														
4,4,5,5- tetraffuoropent anoic acid		Br F F	No alert found No alert found	No afert found	No afert found	Not classified	No alert found	No alert found	J Alkyl is asid,Perflourou asid,Perflourou arbon derivatives,Per halogenated carbon derivatives														
perfluoro-3,6- dioxaheptanoat e		F	No alert found No alert found	No alert found	No afert found	beta- Haloether Reactive Functional Groups		path3-H- acceptor	Alkyl halide;Carboxyl io acid ester;Ether moiety.Perflou rocarbon derivatives														
Methyl perfluoro(2- propoxypropan outo)	13140-34-6	HG-OFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	No alert found No alert found	No silent found	No afert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	H-acceptor- path3-H- acceptor	Alkyl halide;Carboxyl io acid ester;Ether motory.Perflou rocarbon derivatives														

名称	CASRN	標達	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	alerts by ISS	functional groups			遺伝毒性 in vitro マ 砂スリン フォーマ試	in vitro コ 道 メット試験 v	直伝毒性 itro 小核 vitro DNA 鎮切断試 額切断試	in vitro HPRT試験 験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 vivo / 試験	等性 遺伝毒性 小核試 vivo DNA損 傷	遺伝毒性 遺伝 in vivo 染色 in vi 体異常試験 期D 試態	a毒性 ivo 不定 in vivo NA合成 メット記	性 in vivo コ 変異 験	そ然 発がん性
Perfluoro-2- methyf-3- pentanone	756-13-8	F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No alert found	No afert found	Reactive Ketone Reactive Functional Groups	No alert found	No alert found	Alkane,	TA1535, TA1537, TA98,TA100, WP2 uwrA (±39) Negative	hamster Ovary (CHO)Ami guous (+S9),	Chinese hamster lung fibroblasts (V79) (± S9), mouse lymphoma L5178Y cells (± S9)Negative, Negative										
Bis(perfluorois opropyl)ketone	813-44-5	F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No dert found	No alert found	Reactive Ketone Reactive Functional Groups	No alert found		Alkane, branched with tertiary carbon:Alkyl halide:Ketone; Perflourocarbo n derivatives							***************************************						
2-(Perfluoro- 3- methy/butyl)et hyl methacrylate			No afert found	No afort found	Michael addition/Michael addition >> Physicsed Alternes-Michael addition hi/bael addition >> Polarized Alternes-Michael addition >> Alpha, beta unsaturated exters	Acrylate Reactive Functional Groups	No alert found		Alkane, branched with tertiary carbon, Alkene moiety, Alkyl halide, Allyk Car boxylio acid ester, Methacry late, Perflouroc arbon derivatives						***************************************						***************************************	
(Perfluoro-5- methylhexyl)et hyl 2- methylprop-2- enoate		##1	No alert found No alert found	No afert found	Michael addition/Michael addition >> Phatricad Allenees-Michael addition hold addition >> Polarized Allenees-Michael addition >> Allpha, beta unsaturated exters	Acrylate Reactive Functional Groups	No alert found		Alkane, branched with tertiary carbon:Alkene moiety:Alkyl halide:Allyi:Car boxylic acid ester:Methacry late:Perflouroc arbon derivatives						***************************************							
(1S,4S)-3- (Heptafluorobu tyry()camphor		F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No slert found	No afert found	Reactive Ketone Reactive Functional Groups	No alert found	path3-H- acceptor	Alkyl halide;Bicycloh eptane;Bridged -ring carbocycles;C ycloaktane;Cyc loketone;Dike;t one;Ketone;Dike;t one;Ketone; erflourocarbon derivatives;Ter penes						***************************************							
(1R.4R)-3- (Heptafluorobut tyryl)-camphor		F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No alert found	No afert found	Reactive Ketone Reactive Functional Groups	No alert found	path3-H- acceptor	Alkyl haide:Bioyoloh eptane:Bridged ring carbooyoles:C yoloalkane:Cyc loketone:Diket one:Ketone:Pe riflourocarbon derivatives;Ter penes													
(2H- Perfiloroethox y)methyloxiran e	85567-21-1	F	Epondes and Radical Radical > ROS formation ster GSH depletion fladea = ROS formation ster GSH depletion fladea = ROS formation ster GSH depletion fladea = Rosing groups fladea = ROS formation fladea = R	leaving group after metabolic activation;SN2 >> Acylation involving a leaving group after metabolic activation >> Gemini Polyhaloalkane Derivatives;SN2 >> Alkylation, direct acting epoxides and related;SN2 >> Alkylation, direct acting epoxide	Direct Acting Epoxides and related;SN2 >> Direct acting Epoxides and related >> Epoxides	o Alpha- and on beta- Haloether Reactive Functional Groups:Epoxic e Reactive Functional Groups Groups Groups	aziridines	aziridines;H- acceptor- path3-H- acceptor	Alkyl halide.Epoxide; Ether moiety.Perflou rocarbon derivatives;Sat urated heterocyclic fragment													

名称 CASRN	y (genoto nongenoto alerts by	ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagenicit Classification (Ames test alerts by IS	S alerts by ISS	functional s) groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鏡切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 試験	遺伝毒性 vivo 小核試 vi 験 傷	直伝毒性 ivo DNA損 in vivo 体異常	性 遺伝毒性 染色 in vivo 不知 試験 期DNA合成 試験	遺伝毒性 ぎ in vivo コ 式 メット試験	in vivo突然 発がん性 変異
(IQ 2.3.3)— 19932-28-4 Tetrafluoropro poxylmethyllo xirane	Enoxides	and SN2;SN2 >> Alkylation, direct acting epoxides and related;SN2 >> Alkylation, direct acting epoxides and ;Stru related >> Epoxides, Aziridines, Thiiranes and Oxetanit for	SNE SNE 22 > Abylation, direct acting eposities and related SNE 23 > Abylation, direct acting eposities and related SNE posities. Thirranes and Overtaines of the SNE posities, a Arindres, Thirranes and Overtaines	Acystein-Acystein >> P450 Mediated Achivation Acystein Acystein Acystein Acystein >> P450 Mediated Achivation to Acystein Acystei	Alpha- and Epoxides at beta- aziridines Haloether	Epoxides an aziridines:H- acceptor path3-H- acceptor	Alkyl														
N-Estyl-14-(2- 1691-99-2 hydrocyethyl) erfluorocataria sulforamide	F No alert f	ound No alert found	No alert found	No alert found	Not classified No alert for	H-acceptor path3-H- acceptor	Alcohol-Alkyl halide/Perflour ocarbon derivatives;Sul fonamide														
N-Methyl-N- (2, 2448-09-7) (2, 248-09-14)/lp erfluoroctane suffonamide		No slert found	No alert found	No slert found	Not classified No alert for	H-acceptor path3-H- acceptor	Alcohol-Alkyl halide-Perflour ocarbon derivatives-Sul fonamide														
2- 57676-03-2 (Perfluorocotyl )ethyl dihydrogen phosphate	No alert f	No alert found	SNESSR2 > Allylation-SNE2 >> Allylation >> Allylation >> Allylahosphates, Allylthiophosphates and Allylphosphonates	No alert found	Organychosph No alert for orus Type Compounds	nd No alert fou	d Alkyl halide/Perflour ocarbon derivatives.Ph osphate ester														
6.2 57878-01-0 Fluorotelomer phosphate monoester	P No slert f	No alert found	SIESSE2 > Allylation(SIE2 >> Allylation >> Allylation >> Allylahosphates. Allylthiophosphates and Allylphosphorates	No alert found	Organophosph No alert for orus Type Compounds	nd No alert four	d Alkyl halide/Perflour ocarbon derivatives/Ph osphate ester														
ilitio 9 - K5426-58 Chlorohexad 1 ecafluoror-3- oxanonane- 1-sulfonic acid	P No slert f	No alert found	AMZAM2 >> Soliff base formation by allehyde formed after metabolic activation/AM2 >> Soliff somation by allehyde formed after metabolic activation >> Cerniari Polyholasilane formation (after metabolic solitosis) >> Cerniari Polyholasilane formation (indexed Polyholasilane benedit polyholasilane benedit polyholasilane benedit polyholasilane benedit polyholasilane benedit polyholasilane benedit polyholasilane polyholasilane solitosis >> Cerniari polyholasilane benedit polyholasilane benedit polyholasilane benedit polyholasilane solitosis >> Cerniari polyholasilane benedit polyholasilane benedit polyholasilane benedit polyholasilane solitosis >> Cerniari Polyholasilane benedit polyho		Alphan and beta for beta fallocother fleactive Functional Groups	H-acceptor- path3-H- acceptor	Alkyl halide.Ether mioity/Perflou rocarbon derivatives.Per halogenated carbon derivatives.Sul fonic acid														
議加 11- Chloro-decasa fluoro-3- oxaundecan e-1-suffinic acid	9 r No alert f	No alert found	ANCAM2 >> Soliff base formation by allehyde formed after metabolic activation. AN2 >> Soliff secretaria by aldehyde formed after metabolic activation. >> Genimal Polyhalosikane formation by aldehyde formed after metabolic activation. >> Genimal Polyhalosikane formation (indexed Polyhalosikane Dervisteria Statistical >> Read metabolic activation as leaving stock formation (indexed >> Genimal Polyhalosikane Dervisteria Statistical >> Apreliation invition as leaving stock produced and activation and activation and activation as a stock produced and activation as a stock produced and activation as a stock produced activation as a stock produced as a stock produced activation as a stock produced as a stock produced activation as a stock produced as a stock produced as a stock produced activation as a stock produced as a	No alert found	Alpha and No alert for beta Halosther Reactive Functional Groups	md H-acceptor path3-H- acceptor	Alkyl halide-Ether moiety/Perflou rocarbon derivatives-Per halogenated carbon derivatives:Sul fonic acid														

