

臭素系難燃剤 標準液

Brominated Flame Retardants & Related Compounds(BFRs)

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WELLINGTON
LABORATORIES

STANDARDS FOR ENVIRONMENTAL
TESTING AND RESEARCH

Wellington Laboratories Japan Inc.
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BFR-CVS and Related "Support Solutions"

Catalogue Number	Product (toluene solution)	Qty/Conc				
確 BFR-CVS	Polybrominated Diphenyl Ethers/Brominated Flame Retardants	1kit				
	Calibration Solutions CS1-CS5	(5×200 µl)				
確 BFR-CS1, BFR-CS2, BFR-CS3, BFR-CS4, BFR-CS5	Individual Calibration Solutions	200 µl				
		BFR-CS1	BFR-CS2	BFR-CS3	BFR-CS4	BFR-CS5
		(ng/ml)	(ng/ml)	(ng/ml)	(ng/ml)	(ng/ml)
NATIVE PBDEs/BFRs						
2-Bromodiphenyl ether	<i>BDE-1</i>	0.25	1.0	5.0	20	100
3-Bromodiphenyl ether	<i>BDE-2</i>	0.25	1.0	5.0	20	100
4-Bromodiphenyl ether	<i>BDE-3</i>	0.25	1.0	5.0	20	100
2,4-Dibromodiphenyl ether	<i>BDE-7</i>	0.25	1.0	5.0	20	100
2,6-Dibromodiphenyl ether	<i>BDE-10</i>	0.25	1.0	5.0	20	100
4,4'-Dibromodiphenyl ether	<i>BDE-15</i>	0.25	1.0	5.0	20	100
2,2',4-Tribromodiphenyl ether	<i>BDE-17</i>	0.25	1.0	5.0	20	100
2,4,4'-Tribromodiphenyl ether	<i>BDE-28</i>	0.25	1.0	5.0	20	100
2,4,6-Tribromodiphenyl ether	<i>BDE-30</i>	0.25	1.0	5.0	20	100
<i>Pentabromoethylbenzene</i>	<i>PBEB</i>	0.25	1.0	5.0	20	100
<i>Hexabromobenzene</i>	<i>HBB</i>	0.25	1.0	5.0	20	100
2,2',4,4'-Tetrabromodiphenyl ether	<i>BDE-47</i>	0.5	2.0	10	40	200
2,2',4,5'-Tetrabromodiphenyl ether	<i>BDE-49</i>	0.5	2.0	10	40	200
2,3',4,4'-Tetrabromodiphenyl ether	<i>BDE-66</i>	0.5	2.0	10	40	200
2,3',4',6-Tetrabromodiphenyl ether	<i>BDE-71</i>	0.5	2.0	10	40	200
3,3',4,4'-Tetrabromodiphenyl ether	<i>BDE-77</i>	0.5	2.0	10	40	200
2,2',3,4,4'-Pentabromodiphenyl ether	<i>BDE-85</i>	0.5	2.0	10	40	200
2,2',4,4',5-Pentabromodiphenyl ether	<i>BDE-99</i>	0.5	2.0	10	40	200
2,2',4,4',6-Pentabromodiphenyl ether	<i>BDE-100</i>	0.5	2.0	10	40	200
2,3',4,4',6-Pentabromodiphenyl ether	<i>BDE-119</i>	0.5	2.0	10	40	200
3,3',4,4',5-Pentabromodiphenyl ether	<i>BDE-126</i>	0.5	2.0	10	40	200
2,2',3,4,4',5'-Hexabromodiphenyl ether	<i>BDE-138</i>	0.5	2.0	10	40	200
2,2',3,4,4',6-Hexabromodiphenyl ether	<i>BDE-139</i>	0.5	2.0	10	40	200
2,2',3,4,4',6'-Hexabromodiphenyl ether	<i>BDE-140</i>	0.5	2.0	10	40	200
2,2',4,4',5,5'-Hexabromodiphenyl ether	<i>BDE-153</i>	0.5	2.0	10	40	200
2,2',4,4',5,6'-Hexabromodiphenyl ether	<i>BDE-154</i>	0.5	2.0	10	40	200
2,3,3',4,4',5-Hexabromodiphenyl ether	<i>BDE-156</i>	0.5	2.0	10	40	200
3,3',4,4',5,5'-Hexabromodiphenyl ether	<i>BDE-169</i>	0.5	2.0	10	40	200
2,2',4,4',5,5'-Hexabromobiphenyl	<i>BB-153</i>	0.5	2.0	10	40	200
1,2-Bis(2,4,6-tribromophenoxy)ethane	<i>BTBPE</i>	0.5	2.0	10	40	200
2,2',3,3',4,4',6-Heptabromodiphenyl ether	<i>BDE-171</i>	1.0	4.0	20	80	400
2,2',3,4,4',5,5'-Heptabromodiphenyl ether	<i>BDE-180</i>	1.0	4.0	20	80	400
2,2',3,4,4',5',6-Heptabromodiphenyl ether	<i>BDE-183</i>	1.0	4.0	20	80	400
2,2',3,4,4',6,6'-Heptabromodiphenyl ether	<i>BDE-184</i>	1.0	4.0	20	80	400
2,3,3',4,4',5',6-Heptabromodiphenyl ether	<i>BDE-191</i>	1.0	4.0	20	80	400
2,2',3,3',4,4',5,6'-Octabromodiphenyl ether	<i>BDE-196</i>	1.0	4.0	20	80	400
2,2',3,3',4,4',6,6'-Octabromodiphenyl ether	<i>BDE-197</i>	1.0	4.0	20	80	400
2,2',3,3',4,5',6,6'-Octabromodiphenyl ether	<i>BDE-201</i>	1.0	4.0	20	80	400
2,2',3,4,4',5,5',6-Octabromodiphenyl ether	<i>BDE-203</i>	1.0	4.0	20	80	400
2,2',3,4,4',5,6,6'-Octabromodiphenyl ether	<i>BDE-204</i>	1.0	4.0	20	80	400
2,3,3',4,4',5,5',6-Octabromodiphenyl ether	<i>BDE-205</i>	1.0	4.0	20	80	400
2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether	<i>BDE-206</i>	2.5	10	50	200	1000
2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether	<i>BDE-207</i>	2.5	10	50	200	1000
2,2',3,3',4,5,5',6,6'-Nonabromodiphenyl ether	<i>BDE-208</i>	2.5	10	50	200	1000
Decabromodiphenyl ether	<i>BDE-209</i>	2.5	10	50	200	1000
Decabromodiphenylethane	<i>DBDPE</i>	5.0	20	100	400	2000
BFR-LCS						
4-Bromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-3</i>	25	25	25	25	25
4,4'-Dibromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-15</i>	25	25	25	25	25
2,4,4'-Tribromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-28</i>	25	25	25	25	25
<i>Hexabromo[¹³C₆]benzene</i>	<i>MHBB</i>	25	25	25	25	25
2,2',4,4'-Tetrabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-47</i>	50	50	50	50	50
3,3',4,4'-Tetrabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-77</i>	50	50	50	50	50
2,2',4,4',5-Pentabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-99</i>	50	50	50	50	50
2,2',4,4',6-Pentabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-100</i>	50	50	50	50	50
3,3',4,4',5-Pentabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-126</i>	50	50	50	50	50
2,2',4,4',5,5'-Hexabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-153</i>	50	50	50	50	50
2,2',4,4',5,6'-Hexabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-154</i>	50	50	50	50	50
3,3',4,4',5,5'-Hexabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-169</i>	50	50	50	50	50
2,2',4,4',5,5'-Hexabromo[¹³ C ₁₂]biphenyl	<i>MBB-153</i>	50	50	50	50	50
1,2-Bis(2,4,6-tribromo[¹³ C ₆]phenoxy)ethane	<i>MBTBPE</i>	50	50	50	50	50
2,2',3,4,4',5',6-Heptabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-183</i>	100	100	100	100	100
2,2',3,3',4,4',6,6'-Octabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-197</i>	100	100	100	100	100
2,3,3',4,4',5,5',6-Octabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-205</i>	100	100	100	100	100
2,2',3,3',4,4',5,6,6'-Nonabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-207</i>	250	250	250	250	250
Decabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-209</i>	250	250	250	250	250
Decabromo[¹³ C ₁₂]diphenylethane	<i>MDBDPE</i>	500	500	500	500	500
BFR-ISS						
3,3',4,5'-Tetrabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-79</i>	50	50	50	50	50
2,2',3,4,4',6-Hexabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-139</i>	50	50	50	50	50
2,2',3,4,4',5,5'-Heptabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-180</i>	100	100	100	100	100
2,2',3,3',4,4',5,5',6-Nonabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-206</i>	250	250	250	250	250
BFR-SCS						
2,2',3,4,4',5'-Hexabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-138</i>	50	50	50	50	50