名称 (	CASRN	柳油	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and inongenotox)	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test)	in vivo mutagenicity (Micronucleus	Organic 道 functional ) groups	伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ ウスリン	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 試験	遺伝毒性 vivo 小核試 験	遺伝毒性 遺vivo DNA損 in 体	伝毒性 遺伝 ivo 染色 in viv 異常試験 期DN	毒性 遺伝毒 o 不定 in vivo i IA合成 メット試	生 in vivo突 3 変異 検	然 発がん性
38.50 N-ethyl 2 perfluorooctan esulfonamidos cetic soid	2991-50-6		nongenotion) alerts by ISS No alert found No alert found	ANZAN2 >> Schiff base formation by aldehyde formed after metabolic activation/N2 >> Schiff base formation by aldehyde formed after metabolic activation >> Des Schiff base formation by aldehyd formed after metabolic activation >> Desimal Polyhaolasses Destwitters fladical Phadical >> Nacional Polyhaolasses Destwitters fladical Phadical >> Nacional Polyhaolasses Destwitters fladical Phadical >> Nacional Polyhaolasses Destwitters (SNES) >> Nacional Polyhaolasses Destwitters (SNES) >> Nacional Polyhaolasses of Destwitters (SNES) >> Nacional Polyhaolasses of Destwitters (SNES) >> Nacional Polyhaolasses of Destwitters (SNES) >> Nacional Polyhaolasses on destwitters (SNES) >> Nacional Polyhaolasses on destwitters (SNES) >> Nacional Polyhaolasses on destwitters (SNES) >> Nacional Polyhaolasses (SNES) >> Nacional Polyhaolases (SNES) >> Nacional Polyhaolasses (SNES) >> Nacional Polyhaolas			No alert found	alerts by ISS H-acceptor- path3-H- acceptor	Alkyl halide:Carboxyl ic scid:Perflouroc arbon derivatives:Sul fonamide			フォーマ試									試験			
通加 N-methyl perfluorooct anesulfonam idoacetic acid	2355-31-9	r - r - r - r - r - r - r - r - r - r -	No alert found No alert found	ANCAR 2) Sohrt base formation by addelyde formed after metabolic activation/N2 > Sohrt base formation by addelyde formed after metabolic activation >> General Psykhalosilanes Dervatives-Radion Metabolic >> Rode medianism is NGS Formation (indexed) >> Median medianism is NGS formation (indexed) >> Companies of NGS after indexed of NGS formation (indexed) >> Medianism (indexed) = Indexed after metabolic activation of NGS after this (indexed) >> Medianism (indexed) = Indexed after this (indexed) >> Medianism (indexed) = Indexed activation as a Solice and indexed in (indexed) => Companies of NGS and Psykhalosism (indexed) => Companies of NGS and NGS and NGS	e	Not classified	No alert found	H-acceptor- path3-H- acceptor	Alkyl halide:Carboxyl isic assid:Perflouros arbon derivatives;Sul fonamide															
Bis(2.22- 5 triflioroethy()s ulfite	33749-89-6	F F F	No alert found SIZSSE2 > Maytetion, uncleophile substitution as to a control of the control of t	3-SICSS2 >> Abytation, nucleophile substitution at sp3-carbo nations3(2) > Abytation nucleophile substitution at sp3-carbo atom >> Suifonates and Sulfates	n No alert found on	Not classified	No alert found	No alert found	Alkyl halide:Sulfite ester															
N-Methyl-bis- 7 hoptsfluorobut yramide	73980-71-9	F F F F F F F F F F F F F F F F F F F	No alert found. No alert found	No alert found	SNI;SNI >> Ininium Ion Formation;SNI >> Ininium Ion Formation;SNI >> Aliphatic tertilary amines		No alert found	H-acceptor- path3-H- acceptor	Alkyl halide:Haloacet amide:Imide;Pe rflourocarbon iderivatives															
3-(Perfluoro- 5 3- methylluty()- 1,2- propenoxide		F F F F	Eposides and SNZ-SN2 >> Allylation, direct acting eposides and axiridines related SNZ >> Allylation, direct acting eposides and (Genetal/SNz) vallylation, direct acting eposides and clural sleft for genetations and control self-ster generations are controlled to the control self-self-self-self-self-self-self-self-			Epoxide Reactive Functional Groups	Epoxides and aziridines	Epoxides and aziridines	Alkane. branched with tertiary carbon-Alkyl halide-Epoxide; Perflourocarbo derivatives:Sat urated heterocyclic fragment															
(Trifluorometh oxy)ethyl trifluorometha nesulfonate	129710-76-1	F F F	No alert found SNCSR2 > Maytetion, undersphile substitution at spo- cardon atomSN2 > Substant, undersphile substitution at et sp3-carbon atom >> Sulfonates and Sulfates			betar Haloether Reactive Functional Groups	No alert found	path3-H- acceptor	Alkyl halide:Ether moiety:Sulfona te ester															
Perfluorodiace 4 tamide	w/~24~9	F F F	No alert found No alert found	No sfert found	No afert found	Not classified	No alert found	H-acceptor- path3-H- acceptor	Alkyl halide:Haloacet amide:Imide		Table 1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (	***************************************	***************************************	***************************************					***************************************					