確 第一種特定化学物質

BFR-CVS and Related "Support Solutions"

Catalogue Number	Product (toluene solution)	Qty/Conc
確 BFR-LCS	Labelled Compounds Stock Solution	1.2ml
確 BFR-ISS	Internal/Injection Standards	1.2ml
確 BFR-SCS	Sampling/Cleanup Standard	1.2ml
確 BFR-PAR	Native Compounds Stock Solution (nonane/toluene solution)	1.2ml

		BFR-LCS (ng/ml)	BFR-ISS (ng/ml)	BFR-SCS (ng/ml)	BFR-PAR (ng/ml)
NATIVE PBDEs/BFRs					
2-Bromodiphenyl ether	<i>BDE-1</i>	—	—	—	200
3-Bromodiphenyl ether	<i>BDE-2</i>	—	—	—	200
4-Bromodiphenyl ether	<i>BDE-3</i>	—	—	—	200
2,4-Dibromodiphenyl ether	<i>BDE-7</i>	—	—	—	200
2,6-Dibromodiphenyl ether	<i>BDE-10</i>	—	—	—	200
4,4'-Dibromodiphenyl ether	<i>BDE-15</i>	—	—	—	200
2,2',4-Tribromodiphenyl ether	<i>BDE-17</i>	—	—	—	200
2,4,4'-Tribromodiphenyl ether	<i>BDE-28</i>	—	—	—	200
2,4,6-Tribromodiphenyl ether	<i>BDE-30</i>	—	—	—	200
<i>Pentabromoethylbenzene</i>	<i>PBEB</i>	—	—	—	200
<i>Hexabromobenzene</i>	<i>HBB</i>	—	—	—	200
2,2',4,4'-Tetrabromodiphenyl ether	<i>BDE-47</i>	—	—	—	400
2,2',4,5'-Tetrabromodiphenyl ether	<i>BDE-49</i>	—	—	—	400
2,3',4,4'-Tetrabromodiphenyl ether	<i>BDE-66</i>	—	—	—	400
2,3',4',6-Tetrabromodiphenyl ether	<i>BDE-71</i>	—	—	—	400
3,3',4,4'-Tetrabromodiphenyl ether	<i>BDE-77</i>	—	—	—	400
2,2',3,4,4'-Pentabromodiphenyl ether	<i>BDE-85</i>	—	—	—	400
2,2',4,4',5-Pentabromodiphenyl ether	<i>BDE-99</i>	—	—	—	400
2,2',4,4,6-Pentabromodiphenyl ether	<i>BDE-100</i>	—	—	—	400
2,3',4,4',6-Pentabromodiphenyl ether	<i>BDE-119</i>	—	—	—	400
3,3',4,4',5-Pentabromodiphenyl ether	<i>BDE-126</i>	—	—	—	400
2,2',3,4,4',5'-Hexabromodiphenyl ether	<i>BDE-138</i>	—	—	—	400
2,2',3,4,4',6-Hexabromodiphenyl ether	<i>BDE-139</i>	—	—	—	400
2,2',3,4,4',6'-Hexabromodiphenyl ether	<i>BDE-140</i>	—	—	—	400
2,2',4,4',5,5'-Hexabromodiphenyl ether	<i>BDE-153</i>	—	—	—	400
2,2',4,4',5,6'-Hexabromodiphenyl ether	<i>BDE-154</i>	—	—	—	400
2,3,3',4,4',5-Hexabromodiphenyl ether	<i>BDE-156</i>	—	—	—	400
3,3',4,4',5,5'-Hexabromodiphenyl ether	<i>BDE-169</i>	—	—	—	400
2,2',4,4',5,5'-Hexabromobiphenyl	<i>BB-153</i>	—	—	—	400
<i>1,2-Bis(2,4,6-tribromophenoxy)ethane</i>	<i>BTBPE</i>	—	—	—	400
2,2',3,3',4,4',6-Heptabromodiphenyl ether	<i>BDE-171</i>	—	—	—	800
2,2',3,4,4',5,5'-Heptabromodiphenyl ether	<i>BDE-180</i>	—	—	—	800
2,2',3,4,4',5,6-Heptabromodiphenyl ether	<i>BDE-183</i>	—	—	—	800
2,2',3,4,4',6,6'-Heptabromodiphenyl ether	<i>BDE-184</i>	—	—	—	800
2,3,3',4,4',5,6-Heptabromodiphenyl ether	<i>BDE-191</i>	—	—	—	800
2,2',3,3',4,4',5,6'-Octabromodiphenyl ether	<i>BDE-196</i>	—	—	—	800
2,2',3,3',4,4',6,6'-Octabromodiphenyl ether	<i>BDE-197</i>	—	—	—	800
2,2',3,3',4,5',6,6'-Octabromodiphenyl ether	<i>BDE-201</i>	—	—	—	800
2,2',3,4,4',5,5',6-Octabromodiphenyl ether	<i>BDE-203</i>	—	—	—	800
2,2',3,4,4',5,6,6'-Octabromodiphenyl ether	<i>BDE-204</i>	—	—	—	800
2,3,3',4,4',5,5',6-Octabromodiphenyl ether	<i>BDE-205</i>	—	—	—	800
2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether	<i>BDE-206</i>	—	—	—	2000
2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether	<i>BDE-207</i>	—	—	—	2000
2,2',3,3',4,5,5',6,6'-Nonabromodiphenyl ether	<i>BDE-208</i>	—	—	—	2000
Decabromodiphenyl ether	<i>BDE-209</i>	—	—	—	2000
<i>Decabromodiphenylethane</i>	<i>DBDPE</i>	—	—	—	4000
BFR-LCS					
4-Bromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-3</i>	100	—	—	—
4,4'-Dibromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-15</i>	100	—	—	—
2,4,4'-Tribromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-28</i>	100	—	—	—
<i>Hexabromo[¹³C₁₂]benzene</i>	<i>MHBB</i>	100	—	—	—
2,2',4,4'-Tetrabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-47</i>	200	—	—	—
3,3',4,4'-Tetrabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-77</i>	200	—	—	—
2,2',4,4',5-Pentabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-99</i>	200	—	—	—
2,2',4,4',6-Pentabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-100</i>	200	—	—	—
3,3',4,4',5-Pentabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-126</i>	200	—	—	—
2,2',4,4',5,5'-Hexabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-153</i>	200	—	—	—
2,2',4,4',5,6'-Hexabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-154</i>	200	—	—	—
3,3',4,4',5,5'-Hexabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-169</i>	200	—	—	—
2,2',4,4',5,5'-Hexabromo[¹³ C ₁₂]biphenyl	<i>MBB-153</i>	200	—	—	—
<i>1,2-Bis(2,4,6-tribromo[¹³C₁₂]phenoxy)ethane</i>	<i>MBTBPE</i>	200	—	—	—
2,2',3,4,4',5,6-Heptabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-183</i>	400	—	—	—
2,2',3,3',4,4',6,6'-Octabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-197</i>	400	—	—	—
2,3,3',4,4',5,5',6-Octabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-205</i>	400	—	—	—
2,2',3,3',4,4',5,6,6'-Nonabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-207</i>	1000	—	—	—
Decabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-209</i>	1000	—	—	—
<i>Decabromo[¹³C₁₂]diphenylethane</i>	<i>MDBDPE</i>	2000	—	—	—
BFR-ISS					
3,3',4,5'-Tetrabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-79</i>	—	200	—	—
2,2',3,4,4',6-Hexabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-139</i>	—	200	—	—
2,2',3,4,4',5,5'-Heptabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-180</i>	—	400	—	—
2,2',3,3',4,4',5,5',6-Nonabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-206</i>	—	1000	—	—
BFR-SCS					
2,2',3,4,4',5'-Hexabromo[¹³ C ₁₂]diphenyl ether	<i>MBDE-138</i>	—	—	400	—

BDE-CVS-E and Related "Support Solutions"

Catalogue Number	Product (nonane/toluene solution)	Qty/Conc
確 BDE-CVS-E	BDE-CVS-E Calibration Solutions CS1-CS5	1 kit (5×200 µl)
確 BDE-CS1-E	CS1	200 µl
確 BDE-CS2-E	CS2	200 µl
確 BDE-CS3-E	CS3	200 µl
確 BDE-CS4-E	CS4	200 µl
確 BDE-CS5-E	CS5	200 µl