		柳油	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD		alerts by ISS	in vivo mutagenicity (Micronucleus) alerts by ISS	functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試影	遺伝毒性 in vitro マ サスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験 道伝道 id伝道 id伝道 id伝道 idに idに idに idに idに idに idに idに idに idに	性 in vitro NA HPRT試局 試験	in vitro 不 策 定期DNA 成	in vitro 細 造 胞形質転換 viv 試験	医毒性 遺伝 o 小核試 wivo 傷	高性 道伝毒性 in vivo 染色 体異常試験	遺伝毒性 in vivo 不定 期DNA合成 試験	遺伝毒性 in vivo コ メット試験	n vivo突然 f 変異	そがん性
IH.2H- Hexafluorocycl opentene	1005-73-8	F	(Pely) No alert found Halograntad Oyd calarians (Moragrantad August Aug	No alert found	No afert found	Halogenated Cycloalkane Type Compounds	No alert found	No alert found	Alkene moiety/Alkyl halide;Cycloalk ene moiety;Perflou rocarbon derivatives;Un saturated carbocyclic fragment												***************************************		
Hexafluoroisop ropyl acrylate		F O Oty	No alert found No alert found	No slort found	Michael addition/Michael addition >> Polyrized Alternes-Michael addition/School addition >>> Adpha, beta- unsaturated exters  Apha beta- unsaturated exters	Acrylate Reactive Functional Groups			e, branched with secondary carbon; Alkene moiety; Alkyl halide; Carboxyl ic acid ester; Perflouro carbon derivatives														
hydrogen()perf Norohexyleth yl)phosphonate		F F F F F F F F F F F F F F F F F F F	No afert found No afert found	ANZAMO> Soith' Base formation by adelyte formed after metabolic activation/ANC> Soith's formation by adelyte formed after metabolic activation/ANC> Soith's face formation by adelyte formed after metabolic activation >> General Polyhalashare formation (index-19-fid		Organophospl orus Type Compounds	No alert found	No alert found	Alkyl halide;Perflour l ocarbon derivatives;Ph osphonic acid	TAISS, TAISS), TASS, TAISO, WPZ, TAISS, TAIS				V79(±S9) Negative									
2-Bromo-2- (Perfluorohexy )ethene		F F F F F F F F F F F F F F F F F F F	Monohasalen No alert found ( Genetal) Sirve  caterial alert for  genetacid sirve  genetacid  cardingenicity	No afert found	No alert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	Monohaloalkez e	Monohaloalken e	Alkene moiety-Alkenyl halide-Alkyl halide-Perflour ocarbon derivatives														
NN-Diethyl- 2H- perfluoropropa namine	309-88-6	CH <sub>3</sub> F F	No afert found No afert found	No sfort found	SNI,SNI >> Iminum Ion Formation;SNI >> Iminum Ion Formation >> Aliphatic tertiary amines	Alphar- Haloalkylamin Reactive Functional Groups:Nitrog n Mustards Reactive Functional Groups	No alert found	No alert found	Aliphatic amine. tertiary:Alkane, branched with secondary carbon:Alkyl halide:Amine, tertiary:Perflou rocarbon derivatives														
pentafiloropro pionyl acetate		F F F F F F F F F F F F F F F F F F F	No alert found No alert found	No slert found	No alert found	Reactive Ketone Reactive Functional Groups	No alert found	path3-H- acceptor	Alkyl halide:Carboxyl ic acid ester:Ketone;P erflourocarbon derivatives														
3.3- Bis(ctrifluorome thyl)-2- propenoic acid		F P OH	No alert found No alert found	No afert found	No afert found	Not classified	No alert found	No alert found	Acrylic acids Alkene moiety. Alkyl halide; Carboxyl ic acid: Unsaturat ed perhalogenate d carbon derivatives														

名称 CASRN	y (genotox and	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary	in vitro mutagenicity	in vivo mutagenicity	Organic functional	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色	遺伝毒性 in vitro マ	n vitro コ ドット試験	遺伝毒性 vitro 小核	直伝毒性 in itro DNA   F	n vitro IPRT試験	in vitro 不 定期DNA合	in vitro 細 胞形質転換	遺伝毒性 xivo 小核試 v	直伝毒性 遺伝 rivo DNA損 in viv 編 体異	毒性 遺伝毒 o 染色 in vivo	性 遺伝毒性 不定 in vivo コ	in vivo突然 変異	発がん性
(Perfluorocycl 28788-68-3 obsys/methan of	nongenotox) alerts by ISS	No alert found	No alert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	mutagenicity (Ames test) alerts by ISS No alert found	(Micronucleus alerts by ISS No alert found	groups Alcohol:Alkyl halide:Oycloalk ane:Perflouroc arbon derivatives		体異常試験	ウスリン フォーマ試		試験	<b>責切断試験</b>		成	試験	<b>験</b> 6	<b>林</b> 英	常試験 試験	合成メット試験		
Bin(2.2.2- trifluoreethy/la mine 407-01-2	No alert found	No alert found	No alert found	No alert found	Nitrogen Mustards Reactive Functional Groups	No alert found		Aliphatic amine, secondary;Alky I halide;Amine, secondary			***************************************												
2.2.2- Trifluoroachyl Influoroacetat 9	No alert found	No alert found	No alert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	No alert found	Alkyl halide:Carboxyl ic acid ester															
Perfluero(2- bromeethy) viryl ethar)	F ialet for nongenotoxic carcinogenicity : Trichleror (or fluoro) ethylene and Tetrachloror (or fluoro) (or fluoro) ethylene and tetrachloror (or fluoro) ethylene ethylene	Acylation involving a leaving group after metabolic activation;SN2 >> Acylation involving a leaving group	Radical Radical >> ROS formation after GSH depletion/Radical >> ROS formation after GSH depletion >> Central of Communication of the GSH depletion >> Central of Communication o	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	No alert found	Alkene moiety.Alkenyl halide.Alkyl halide.Perflour ocarbon derivatives.Per halogenated carbon derivatives;Un saturated perhalogenate d carbon derivatives											***************************************				
2.4.5- Trackentation cethyl-1.3.5- triazine	No dert found	No slert found	No afert found	No alert found	Not classified	No alert found	No alert found	Alkyl halide;Aryl;Perf lourocarbon derivatives;Tri azine															
Hexaflumuron 88479-06-3	5 - 1	Acylation involving a leaving group after metabolic activation; SNZ >> Acylation involving a leaving group after metabolic activation >> Geminal Polyhaloalkane Derivatives; SNZ >> Nucleophilic substitution at sp3 carbon atom after thiol (glutathione) conjugation; SNZ >>	Radical Placical > ROS formation after GSH depletion/Flacical >> ROS formation after GSH depletion >> General Conference of the GSH depletion >> General Conference of the GSH depletion >> General Conference of the GSH depletion and the GSH de	Acyl Halides; Acylation >> P450 Mediated Activation to Acyl Halides >> 1,1-Dihaloalkanes; SN1; SN1 >> Nitrenium Ion formation; SN1 >> Nitrenium Ion	o Alpha- and heta- Haloether Reactive Functional Groups	No alert found	H-acceptor- path3-H- acceptor	Alkyl halide:Aryl:Aryl halide:Benzami de:Ether moiety:Imide;P erflourocarbon derivatives;Ure a derivatives			***************************************											***************************************	
1H.1H.7H- Perfusorhepty 1 4- methylbenzene suffonate	Dis Benzenesulfon in ethers, in ethers, in ethers, in ethers, in others, in the ethers, in the ethers are ethers, in the ethers, in et	at sp3-carbon atom >> Sulfonates and Sulfates	SN2SN2>> Allylation, ruudeaphilio substitution at ag3-carbon internalN2>> Allylation, ruudeaphilio substitution at ag3-carbon internalN2>> Sufferentes and Suffates	Acyletion:Acyletion >> P450 Mediated Activetion to Acyl Haldes Acyletion >> P450 Mediated Activetion to Acyl Haldes >> 1,1+*Chalcollanes	Not olassified	No alert found	No alert found	Alkyl (hetero)arenes ;Alkyl (hetero)arenes ;Alkyl halide;Alkyl-, alkenyl- and alkynyl (hetero)arenes ;Anyl:Perflouro carbon derivatives;Sul fonate ester			***************************************								***************************************				