NATIVE PBDE CONGENERS	BDE-CS1- E BDE-CS2- E BDE-CS3- E BDE-CS4- E BDE-CS5- E					
	IUPAC	(ng/ml)	(ng/ml)	(ng/ml)	(ng/ml)	(ng/ml)
4-Bromodiphenyl ether	3	1.0	5.0	20	100	400
2,4-Dibromodiphenyl ether	7	1.0	5.0	20	100	400
4,4'-Dibromodiphenyl ether	15	1.0	5.0	20	100	400
2,2',4-Tribromodiphenyl ether	17	1.0	5.0	20	100	400
2,4,4'-Tribromodiphenyl ether	28	1.0	5.0	20	100	400
2,2',4,4'-Tetrabromodiphenyl ether	47	1.0	5.0	20	100	400
2,2',4,5'-Tetrabromodiphenyl ether	49	1.0	5.0	20	100	400
2,3',4,4'-Tetrabromodiphenyl ether	66	1.0	5.0	20	100	400
2,3',4',6-Tetrabromodiphenyl ether	71	1.0	5.0	20	100	400
3,3',4,4'-Tetrabromodiphenyl ether	77	1.0	5.0	20	100	400
2,2',3,4,4'-Pentabromodiphenyl ether	85	1.0	5.0	20	100	400
2,2',4,4',5-Pentabromodiphenyl ether	99	1.0	5.0	20	100	400
2,2',4,4',6-Pentabromodiphenyl ether	100	1.0	5.0	20	100	400
2,3',4,4',6-Pentabromodiphenyl ether	119	1.0	5.0	20	100	400
3,3',4,4',5-Pentabromodiphenyl ether	126	1.0	5.0	20	100	400
2,2',3,4,4',5'-Hexabromodiphenyl ether	138	2.0	10	40	200	800
2,2',4,4',5,5'-Hexabromodiphenyl ether	153	2.0	10	40	200	800
2,2',4,4',5,6'-Hexabromodiphenyl ether	154	2.0	10	40	200	800
2,3,3',4,4',5-Hexabromodiphenyl ether	156	2.0	10	40	200	800
2,2',3,4,4',5',6-Heptabromodiphenyl ether	183	2.0	10	40	200	800
2,2',3,4,4',6,6'-Heptabromodiphenyl ether	184	2.0	10	40	200	800
2,3,3',4,4',5',6-Heptabromodiphenyl ether	191	2.0	10	40	200	800
2,2',3,3',4,4',5,6-Octabromodiphenyl ether	196	2.0	10	40	200	800
2,2',3,3,3,4,4',6,6'-Octabromodiphenyl ether	197	2.0	10	40	200	800
2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether	206	5.0	25	100	500	2000
2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether	207	5.0	25	100	500	2000
Decabromodiphenyl ether	209	5.0	25	100	500	2000
MASS-LABELLED PBDE CONGENERS						
4-Bromo[¹³ C ₁₂]diphenyl ether	3L	100	100	100	100	100
4,4'-Dibromo[¹³ C ₁₂]diphenyl ether	15L	100	100	100	100	100
2,4,4'-Tribromo[¹³ C ₁₂]diphenyl ether	28L	100	100	100	100	100
2,2',4,4'-Tetrabromo[¹³ C ₁₂]diphenyl ether	47L	100	100	100	100	100
2,2',4,4',5-Pentabromo[¹³ C ₁₂]diphenyl ether	99L	100	100	100	100	100
2,2',4,4',5,5'-Hexabromo[¹³ C ₁₂]diphenyl ether	153L	200	200	200	200	200
2,2',4,4',5,6'-Hexabromo[¹³ C ₁₂]diphenyl ether	154L	200	200	200	200	200
2,2',3,4,4',5',6-Heptabromo[¹³ C ₁₂]diphenyl ether	183L	200	200	200	200	200
2,2',3,3',4,4',6,6'-Octabromo[¹³ C ₁₂]diphenyl ether	197L	200	200	200	200	200
2,2',3,3',4,4',5,6,6'-Nonabromo[¹³ C ₁₂]diphenyl ether	207L	500	500	500	500	500
Decabromo[¹³ C ₁₂]diphenyl ether	209L	500	500	500	500	500
MASS-LABELLED PBDE Internal Standard						
2,2',3,4,4',5'-Hexabromo[¹³ C ₁₂]diphenyl ether	138L	200	200	200	200	200

BDE-CVS-E and Related "Support Solutions"

Catalogue Number	Product (nonane/toluene solution)			
確 MBDE-MXE	Mass-Labelled PBDE Solution/Mixture			1.2ml
確 BDE-CVS-EISS	Mass-Labelled PBDE Internal Standard Solution			1.2ml
確 BDE-MXE	Native PBDE Solution/Mixture			1.2ml

NATIVE PBDE CONGENERS	IUPAC	MBDE-MXE (ng/ml)	BDE-CVS-EISS (ng/ml)	BDE-MXE (ng/ml)
4-Bromodiphenyl ether	3	—	—	1000
2,4-Dibromodiphenyl ether	7	—	—	1000
4,4'-Dibromodiphenyl ether	15	—	—	1000
2,2',4-Tribromodiphenyl ether	17	—	—	1000
2,4,4'-Tribromodiphenyl ether	28	—	—	1000
2,2',4,4'-Tetrabromodiphenyl ether	47	—	—	1000
2,2',4,5'-Tetrabromodiphenyl ether	49	—	—	1000
2,3',4,4'-Tetrabromodiphenyl ether	66	—	—	1000
2,3',4',6-Tetrabromodiphenyl ether	71	—	—	1000
3,3',4,4'-Tetrabromodiphenyl ether	77	—	—	1000
2,2',3,4,4'-Pentabromodiphenyl ether	85	—	—	1000
2,2',4,4',5-Pentabromodiphenyl ether	99	—	—	1000
2,2',4,4',6-Pentabromodiphenyl ether	100	—	—	1000
2,3',4,4',6-Pentabromodiphenyl ether	119	—	—	1000
3,3',4,4',5-Pentabromodiphenyl ether	126	—	—	1000
2,2',3,4,4',5'-Hexabromodiphenyl ether	138	—	—	2000
2,2',4,4',5,5'-Hexabromodiphenyl ether	153	—	—	2000
2,2',4,4',5,6'-Hexabromodiphenyl ether	154	—	—	2000
2,3,3',4,4',5-Hexabromodiphenyl ether	156	—	—	2000
2,2',3,4,4',5',6-Heptabromodiphenyl ether	183	—	—	2000
2,2',3,4,4',6,6'-Heptabromodiphenyl ether	184	—	—	2000
2,3,3',4,4',5',6-Heptabromodiphenyl ether	191	—	—	2000
2,2',3,3',4,4',5,6'-Octabromodiphenyl ether	196	—	—	2000
2,2',3,3',4,4',6,6'-Octabromodiphenyl ether	197	—	—	2000
2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether	206	—	—	5000
2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether	207	—	—	5000
Decabromodiphenyl ether	209	—	—	5000

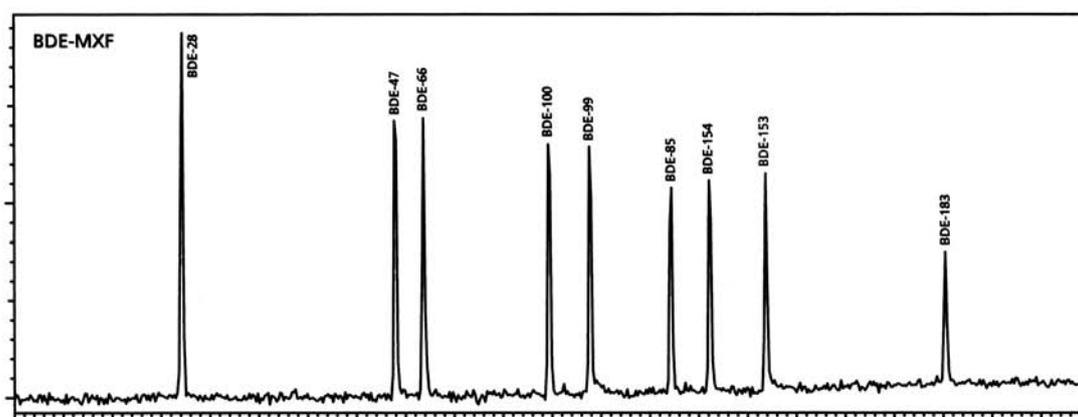
MASS-LABELLED PBDE CONGENERS				
4-Bromo[¹³ C ₁₂]diphenyl ether	3L	100	—	—
4,4'-Dibromo[¹³ C ₁₂]diphenyl ether	15L	100	—	—
2,4,4'-Tribromo[¹³ C ₁₂]diphenyl ether	28L	100	—	—
2,2',4,4'-Tetrabromo[¹³ C ₁₂]diphenyl ether	47L	100	—	—
2,2',4,4',5-Pentabromo[¹³ C ₁₂]diphenyl ether	99L	100	—	—
2,2',4,4',5,5'-Hexabromo[¹³ C ₁₂]diphenyl ether	153L	200	—	—
2,2',4,4',5,6'-Hexabromo[¹³ C ₁₂]diphenyl ether	154L	200	—	—
2,2',3,4,4',5,6-Heptabromo[¹³ C ₁₂]diphenyl ether	183L	200	—	—
2,2',3,3',4,4',6,6'-Octabromo[¹³ C ₁₂]diphenyl ether	197L	200	—	—
2,2',3,3',4,4',5,6,6'-Nonabromo[¹³ C ₁₂]diphenyl ether	207L	500	—	—
Decabromo[¹³ C ₁₂]diphenyl ether	209L	500	—	—