	alerts by ISS		DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagenic Classification (Ames tes alerts by I	S alerts by ISS	functional s) groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	直伝毒性 in itro DNA 貞切断試験	vitro PRT試験	in vitro 不 定期DNA合 成	in vitro 細 逆 胞形質転換 vi 試験	直伝毒性 ivo 小核試 wivo 集	E毒性 遺伝毒性 DNA損 in vivo 染 体異常試	遺伝毒性 色 in vivo 不定 験 期DNA合成 試験	遺伝毒性 in vivo コ メット試験	n vivo突然 発がん性 変異
Perfluent/4 - 16090-14-5 methyl-13-6 diseaset-7- ena hialforyl fluorida	Structural alart for increased and the form of the for	No alert found	SV2.3N2 >> SV2 attack on sulfur atom:SV2 >> SV2 attack on sulfur atom >> Sulfonyl Halides	SMI.SMI > Contenium for FormstorSMI >> Contenium for FormstorSMI >> Contenium for Formstor >> Alpha hado ethers (including ablea hado thioesthers)	Alphar and beta full full full full full full full ful	H-acceptor- path3-H- acceptor	Alkane moiety-Alkenyl halide-Alkyl halide-Ether moiety-Perflou rocarbon derivatives:Sul fonyl halide-Unsatur ated perhaloguate d carbon derivatives														
Cyclobrasitor September 84246-29-7 bis culf cry/limi de	F F F F F F F F F F F F F F F F F F F	No alert found	No alert found	No slet found	Not classified No alert fo	H-acceptor- path3-H- acceptor	Alkyl halide/Perflour ocarbon derivatives;Sat urated heterocyclic fragment				***************************************				***************************************						
2H- Perfluencisopr apyl 2- fluenceonylate	Huce Property Propert	mediated broad-drien termation/MZ 27 Thread-plation via formation > Polarized Holdison Demokrates SMS-SM2 >> Afkylation, direct acting opinide and related after PSO-mediated methodison certoviarios 322-22 - Mayetien, direct acting epoides and related after PSO-mediated methodic activation/SM2 >> Mayetien, direct acting epoides and related after PSO-mediated methodic activation >> Polarized Holdisone on carbon atom SM2 >> SSE at 493 and activated significant carbon atom SM2 >> SSE at 493 and activated significant polarized Hadealtene Derivatives	ARQ-AND 'S Solff base formation-AND 'S Solff base formation 'S Political febalesine Devitor-AND 'S Theory state of blacken Devitor-AND 'S Theory state of the AND 'S Theory state of th		Acrylate Reactive Reactive Groups:Alpha and Alpha Haloether Reactive Functional Groups	No alert four	d Acrylate:Alkan e, branched with secondary carbor:Alkene moisty:Alkenyl halide:Alkyl halide:Carboxyl ic acid ester:Perflouro carbon derivatives														
3H 77969-17-3 Perfluoropenta ner 2,4-done	No alert found	SSC SSC 3- Alkylation, nucleophilis substitution at sg3- conton attem\$22 - Alkylation, nucleophilis substitution at sg3-carbon attem\$2 - Alkylation, nucleophilis substitution at sg3-carbon atem >> Halsalkane Derivatives with Lable Halogen	SVEXBLY) Alkylation, mucleophile substitution at a 20-carbon stands 3(2) Alkylation, mucleophile substitution at sp3-carbon stands 3(2) Alkylation, mucleophile substitution at sp3-carbon stom >> Helosikune Derivetives with Labile Halogen	No alert found	Reactive Ketone Reactive Functional Groups	H-acceptor path3-H- acceptor	Alkyl halide;Diketone :Ketone														
N-Methyl-N S3296-64-3 trinethylsiphie ptaffuorobutyr amide	Oth No dert found H <sub>2</sub> C — SI — Oth SI — F — F — F — F — F	No alert found	No alert found	No alert found	Not classified No alert fo	No alert four	d Alkyl halide,Halaacet amide,Perflour ocarbon derivatives;Sila ne														
(Perfluorocycl 40677-94-9 obey/invelly) propr 2-enoste	Halogented Opcolanes Opcol			Michael addition Michael addition >> Polarined Makenes Michael Addition (Michael addition) > Polarined Makenes Michael addition) >> Polarined Makenes Michael addition >> Alpha, beta installmented distance of the Michael addition >> Alpha, beta installmented distance of the Michael addition >> Alpha, beta installmented distance of the Michael addition >> Alpha, beta installmented distance of the Michael addition >> Alpha, beta installmented distance of the Michael Alpha, beta installmented di	Reactive Functional Groups	und No alert four	e moietyAlkyl halide:Carboxyl ic acid ester:Cycloalk ane:Perfloured arbon derivatives														
3 - 243139-64-2 (Perfluoroisppr opt)-2: properate acid	No dert found	No alert found	No alert found	No afert found	Not classified No alert fo	und No alert four	d Acrylic acids:Alkane, branched with tertiary carbon:Alkane moisty:Alkyl halide:Garboxyl io acid:Perflouroc arbon derivatives														

	Carcinogenicit y (genotox and nongenotox) alerts by ISS	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic in vitro Primary mutagenici Classification (Ames tes alerts by I:	in vivo mutagenicity t) (Micronucleus alerts by ISS	Organic functional s) groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	直伝毒性 ir itro DNA H 責切断試験	n vitro IPRT試験	in vitro 不 i 定期DNA合 i 成 I	n vitro 細 遺 物形質転換 vit 試験 験	伝毒性 遺伝 ro 小核試 vivo 傷	毒性 遺伝毒性 DNA損 in vivo 染色 体異常試験	遺伝毒性 in vivo 不定 親DNA合成 試験	遺伝毒性 in vivo コ メット試験	n vivo突然 発がん性 変異
2 Alykoxperfluo roethanesulfon yil fluoride	No alert found	No alert found	SN23942 >> SN2 attack on sulfur atom SN2 >> SN2 attack on sulfur atom >> Sulfonyl Holides	No alert found	Alpha- and beta- fibera- fiber	H-acceptor path3-H- acceptor	Alkene moiety-Alkyl halide-Allyk-Eth er moiety-Perflou rocarbon derivatives:Sul fonyl halide														
Methyl 3- chloroperfulor opropanoste	No alert found	No alert found	No dert found	No alert found	Alpha- and beta-fine Heacther Reactive functional Groups		halide:Carboxyl ic acid ester;Perflouro carbon derivatives;Per halogenated carbon derivatives														
[(Metatallurco 204097-69-2 resp/sulfarar)la cetto acid	F No afert found	No alert found	No dert found	No alert found	Alpha No alert for Reactive Functional Groups Saffur Mustard Groups	No alert four	id Alkyl halide,Carboxyl id acid:Perflouroc arbon derivatives;Sul fide														
4-(3 (Perfluorobuty) )— soylozy), bene y alcohol	No afert found	No alert found	No afert found	No alert found	Not classified No alert fo	No alert four	di Alcohd:Alkyl halide.Aryl:Ben zyl:Ether moiety/Perflou rocarbon derivatives														
2-Vmyl(1- bromoperfulor cethane)	H <sub>2</sub> C F	No alert found	No dert found		Linear Aliphatia Hydrocarbone Type Compounds	No alert four	moiety-Alkyl halide-Perflour ocarbon derivatives.Per halogenated carbon derivatives				***************************************										
	F F F F F F F F F F F F F F F F F F F		No dert found		Halogenated Linear Aliphatic Hydrocarbone Type Compounds		branched with tertiary carbon-Alkene moiety-Alkyl haide-Perflour ocarbon derivatives														
Pentafluoraully (57641-28-5 I fluorosulfate	F Streetural Streetura	No slort found	No afert found	No alert found	Not classified No alert fo	No alert foun	d Alkene moisty-Alkenyl halide-Alkyl halide-Alkyl halide-Unsatur ated perhalognate d carbon derivatives				***************************************										

名称	CASRN	構造 Carcinoge y (genoto nongenoto alerts by	micit DNA alerts for AMES, CA and MNT by OASIS x and xx) ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus) alerts by ISS	functional groups	直伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試影	遺伝毒性 in vitro マ サスリン フォーマ試	in vitro コメット試験	遺伝毒性 vitro 小枝 試験 遺伝毒性 vitro DNA 鎖切断試	in vitro HPRT試験 験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 試験 験	事性 遺伝毒性 小核試 vivo DNA損 傷	遺伝毒性 遺伝 in vivo 染色 in viv 体異常試験 期DN 試験	毒性 遺伝毒性 o 不定 in vivo コ IA合成 メット試験	in vivo突然 変異	発がん性
Bis(1H,1H- perfluoropropyl )amine	883498-76-8	No alex f	ound No elert found	No alert found	No alert found	Nitrogen Mustards Reactive Functional Groups	No alert found	No alert found	Aliphatic amine, secondary;Alky I halide/Amine, secondary;Perf lourocarbon derivatives													
3- (Perfluoroisppropyl)-(2E)- dfluoropropen oic acid	103229-89-6	No alert f	mediated thioketene formation-ANZ >> Thioacylation vis nucleophilic addition after cysteine-mediated thioketen formation >> Polarized Haloalkene Derivatives;SNZ:SNZ >> Alkylation, direct acting epoxides and related after P450-mediated metabolic activation;SNZ >> Alkylation, direct acting epoxides and related after P450-mediated	ANZ-ANZ >> Schrift base formation:ANZ >> Schrift base formation:> Polarized Halsalem Derivatives.ANZ >> Schrift base formation:> Polarized Halsalem Derivatives.ANZ >> Schrift base formation:> Polarized Halsalem Derivatives.ANZ >> Schrift base formation:> Schrift base formation:> And the schrift base formation:> Polarized Halsalem Derivatives.ANZ Schrift base formation:> Polarized Halsalem Derivatives.ANZ Schrift products and related after P450-mediated metabolic activation:> Polarized Halsalem Derivatives.ANZ >> Polarized Halsalem Derivatives.ANZ >> Polarized Halsalem Derivatives.ANZ >> Polarized Halsalem Derivatives.ANZ >> Polarized Halsalem Derivatives.	4	Alpha- and beta- Haloether Reactive Functional Groups	No alert found		Acrylic acids:Alkane, branched with tertiary carbon;Alkene moiety:Alkenel halide:Alkyl halide:Carboxyl ic acid:Perflourod arbon derivatives													
Hexafiluoropro pyl allyl ether		No alert f	No afert found	No afert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	No alert found	Alkane, branched with secondary carbon/Alkene moiety-Alkyl halide-AllyEth er moiety-Perflou rocarbon derivatives													
Hexafluoroacet ylacetone dirydrate	66922-83-6	H <sub>Q</sub> O H <sub>Q</sub> O No alert f	No alert found	No alert found	No alert found	Reactive Ketone Reactive Functional Groups:Not classified	No alert found	path3-H- acceptor;No alert found	Alkyl halide;Diketone :Ketone;No functional group found													
Perfluoropinac ol	918-21-8	Structura alert for nonegood and structural alert for nonegood and structural for structural for the structu	oxic nicity ed	No alert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	path3-H-	Alcohol/Alkane, branched with tertiary carbon/Alkyl halide/Dihydrox yl derivatives;Per flourocarbon derivatives													
(Perfluoro-3- methybury)- 2- hydroxypropyl acrylate		XXXX.	No afert found	No alert found	Michael addition/Michael addition 2) Polarised Alekener-Michael addition/Michael addition/Michael addition/Polarised Alexener-Michael addition 3) Alpha, beta unsaturated exters	Groups	No alert found	path3-H- acceptor	Acrylate:Alcoh ol-Alkane, branched with secondary carbon/Alkane, branched with tertiary carbon/Alkane moiety:Alkyl halide:Carboxyl ic acid ester.Perflouro carbon derivatives													
Tris(2,2,2- triflucroethyl) borate	659-18-7	No alert f	No alert found	No alert found	No alert found	Not classified	No alert found	No alert found	Alkyl halide:Borate ester													