MASS-LABELLED PBDE Internal Standard				
2,2',3,4,4',5'-Hexabromo[¹³ C ₁₂]diphenyl ether	138L	—	200	—

BDE-CVS-F and Related "Support Solutions"

Catalogue Number	Product (toluene solution)	Qty/Conc
確 BDE-CVS-F	BDE-CVS-F Calibration Solutions CS1-CS5	1 kit (5×200 µl)
確 BDE-CS1-F	CS1	200 µl
確 BDE-CS2-F	CS2	200 µl
確 BDE-CS3-F	CS3	200 µl
確 BDE-CS4-F	CS4	200 µl
確 BDE-CS5-F	CS5	200 µl

NATIVE PBDE CONGENERS	IUPAC	BDE-CS1-	BDE-CS2-	BDE-CS3-	BDE-CS4-	BDE-CS5-
		F	F	F	F	F
		(ng/ml)	(ng/ml)	(ng/ml)	(ng/ml)	(ng/ml)
2,4,4'-Tribromodiphenyl ether	28	1.0	5.0	25	100	500
2,2',4,4'-Tetrabromodiphenyl ether	47	1.0	5.0	25	100	500
2,3',4,4'-Tetrabromodiphenyl ether	66	1.0	5.0	25	100	500
2,2',3,4,4'-Pentabromodiphenyl ether	85	1.0	5.0	25	100	500
2,2',4,4',5-Pentabromodiphenyl ether	99	1.0	5.0	25	100	500
2,2',4,4',6-Pentabromodiphenyl ether	100	1.0	5.0	25	100	500
2,2',4,4',5,5'-Hexabromodiphenyl ether	153	1.0	5.0	25	100	500
2,2',4,4',5,6'-Hexabromodiphehyl ether	154	1.0	5.0	25	100	500
2,2',3,4,4',5',6-Heptabromodiphenyl ether	183	1.0	5.0	25	100	500
MASS-LABELLED PBDE SURROGATE STANDARDS						
2,4,4'-Tribromo[¹³ C ₁₂]diphenyl ether	28L	20	20	20	20	20
2,2',4,4'-Tetrabromo[¹³ C ₁₂]diphenyl ether	47L	20	20	20	20	20
2,2',4,4',5-Pentabromo[¹³ C ₁₂]diphenyl ether	99L	20	20	20	20	20
2,2',4,4',6-Pentabromo[¹³ C ₁₂]diphenyl ether	100L	20	20	20	20	20
2,2',4,4',5,5'-Hexabromo[¹³ C ₁₂]diphenyl ether	153L	20	20	20	20	20
2,2',4,4',5,6'-Hexabromo[¹³ C ₁₂]diphenyl ether	154L	20	20	20	20	20
2,2',3,4,4',5',6-Heptabromo[¹³ C ₁₂]diphenyl ether	183L	20	20	20	20	20
MASS-LABELLED PBDE RECOVERY STANDARDS						
3,3',4,4'-Tetrabromo[¹³ C ₁₂]diphenyl ether	77L	20	20	20	20	20
2,2',3,4,4',5'-Hexabromo[¹³ C ₁₂]diphenyl ether	138L	20	20	20	20	20



BDE-MXF; HRGC/LRMS TIC Chromatogram

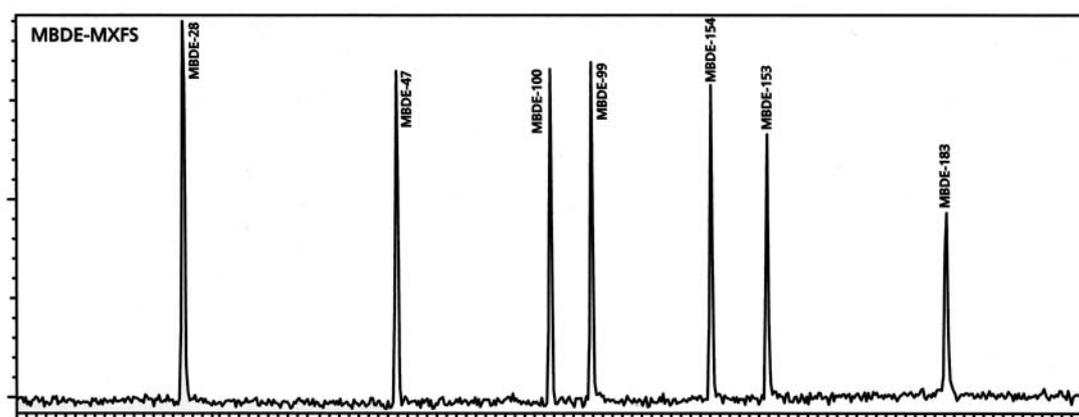
BDE-CVS-F and Related "Support Solutions"

Catalogue Number	Product (toluene solution)	Qty/Conc
確 MBDE-MXFS	Mass-Labelled PBDE Surrogate Stock	1.2 ml
確 MBDE-MXFR	Mass-Labelled PBDE Recovery Stock	1.2 ml
確 BDE-MXF	Native PBDE Stock	1.2 ml

NATIVE PBDE CONGENERS	IUPAC	MBDE-MXFS (ng/ml)	MBDE-MXFR (ng/ml)	BDE-MXF (ng/ml)
2,4,4'-Tribromodiphenyl ether	28	—	—	2000
2,2',4,4'-Tetrabromodiphenyl ether	47	—	—	2000
2,3',4,4'-Tetrabromodiphenyl ether	66	—	—	2000
2,2',3,4,4'-Pentabromodiphenyl ether	85	—	—	2000
2,2',4,4',5-Pentabromodiphenyl ether	99	—	—	2000
2,2',4,4',6-Pentabromodiphenyl ether	100	—	—	2000
2,2',4,4',5,5'-Hexabromodiphenyl ether	153	—	—	2000
2,2',4,4',5,6'-Hexabromodiphenyl ether	154	—	—	2000
2,2',3,4,4',5',6-Heptabromodiphenyl ether	183	—	—	2000

MASS-LABELLED PBDE SURROGATE STANDARDS				
2,4,4'-Tribromo[¹³ C ₁₂]diphenyl ether	28L	2000	—	—
2,2',4,4'-Tetrabromo[¹³ C ₁₂]diphenyl ether	47L	2000	—	—
2,2',4,4',5-Pentabromo[¹³ C ₁₂]diphenyl ether	99L	2000	—	—
2,2',4,4',6-Pentabromo[¹³ C ₁₂]diphenyl ether	100L	2000	—	—
2,2',4,4',5,5'-Hexabromo[¹³ C ₁₂]diphenyl ether	153L	2000	—	—
2,2',4,4',5,6'-Hexabromo[¹³ C ₁₂]diphenyl ether	154L	2000	—	—
2,2',3,4,4',5',6-Heptabromo[¹³ C ₁₂]diphenyl ether	183L	2000	—	—

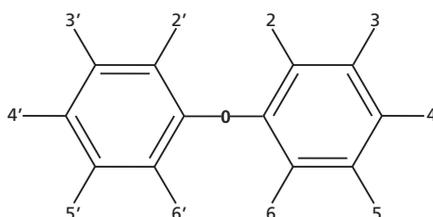
MASS-LABELLED PBDE RECOVERY STANDARDS				
3,3',4,4'-Tetrabromo[¹³ C ₁₂]diphenyl ether	77L	—	2000	—
2,2',3,4,4',5'-Hexabromo[¹³ C ₁₂]diphenyl ether	138L	—	2000	—



MBDE-MXFS; HRGC/LRMS TIC Chromatogram

NATIVE BROMINATED DIPHENYL ETHERS (PBDEs)

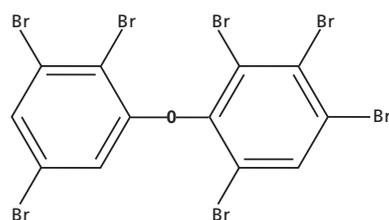
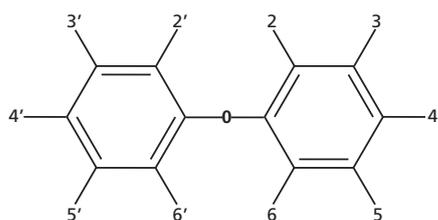
Catalogue Number	Product (nonane solution)	Qty/Conc
BDE-1	2-Bromodiphenyl ether	1.2 ml 50 µg/ml
BDE-2	3-Bromodiphenyl ether	1.2 ml 50 µg/ml
BDE-3	4-Bromodiphenyl ether	1.2 ml 50 µg/ml
BDE-7	2,4-Dibromodiphenyl ether	1.2 ml 50 µg/ml
BDE-10	2,6-Dibromodiphenyl ether	1.2 ml 50 µg/ml
BDE-15	4,4'-Dibromodiphenyl ether	1.2 ml 50 µg/ml
BDE-17	2,2',4-Tribromodiphenyl ether	1.2 ml 50 µg/ml
BDE-21	2,3,4-Tribromodiphenyl ether	1.2 ml 50 µg/ml
BDE-28	2,4,4'-Tribromodiphenyl ether	1.2 ml 50 µg/ml
BDE-30	2,4,6-Tribromodiphenyl ether	1.2 ml 50 µg/ml
BDE-37	3,4,4'-Tribromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-47	2,2',4,4'-Tetrabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-49	2,2',4,5'-Tetrabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-54	2,2',6,6'-Tetrabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-60	2,3,4,4'-Tetrabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-66	2,3',4,4'-Tetrabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-71	2,3',4',6-Tetrabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-77	3,3',4,4'-Tetrabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-82	2,2',3,3',4-Pentabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-85	2,2',3,4,4'-Pentabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-99	2,2',4,4',5-Pentabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-100	2,2',4,4',6-Pentabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-104	2,2',4,6,6'-Pentabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-105	2,3,3',4,4'-Pentabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-119	2,3',4,4',6-Pentabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-126	3,3',4,4',5-Pentabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-128	2,2',3,3',4,4'-Hexabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-138	2,2',3,4,4',5'-Hexabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-139	2,2',3,4,4',6-Hexabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-140	2,2',3,4,4',6'-Hexabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-149	2,2',3,4',5',6-Hexabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-153	2,2',4,4',5,5'-Hexabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-154	2,2',4,4',5,6'-Hexabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-155	2,2',4,4',6,6'-Hexabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-156	2,3,3',4,4',5-Hexabromodiphenyl ether	1.2 ml 50 µg/ml



NATIVE BROMINATED DIPHENYL ETHERS (PBDEs)

Catalogue Number	Product (nonane solution)	Qty/Conc
確 BDE-169	3,3',4,4',5,5'-Hexabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-170	2,2',3,3',4,4',5-Heptabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-171	2,2',3,3',4,4',6-Heptabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-175	2,2',3,3',4,5',6-Heptabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-176	2,2',3,3',4,6,6'-Heptabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-177	2,2',3,3',4',5,6-Heptabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-179	2,2',3,3',5,6,6'-Heptabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-180	2,2',3,4,4',5,5'-Heptabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-181	2,2',3,4,4',5,6-Heptabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-182	2,2',3,4,4',5,6'-Heptabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-183	2,2',3,4,4',5',6-Heptabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-184	2,2',3,4,4',6,6'-Heptabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-188	2,2',3,4',5,6,6'-Heptabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-189	2,3,3',4,4',5,5'-Heptabromodiphenyl ether	1.2 ml 50 µg/ml
確 BDE-191*	2,3,3',4,4',5',6-Heptabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-194*	2,2',3,3',4,4',5,5'-Octabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-195*	2,2',3,3',4,4',5,6-Octabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-196*	2,2',3,3',4,4',5,6'-Octabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-197*	2,2',3,3',4,4',6,6'-Octabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-198*	2,2',3,3',4,5,5',6-Octabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-199*	2,2',3,3',4,5,5',6'-Octabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-200*	2,2',3,3',4,5,6,6'-Octabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-201*	2,2',3,3',4,5',6,6'-Octabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-202*	2,2',3,3',5,5',6,6'-Octabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-203*	2,2',3,4,4',5,5',6-Octabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-204*	2,2',3,4,4',5,6,6'-Octabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-205*	2,3,3',4,4',5,5',6-Octabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-206*	2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-207*	2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-208*	2,2',3,3',4,5,5',6,6'-Nonabromodiphenyl ether	1.2 ml 50 µg/ml
BDE-209*	Decabromodiphenyl ether	1.2 ml 50 µg/ml
4PC-BDE-208*	2,2',3,3',4,5,5',6,6'-Nonabromo-4'-chlorodiphenyl ether	1.2 ml 50 µg/ml