名称	CASRN	構造	Carcinogenicit y (genotox and nongenotox)	DNA alerts for AMES, CA and MNT by OASIS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus	Organic functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試験	遺伝毒性 in vitro マ ゥスリン	in vitro コ メット試験	遺伝毒性 vitro 小核 試験	遺伝毒性 vitro DNA 鎖切断試験	in vitro HPRT試験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 試験	遺伝毒性 rivo 小核試 険	遺伝毒性 遺伝 vivo DNA損 in vi 傷 体異	毒性 遺伝書 ro 染色 in vivo 常試験 期DNA	性 遺伝毒性 不定 in vivo コ 合成 メット試験	in vivo突然 変異	発がん性
Perfluorosusci nic anhydride	699-30-9	F F F	alerts by ISS No alert found	No affert found	No slort found	No alert found	Anhydride Type Compounds	alerts by ISS No alert found	H-acceptor- path3-H- acceptor:Oxo	Acid anhydride:Alkyl a halide:Oxolane; Perflourocarbo n derivatives			フォーマ試									試験			
1, 1— bis(Trifluorom ethyl)methoxy —2-ethanol	63693-13-0	HO F	No alert found	No alert found	No alert found	No alert found	Alpha— and beta— Haloether Reactive Functional Groups	No alert found	H-acceptor- path3-H- acceptor	Alcohol-Alkane, branched with secondary carbon-Alkyl halide:Ether moiety-Perflou rocarbon derivatives															
Perfluore-2- butyltetrahydr ofuran		F F F	(Poly) Halogenated Cycloalkanes (Nongenotox); Structural alert for nongenotoxic carcinogenicity	No afert found	No alert found	SNI.SNI >> Carbenium Ion Formation:SNI >> Carbenium Ion Formation >> Alpha halo ethers (including alpha halo thioethers)	Alpham and betam Halocher Reactive Functional Groups	No alert found	Oxolane	Alkyl halide:Ether moiety;Oxolan e;Perflourocar bon derivatives;Sat urated heterocyclic fragment															
2.2.2- Trifluoro-N- (2.2.2- trifluoroethyl)a cetamide	407-37-4	F HN O	No alert found	No alert found	No afert found	No afert found	Nitrogen Mustards Reactive Functional Groups	No alert found	No alert found	Alkyl halide:Haloacet amide:Organic amide and thioamide															
Propertyberflu oropropane		F F F	No alert found	No alert found	No afert found	No alert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds		No alert found	Alkene moiety-Alkyl halide-Alkyl-Per flourocarbon derivatives															
3H-Purfluoro- 2.2.44 tetrahydroxype ntane		HO GH		No alert found	No alert found	No afert found	Alpha- and beta- Halloether Reactive Functional Groups			Alcohol:Alkane, branched with secondary carbon:Alkyl halide															
4- (IH.IH.2H.2H- Perfluorodecyl thio)phenol	142623-70-9	\$ HAMA	No alert found	No alert found	No afert found	No afert found	Phenol Type Compounds	No alert found	No alert found	Alkyl halide,Aryl;Perf lourocarbon derivatives;Ph enol;Sulfide															

		標准	Carcinogenicit DNA alerts for AMES, CA a y (genotox and nongenotox) alerts by ISS	nd MNT by OASIS DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus alerts by ISS	Organic functional groups	責伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試影	遺伝毒性 in vitro マ サスリン フォーマ試	in vitro コメット試験	遺伝毒性 vitro 小枝 xitro DNA 類切断試	in vitro HPRT試験 験	in vitro 不 定期DNA合 成	in vitro 細 胞形質転換 vivo 小 試験	生 遺伝毒性 遺伝3	i 接色 遺伝毒性 i 染色 in vivo 不知 x試験 期DNA合成 試験	遺伝毒性 in vivo コ t メット試験	in vivo突然 変異	そがん性
2-Amino-2H- perfluoropropa ne	1619-92-7	F NH <sub>2</sub>	No alert found No alert found	No afert found	No alert found	Nitrogen Mustards Reactive Functional Groups	No alert found	No alert found	Aliphatic amine, primary,Alkane, branched with secondary carbon,Alkyl halide,Amine, primary,Perflo urocarbon derivatives				**************************************			***************************************						
Perfluoro(N- methylmorphol ine)	382-28-5	F F F F F F F F F F F F F F F F F F F	(Poly) No alert found Halagemeted Cyclosilanes (Mengenota), alert for a safety for a safety for mongenotasic carrinogenicity	No afert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups.Alpha- Haloalkylamine Reactive Functional Groups.Ntrog n Mustards Reactive Functional Groups	No alert found	H-acceptor- path3-H- acceptor	Aliphatic amine, tertiary/Alkyl halidec/Amine, tertiary/Ether moiety/Morpho line;Perflourod arbon derivatives;Sat urated heterocyclic fragment							1000 TO THE TOTAL THE TOTA						
(Perfluorobuty ryl)-2- thenoylmethan e	559-94-4		No alert found	No alert found	Michael delicion-Michael addisin 3) PR69 Mackal Activation of Heterocycle Ring System Michael addision >> HS60 Mediated Activation of Heterocyclic Ring Systems >> Tringoheroes Michael Eposidation-SNE2 >> P450 Mediated Eposidation >2 Thiophenes-SNE2		No alert found	acceptor	Alkyl halide:Aryl:Dik etone:Ketone: Perflourocarbo n derivatives;Thi ophene													
(Dimethylamin olpropyl) perfluorohexan e sulfonamide		" HHHH	No alert found	No afert found	SNI-SNI >> Immium Ion FormationSNI >> Immiu Ion Formation >> Alighatic tertiary amines				tertiary;Alkyl halide;Amine, tertiary;Perflou rocarbon derivatives;Sul fonamide													
Perfluoro(4- methyl-2- pentene)	3709-71-5	F F F	No alert found	No afert found	No alert found	Linear Aliphatic Hydrocarbone Type Compounds	No alert found		Alkane, branched with tertiary carbon/Alkene moiety-Alkenyi halide/Alkryi halide/Perflour ocarbon derivatives													
Perfluoro-3.6- dimethyl-1,4- dioxan-2-one		P F F F F F F F F F F F F F F F F F F F	(Poby) No alert found Halogranted Halogranted Statement (Polymer of the Control o	No afert found	SNI.SNI >> Carbonium for Formation:SNI >> Curbonium for Formation:SAI >> Alpha halo ethers (including alpha halo thioethers)	betan Haloether Reactive Functional Groups	No alert found	path3-H- acceptor	Alkyl halide/Dioxane; Ether moiety,Lacton s;Perflourocar bon derivatives													
2- Chloro(perfluo ro-2- methylpentane )	67437-97-2	F F F F	No alert found	No afert found	No alert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert found	No alert found	Alkane, branched with tertiary carbon;Alkyl halide;Perflour ocarbon derivatives;Per halogenated carbon derivatives													