* Toluene Solution



BDE-175

PBDE WINDOW DEFINING SOLUTION/MIXTURE

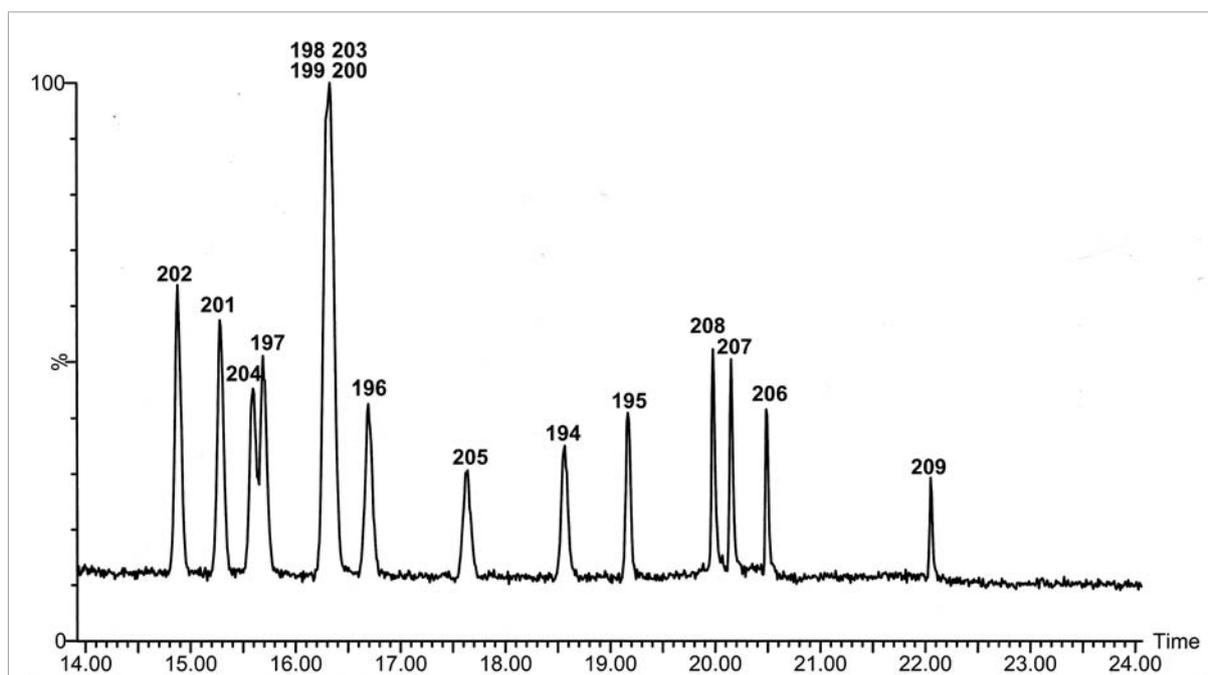
Catalogue Number	Product (nonane solution)	Qty/Conc	
確 BDE-WD	PBDE Window Defining Solution/Mixture for use with a J&W DB-5HT column	1.2 ml	
	FIRST ELUTER (IUPAC)	LAST ELUTER (IUPAC)	
		CONCENTRATION (µg/ml each)	
Bromodiphenyl ethers	1	3	1.0
Dibromodiphenyl ethers	10	15	1.0
Tribromodiphenyl ethers	30	37	1.0
Tetrabromodiphenyl ethers	54	60	1.0
Pentabromodiphenyl ethers	104	82	1.0
Hexabromodiphenyl ethers	155	128	2.0
Heptabromodiphenyl ethers	188	170	2.0
Octabromodiphenyl ethers	202	195	2.0
Nonabromodiphenyl ethers	208	206	5.0
Decabromodiphenyl ether		209	5.0

NATIVE BROMINATED DIPHENYL ETHERS: SOLUTION/MIXTURES

Catalogue Number	Product (nonane solution)	Qty/Conc
確 BDE-MXA	Native PBDE Solution/Mixture	1.2 ml
	IUPAC	
2,2',4,4'-Tetrabromodiphenyl ether	47	5 µg/ml
2,2',4,4',5-Pentabromodiphenyl ether	99	5 µg/ml
2,2',4,4,5,5'-Hexabromodiphenyl ether	153	5 µg/ml
確 BDE-MXB	Native PBDE Solution/Mixture	1.2 ml
	IUPAC	
2,4,4'-Tribromodiphenyl ether	28	5 µg/ml
2,2',4,4',5,6'-Hexabromodiphenyl ether	154	5 µg/ml
2,2',3,4,4,5',6-Heptabromodiphenyl ether	183	5 µg/ml
確 BDE-MXD	Native PBDE Solution/Mixture	1.2 ml
	IUPAC	
2,2',4-Tribromodiphenyl ether	17	5 µg/ml
2,2',4,4'-Tetrabromodiphenyl ether	47	5 µg/ml
2,3',4,4'-Tetrabromodiphenyl ether	66	5 µg/ml
2,2',4,4',6-Pentabromodiphenyl ether	100	5 µg/ml
2,2',4,4',5,5',-Hexabromodiphenyl ether	153	5 µg/ml
2,2',3,4,4',5',6-Heptabromodiphenyl ether	183	5 µg/ml
Decabromodiphenyl ether	209	10 µg/ml