名称	CASRN	標達	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD		alerts by ISS	in vivo mutagenicity (Micronucleus alerts by ISS	functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試影	遺伝毒性 in vitro マ サスリン フォーマ試	in vitro コメット試験	遺伝毒性 vitro 小核 試験 鎖切断部	in vitro HPRT試験 験	in vitro 不 定期DNA合 成	in vitro 細 遺伝毒 胞形質転換 vivo 小 試験 験	性 遺伝毒性 遺伝 枝試 vivo DNA損 in viv 傷 体異	毒性 遺伝毒性 o 染色 in vivo 不) 常試験 期DNA合所 試験	遺伝毒性 gin vivo コ g メット試験	in vivo突然 変異	<b>必がん性</b>
Perfluorocyclo hexanecarbony I fluoride	6588-63-2	F F F F	(Poly) No alert found Histogranized (Opcicalismes (Normanized), (Normanized), (Clarecton), (Structural alerts for both generation and generat	SN2SN2 >> Direct acylation imolving a leaving group SN2 >> Direct acylation imolving a leaving group >> Acyl Halides	Acytoin-Acytoin >> Direct Addition of an Acyt Hattlec-Acytoin-> Direct Addition of an Acyt Hattlec-Xyelaton-> Direct Addition of an Acyt Hattle >> Acyt hattle	Acyl and Benzoyl Type Compounds	Acyl halides	Acyl halides	Acyl halide:Gycloalk ane:Perflouros arbon derivatives													
(Perfluorooty) )propyl acetate	150225-00-6	~~iHiHi	No alert found No alert found	No dert found	No alert found			d No alert found	halide/Carboxyl ic acid ester/Perflouro carbon derivatives													
Aminohexafluc ropropan-2-ol		F HO NH <sub>2</sub>	No alert found. No alert found	No afert found		Functional Groups			Alcohol:Aliphat ic amine, primary.Alkyl halide:Amine, primary.Perflo urocarbon derivatives													
perfluoro(3- (1- ethenyloxypro pan-2- yloxy)propanoa te)		H.C. 0 P P P P P P P P P P P P P P P P P P	Structural No alert found alert for alert for morganization for incompanies and incompanies for flavor of	No afert found	SNI(SNI) >> Carbenium lon Fermatior(SNI) >> Carbenium lon Fermatior(SNI) >> Carbenium lon (Sni ha hod ethers (Including alpha halo ethers (Including alpha halo thioethers)	Alpha- and beta- Haloether Reactive Functional Groups		acceptor	Alkene moiety.Alkeryl halide.Alkyl halide.Carboxyl ie acid ester.Ether moiety.Perflou rocarbon derivatives;Un saturated perhalogenate d carbon derivatives													
[(Perfluorooct ylsulfonamido) propyl]-N.N.h trimethylammo nium iodide		0 3 3 3	No alert found No alert found	No dert found	No afert found			d No alert found	halide/Perflour ocarbon derivatives:Qu atemary ammonium salts;Sulfonami de													
Decaffacrocycl chexene		F F F	(Poly) No alert found Halippense Cyclus Process Control Process Structural alert for cardinogenicity	No efert found	No slert found	Cycloalkane Type Compounds		d No alert found	moiety.Alkenyl halide:Alkyl halide:Cycloalk ene moiety.Perflou rocarbon derivatives;Un saturated carbocyclic fragment													
N- (Phenylmethyl) perfuorobutan amide	560-02-1		No alert found No alert found	No afert found	Michael addition/Michael addition >> P450 Mediate Activation to Quinorea and Quinorea Chemicals Michael addition >> P450 Mediate Chemicals Michael addition >> P450 Mediated Activation to Quinorea Chemicals >> Avence  Arence  Observable  Arence  Observable  O	d Not classified	No alert foun	d No alert found	Alkyl halide-Aryl;Ben zyl Haloacetam ide:Organio amide and thicamide:Perfl ourocarbon derivatives													

		標達	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus) alerts by ISS	Organic j functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試影	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 vitro 試験 鎖切	事性 in vitro DNA HPRT! 所試験	in vitro 試験 定期DN 成	不 in vitro 細 A合 胞形質転 試験	遺伝毒性 kyivo 小核試 験	遺伝毒性 vivo DNA損 in viv 傷 体異:	i性 遺伝毒性 染色 in vivo 不 試験 期DNA合 試験	遺伝毒性 定 in vivo コ 成 メット試験	in vivo突然 変異	発がん性
1H, IH,3H- Perfluorobutyl 2- methylacrylate		NG C	No alert found No alert found	No alert found	Michael addition/Michael addition >> Polarised Allenes-Michael additions/Michael addition >> Polarised Allenes-Michael addition >> Alpha, beta unsaturated esters		No alert found	No alert found	Alkane, branched with secondary carbon/Alken moiety-Alkyl halide-Allyl-Car boxylic acid ester-Methacry late-Perflouroc arbon derivatives														
3H-Perfluoro- 4-hydroxy-3- penten-2-one	1694-30-0	F OH	alpha letter unsatterated controlled (Cameton) Structural alert for earningenicity	Mo alert found	No after't found	Alpha- and beta- Haloether Reactive Functional Groups:React ve Ketone Reactive Functional Groups	alpha,beta- unsaturated carbonyls	alpha,beta- unsaturated carbonyls;H- acceptor- path3-H- acceptor	Alkene moiety-Alkyl halide:Enot:Ket one														
Trifluoroacetic acid	76-05-1	F F HO O	No alert found No alert found	No slert found	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	No alert found	Alkyl halide;Carboxyl ( ic acid	TAIS35.TAIS37.TA98, TAI00, TAI02 ±59) Negative	Human lymphocyte (±S9) Negative	lymphoma e LS178Y cells(±S9) Negative				***************************************							
4- ((Perfluorohex ylvethyl)phenyl methanol	356055-76-0		No alert found No alert found	No slert found	Michael Jedécou Michael Jedition >> PED Dedates Michael et Outnoise and Commentage Chemicals Michael Jedécou >> PED Mediated Activation to Guinnes and Quinone-type Chemicals >> Arenes	Not classified	No alert found	No alert found	Alcohol:Aliyi halide:Aryi,Ben zyi,Perflouroca rbon derivatives							***************************************							
N.O – Bis(trifluoroac etyl/hydroxyla mine	684-78-6	F F F F	No alert found No alert found	No alert found	No afert found			path3-H- acceptor	halide:Haloacet amide														
Perfluorobutan oic acid		F F OH	No afert found No afert found	No alert found		Alpha- and beta- Haloether Reactive Functional Groups			ic scidPerflouroc arbon derivatives														
Perfluoro- tert-butyl isobutyrate	914637-43-7	MC F F	No alert found No alert found	No alert found	No afert found	Not classified	No alert found		Alkane. branched with tertiary carbon/Alkyl halide:Carboxyl ic acid ester_Isopropyl :Perflourocarb on derivatives							***************************************							

名称	CASRN	標准	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	mutagenicity (Ames test)	in vivo mutagenicity (Micronucleus) alerts by ISS	functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試明	遺伝毒性 in vitro マ サスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小核 試験 鎖切断	in vitro A HPRT試験 以映	in vitro 不 定期DNA合 成	in vitro 細 造伝 的 胞形質転換 vivo / 試験 験	it 遺伝毒性 遺伝 N核試 vivo DNA損 in vi 傷 体異	毒性 遺伝毒性 o 染色 in vivo 不) 常試験 朔DNA合所 試験	遺伝毒性 g in vivo コ g メット試験	in vivo突然 変異	発がん性
3H.3H- Perfluoro-2- butanone	400-49-7	F	No alert found No alert found	No alert found	No alert found	Reactive Ketone Reactive Functional Groups	No alert found	No alert found	Alkyl halide;Ketone			24 (84							SA-UK			
Trifluoroscetic anhydride	407-25-0	F	No alert found No alert found	No afert found	No alert found	Not classified	No alert found	H-acceptor- path3-H- acceptor	Acid anhydride:Alkyl halide													
Iodoperfluoro- 3- oxapentanesulf onyl fluoride	F	0 = s = 0	Acyldicin involving a leaving group after metabolic activations ONE 29. Adjustment involving a leaving group carbon involving a steini group and a carbon atom after this involving a carbon atom after this (ighatathona) copyagation SIRE 27. Nucleophilis substitution at a gal carbon atom after this (ighatathona) conjugation SIRE 27. Nucleophilis substitution at a gal carbon atom after this (ighatathona) conjugation >5 Germinal Polyhalesahane Obrinatives.	Polyhalashane Derivatives SNS-SN2 2 > Anylation involving a leaving group after metablica scatistical SN2 > Anylation involving a leaving group after metablica scatistical SN2 > Anylation Polyhalashane Derivatives SN2 > Nucleophilic substitution at good carbon storal feet that (alignation) conjugation SN2 > Nucleophilic substitution at sn2 carbon atom after that of Orientees SN2 > SN2 states on suitir at om SN2 >> SN2 attack on suffer at om SN2 >> SN2 attack on sN2 >> SN2	<b>t</b>	betar Haloether Reactive Functional Groups	No alert found	path3-H- acceptor	Alkyl halide/Ether moiety/Perflou rocarbon derivatives;Per halogenated carbon derivatives;Sul fonyl halide													
IH. IH. 2H. 2H- perfluorooctyl acrylate	17527-29-6	NC STATE OF THE ST	No alert found No alert found	ANZANZ > Solif base formation by aldehyde formed after metabolic activation AVZ > Solif base formation by aldehyde formed after metabolic activation AVZ > Solid files formation by Aldehyde formed after metabolic activation >> Genriand Polyharolakane formation (indexed >> Genriand Polyharolakane formation (indexed >> Genriand Polyharolakane Derivatives SINZSE) >> Neglation involving a leaving group of the provinces SINZSE >> Neclapidis in usation at a place of the provinces SINZSE >> Neclapidis in usation at a place of the provinces SINZSE >> Neclapidis in usation at a place of the provinces SINZSE >> Neclapidis in usation at a place of the provinces SINZSE >> Neclapidis in usation at a place of the provinces SINZSE >> Neclapidis in usation at a place of the provinces SINZSE >> Neclapidis in usation at a place of the provinces SINZSE >> Neclapidis in usation at a place SINZ	Polarised Alkenes-Michael addition >> Alpha, beta unsaturated esters	Reactive	No alert found		Acrylate/Alken e moiety :Alkyl halide:Carboxyl ic acid ester/Perflouro carbon derivatives	TAISSS, TAISS7, TA98,TAI00, WP2	CHL/IU (± S9) Negative				V79 (±S9 Negative	)	CD-1 人。他 骨髓 Negat	雄、				
hydroxyethyl)a mmonium perfluorocotan esulfonic acid		10, 21	No alert found No alert found	ANZAM2') Solif base formation by allehyde formed after metabolic activation. ANZ > Solif base formation by allehyde formed after metabolic activation. ANZ > Solif base formation by allehyde formed after metabolic activation. Solid production and analysis of the solid production of the solid production. ANZ Solid production for any solid production. ANZ Solid production of the solid production. ANZ Solid production and solid production. ANZ Solid production at post case of the solid production. ANZ Solid production at a solid production and anz solid production. ANZ Solid production and anz solid production. ANZ Solid production and anz solid production. ANZ Solid production and anz solid production and anz solid production. ANZ Solid production and anz solid production and anz solid production. ANZ Solid production and anz so	•			path3-H- acceptor	halide;Ammoni um salt;Dihydroxyl derivatives;Per flourocarbon derivatives;Sul fonio acid:Surfactan ts – Anionio	ネズミテフス裏、酵母 Negative												
perfluorocotan esulfonate			No alert found No alert found	AMZAN2 > Soliff base formation by aldehyde formed after metabolic activation XIV > Soliff base formation by adelyd metabolic activation XIV > Soliff base formation by adelyd formed after metabolic activation >> Geninal Polyhalacilane Derivatives/Radia/Salifacia/S + Radiad mechanism via NOS formation (indirect/Radiad) >> Radiad mechanism via NOS formation (indirect/Radiad) >> Radiad mechanism via NOS observations (SAIV >> Register involving a leaving group after metabolic activation) >> Barriam Polyhalacilane Derivatives/SIX >> Nucleophilic substitution at sp3 carbon atom after this (datathiese) conjugation XIV >> Nucleophilic substitution at sp3 carbon atom after this (datathiese) conjugation XIV >> Nucleophilic substitution at sp3 carbon atom after this (datathiese) conjugation XIV >> Nucleophilic substitution at sp3 carbon atom after this (datathiese) conjugation XIV >> Nucleophilic substitution at sp3 carbon atom after this (datathiese) conjugation XIV >> Nucleophilic substitution at sp3 carbon atom after this (datathiese) conjugation XIV >> Nucleophilic substitution at sp3 carbon atom after this (datathiese) conjugation XIV >> Nucleophilic substitution at sp3 carbon atom after this (datathiese) conjugation >> Oeminal Polyhalacilane Derivatives					halide,Lithium, organo;Perflou rocarbon derivatives;Sul fonic acid;Surfactan ts – Anionic													
Bitin Perfuora(2- [5-methoxy- 1,3-dicoxfan- 4-yloxy]scetta acid)		F F F F F F F F F F F F F F F F F F F	(Poly)  No alert found  Halogerated  Other (Poly)  Nongerated  Structural  alert for  are reinogenicity	No alert found	No afert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	path3-H- acceptor	Alkyl halide;Carboxyl ic acid:Dioxolane; Ether moiety:Saturat ed heterocyclic fragment													

	CASRN	標准	Carcinogenicit DNA alerts for AMES, CA and MNT by OASIS y (genotox and nongenotox) alerts by ISS	DNA binding by OASIS	DNA binding by OECD		in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus alerts by ISS	functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試影	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 vitro 小枝 試験 道伝毒 vitro DI 鎖切断	性 in vitro IA HPRT試験 試験	in vitro 不 定期DNA f 成	in vitro 細 造 的形質転換 vivo 試験	毒性 遺伝者 小枝試 wivo D 傷	事性 遊伝毒性 in vivo 染色 体異常試験	遺伝毒性 in vivo 不定 ii 期DNA合成 z 試験	責伝毒性 n vivo コ パット試験	i vivo突然 身 支異	とがん性
差加 2-(3.4- dichloro- 1.1.2.2.3.4.4- heptafluorobut oxy)- 2.3.3.3tetrafluo ropropionicaci dfluoride	NO_CAS	o F F G G F F G G F F G G F F F G G F F F G G F F F F G G F F F F G G F	Acyl states Save Colombia Save	AM2.AM2 > Soliff base formation by allehyde formed after instabolic activation(AM2 > Soliff base formation by allehyde formed after instabolic activation(AM2 > Soliff base formation by allehyde formed after metabolic activation > Cernian Polyhidosilane formation (indexed) > Resident metabolic metabolic production of the Commistion (indexed) > Sentinent Polyhidosilane metabolic (indexed) > Sentinent Polyhidosilane production of the Commistion (indexed) > Sentinent Polyhidosilane indexed production of the Commistion (indexed) > Sentinent Polyhidosilane production (indexed) > Sentinent Polyhidosilane production (indexed) > Destabolic production of the Commission (indexed) > Destabolic product	Helide-Acyletion >> Direct Addition of an Acyl Halide >> Acyl halide	Acyl and Benzoyl Type Compounds:Al pha- and beta- Haloether Reactive Functional Groups	Acyl halides	Acyl halides:H- acceptor- path3-H- acceptor		Positive(NHS)						***************************************							
追加 2.33.3 tetrafluoror-2- (heptafluoropropoxy)/propanoi cacid2(trifluor omethy)/hexafl uoropropyleste	NO_CAS	×+++	No alert found No alert found	AM2,AM2 > Soliff base formation by allohyde formed after metabolic activation/AM2 > Soliff be formation by aldebyde formed after metabolic activation/AM2 > Soliff bear formation by aldebyde formed after metabolic activation >> Genniam Polyhioloidane formation (indexed >> Genniam Polyhioloidane formation (indexed >> Genniam Polyhioloidane formation (indexed >> Genniam Polyhioloidane periodic of the polyhioloidane periodic organization org	No alert found	Alpha- and beta- Haloether Reactive Functional Groups	No alert found	H-acceptor- path3-H- acceptor	Alkane, branched with tertiary carbon, Alkyl halide; Carboxyl is acid ester, Ether moiety, Perflou rocarbon derivatives	Positive(NHS)						***************************************							
chloropropanei cacidi3.3 " [[2.2-bis[[3- (3- chloropropano ylosy)1,1.2.2- tetrafluoroprop oxy]diffuorome thyl] 1,1.3,3etrafluo ropropane 1,3- diyldioxy]bis(2 2,3,3- tetrafluoroprop yl)ester		man de la companya de	(Genetal-Stru Derivatives with Lable HologenSIE-282 > Application total after fire involving a leaving result 2022 > Application involving a curring result of the structure of the structure of the structure of the curring results of the structure of the structure of the structure of substitution at any structure of the structure of current of the structure of the structure of the structure of structure of the structure of the structure of current of the structure of the structure of structure of	substitution at sp3-cration stem502 >> Allystaton, readesphili- understitution at sp3-cration stem >> Hidusthare Derivatives wit Lable Hidugen		Haloether Reactive Functional Groups	Aliphatic halogens	Aliphatic halogen	Alkane, branched with unaternary carbon, Alkyl halide; Carboxyl is a sid ester, Ether moiety, Perflou rocarbon derivatives	Positive(NBHS)					***************************************			***************************************					
語加 2- (trifluoromethy )-2.3.3.3- terafluoroprop ionicacidfluorid e		F F F	Acyt haldes No Identificated (Comendo, Structural after fire carrinogenicity	ANZAM2'> Solif base formation by allehyde formed after intestables activation AI2'> Solif base formation by allehyde fromed after metabloic activation AI2'> Solif base formation by allehyde formed after metabloic solvation by Germian Polyholasilane formation (indexes) AIR and the metabloic solvation of Committee Confedence (AIR and Solid Basel mechanism via ROS formation (indirect) >> Genimal Polyholasilane Derivations (AIR and AIR an	Halida-Aculation >> Direct Addition of an Acul	Acyl and Benzoyl Type Compounds	Acyl halides	Acyl halides	Acyl F, halideAlkane, branched with tertiary carbon, Alkyl halide, Perflour ocarbon derivatives	Positive(NIHS)					***************************************	***************************************							
追加 2.3.3.3 tetrafluoro-2- [1.1.2.2- tetrafluoro- 2(fluorosulfory) ()ethoxy]oropio nicacidfluoride	4089-57-0	F F F F F F F F F F F F F F F F F F F	Acyt halies in the control of the co	ANZ-ANZ-> Schiff base formation by alshyde formed after intertables carbinoval AVZ-> Schiff base formation by alshyde mistables and intertables and and avz-AVZ-> Schiff base formation by alshyde mistables are interested as a strength of the avz-AVZ-> Surfamily and avz-AVZ-> S	Halidez-Acylation >> Direct Addition of an Acyl Halide >> Acyl halide	Acyl and Benzcyl Type Compounds:Al pha- and beta- Haloether Reactive Functional Groups	Acyl halides	halides.H- acceptor- path3-H- acceptor	halide.Alkyl halide.Ether moiety.Perflou rocarbon derivatives;Sul fonyl halide	Positive(NIHS)					***************************************	***************************************		***************************************					
chloroacrylicas id3.3.4.5.5.6.6 .6- nonafluorohexy lester		F F F F F F F F F F F F F F F F F F F	mediated thioletens formation:AIR 2.7 Thiosopylation via nucleophila addition after cythnic mediated thioleten with the common and the common and the common and withdrawing Groups:AIR 2.7 Thiosopylation via nucleophila addition after cythnic mediated thioleten formation 3.7 Padrized Histoshene Derinatives:SIS 2.83, 3. Allydation, direct acting provides and related after direct using quoides and related after PASD-mediated direct using quoides and related after PASD-mediated metabolic activation 3.1 Histoshene Derivatives with Electron-Withdrawing Groups:SIS 2.3 Allydation, direct lating spoudes and related after PASD-mediated lating spoudes and related after PASD-mediated Derivatives:SIS 2.3 SIS 2 st. spl. and activated sig.2 cathon storesists 2.5 SIS 2 st. spl. and activated sig.2 cathon storesists 2.5 SIS 2 st. spl. and activated sig.2	formation >> Polarized Islasianen DerinattverAN2 >> Sobif base formation by ideletyle formed after metabolic activation/NE >> Sobif base formation by adelyte formed after metabolic activation/NE >> Sobif base formation by adelyte formed after polarized to the property of the property		Acrylate Reactive Functional Groups.Alpha- and beta- Halcether Reactive Functional Groups			Acrylate/Alken i e moiety ;Alkenyl halide/Alkyl halide/Carboxyl ic acid ester/Perflouro carbon derivatives							***************************************							
追加 3.3.3- trifluoropropyn	661-54-1	но F	No derif four  APCARD > No. Designation Abdedition. On Designation and the Company of the Compan	ANZ-ANZ-> Nucleophilic addition to a, D-vasatured actuating composation AVZ > Nacional addition to a, Sichard composation AVZ > Nacional addition to a a, Sichard section and a sichard	No alert found	Halogenated Linear Aliphatic Hydrocarbone Type Compounds	No alert found	No alert found	Alkyl F halide:Alkyne moiety	Positive(NIHS)													

名称	CASRN	標准	Carcinogenici y (genotox an nongenotox) alerts by ISS	t DNA alerts for AMES, CA and MNT by OASIS d	DNA binding by OASIS	DNA binding by OECD	Oncologic Primary Classification	in vitro mutagenicity (Ames test) alerts by ISS	in vivo mutagenicity (Micronucleus alerts by ISS	Organic functional groups	遺伝毒性 vitro 復帰突然変異試験	遺伝毒性 vitro 染色 体異常試影	遺伝毒性 in vitro マ ウスリン フォーマ試	in vitro コ メット試験	遺伝毒性 jitro 小核 yitro 試験 鏡	伝毒性 in v ro DNA HPI 切断試験	itro in v RT試験 定规	itro 不 in vitr IDNA合 胞形 試験	ro 細 遺伝毒性 質転換 vivo 小核 験	遺伝毒性 ji ji vivo DNA損 ir 傷 t	低毒性 遺 vivo 染色 in 異常試験 期 試	伝毒性 遺伝 vivo 不定 in viv ONA合成 メット 除	毒性 in viv voコ 変異 試験	vo突然 発力	る人性
tetrafluorooxet ane	765-63-9 t	F F O	No alert found	SNESNEY > Allylation, direct acting eposities and protected SNE2 > Allylation (erice acting eposities and related SNE2 > Allylation (erice acting eposities and related >> 14diogenated Oretains and Nalioepouddes			Alphar and betar Haloether Reactive Functional Groups	No alert found	No alert found	Alkyl halide:Ether moiety;Oxetan e;Perflourocar bon derivatives;Sat urated heterocyclic fragment															
38 - dichloro- 2 2.3.4 - pentafluorobut yricacidfluorid e			(Genotox);Strotural alert ctural alert genotoxic carcinogenicit	y	ANCARO 2: Solith base formation by altehyde formed after metabolic activation/AIV 2: Solith face formation by aldehyde formed after metabolic activation/AIV 2: Solid flave formation by aldehyde formed after metabolic activation >> Genimal Polyhalonlane Denviatives Rifacial AIV Radiad mechanism via ROS formation (indirect)Radiad 3: Padiad innechanism via ROS formation (indirect)Radiad 3: Padiad innechanism via ROS Denviatives SIRS 2: Do Apulation involving a leaving group after metabolic activation > Geninal Polyhalosaltem Denviatives SIRS 2: Dist Algoritism (Polyhalosaltem Denviatives SIRS 2: Dist Algoritism SIRS 2: Dist Algoritism SIRS 2: Dist Algoritism SIRS 2: Dist AIR SIRS					enated carbon derivatives															
議力 Methanesuffon Moride, trifluoro-		0=S=0 F-F			SNESSY 2) SNE2 at sulfur atom SNE >> SNE2 at sulfur atom >> Sulfonyl Haldes			No alert found		halide:Sulfonyl	Pearlive(NBS)														
Perfluerometh yldecalin			#N/A	ev/A	BN/A	BN/A			#N/A	IN/A															
Perfluorodimet hyloyolobutane		FFF	#N/A	#WA	SN/A	WA/A			₽N/A	IN/A															
Perfluorohepta nes (Dranched and linear)	NOCAS_8977		₽N/A	#WA	M.A	BN/A	₹N/A	WN/A	EN/A	an/A															