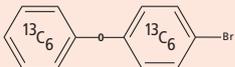
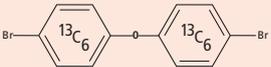
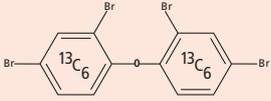
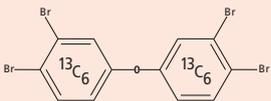
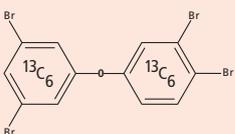
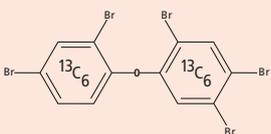
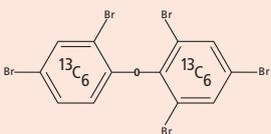
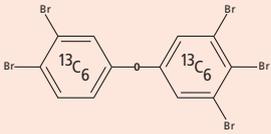
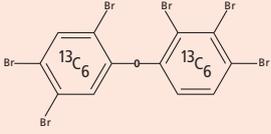
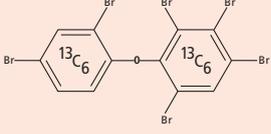
NATIVE BROMINATED DIPHENYL ETHERS: SOLUTION/MIXTURE

Catalogue Number	Product (nonane/toluene solution)	Qty/Conc
BDE-OND	Octa-, Nona-, and Deca-Bromodiphenyl Ether Solution/Mixture	1.2 ml
	IUPAC	
2,2',3,3',4,4',5,5'-Octabromodiphenyl ether	194	1.0 µg/ml
2,2',3,3',4,4',5,6-Octabromodiphenyl ether	195	1.0 µg/ml
2,2',3,3',4,4',5,6'-Octabromodiphenyl ether	196	1.0 µg/ml
2,2',3,3',4,4',6,6'-Octabromodiphenyl ether	197	1.0 µg/ml
2,2',3,3',4,5,5',6-Octabromodiphenyl ether	198	1.0 µg/ml
2,2',3,3',4,5,5',6'-Octabromodiphenyl ether	199	1.0 µg/ml
2,2',3,3',4,5,6,6'-Octabromodiphenyl ether	200	1.0 µg/ml
2,2',3,3',4,5',6,6'-Octabromodiphenyl ether	201	1.0 µg/ml
2,2',3,3',5,5',6,6'-Octabromodiphenyl ether	202	1.0 µg/ml
2,2',3,4,4',5,5',6-Octabromodiphenyl ether	203	1.0 µg/ml
2,2',3,4,4',5,6,6'-Octabromodiphenyl ether	204	1.0 µg/ml
2,3,3',4,4',5,5',6-Octabromodiphenyl ether	205	1.0 µg/ml
2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether	206	2.5 µg/ml
2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether	207	2.5 µg/ml
2,2',3,3',4,5,5',6,6'-Nonabromodiphenyl ether	208	2.5 µg/ml
Decabromodiphenyl ether	209	2.5 µg/ml

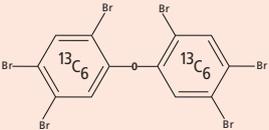
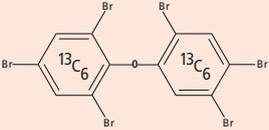
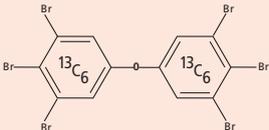
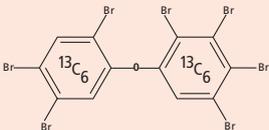
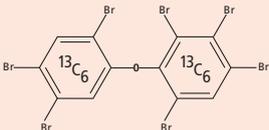
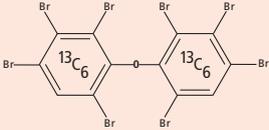
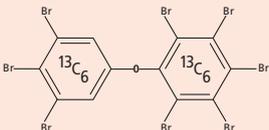
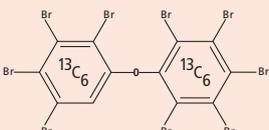
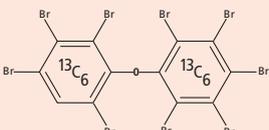
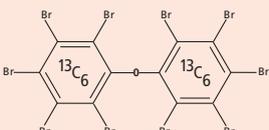


HRGC/HRMS Data for BDE-OND on a 15m DB-5HT column.

MASS-LABELLED BROMINATED DIPHENYL ETHERS

Catalogue Number	Product
MBDE-3	 <p>4-Bromo^[13C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
MBDE-15	 <p>4,4'-Dibromo^[13C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
MBDE-28	 <p>2,4,4'-Tribromo^[13C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
確 MBDE-47	 <p>2,2',4,4'-Tetrabromo^[13C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
確 MBDE-77	 <p>3,3',4,4'-Tetrabromo^[13C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
確 MBDE-79	 <p>3,3',4,5'-Tetrabromo^[13C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
確 MBDE-99	 <p>2,2',4,4',5-Pentabromo^[13C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
確 MBDE-100	 <p>2,2',4,4',6-Pentabromo^[13C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
確 MBDE-126	 <p>3,3',4,4',5-Pentabromo^[13C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
確 MBDE-138	 <p>2,2',3,4,4',5'-Hexabromo^[13C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
確 MBDE-139	 <p>2,2',3,4,4',6-Hexabromo^[13C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>

MASS-LABELLED BROMINATED DIPHENYL ETHERS

Catalogue Number	Product
確 MBDE-153	 <p>2,2',4,4',5,5'-Hexabromo[¹³C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
確 MBDE-154	 <p>2,2',4,4',5,6'-Hexabromo[¹³C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
確 MBDE-169	 <p>3,3',4,4',5,5'-Hexabromo[¹³C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
確 MBDE-180	 <p>2,2',3,4,4',5,5'-Heptabromo[¹³C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
確 MBDE-183	 <p>2,2',3,4,4',5',6-Heptabromo[¹³C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
MBDE-197	 <p>2,2',3,3',4,4',6,6'-Octabromo[¹³C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in toluene</p>
MBDE-205	 <p>2,3,3',4,4',5,5',6-Octabromo[¹³C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in toluene</p>
MBDE-206	 <p>2,2',3,3',4,4',5,5',6-Nonabromo[¹³C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in toluene</p>
MBDE-207	 <p>2,2',3,3',4,4',5,6,6'-Nonabromo[¹³C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in toluene</p>
MBDE-209	 <p>Decabromo[¹³C₁₂]diphenyl ether 1.2 ml; 25 µg/ml (±1.2 µg/ml); in toluene</p>

MASS-LABELLED BROMINATED DIPHENYL ETHERS: SOLUTION/MIXTURES

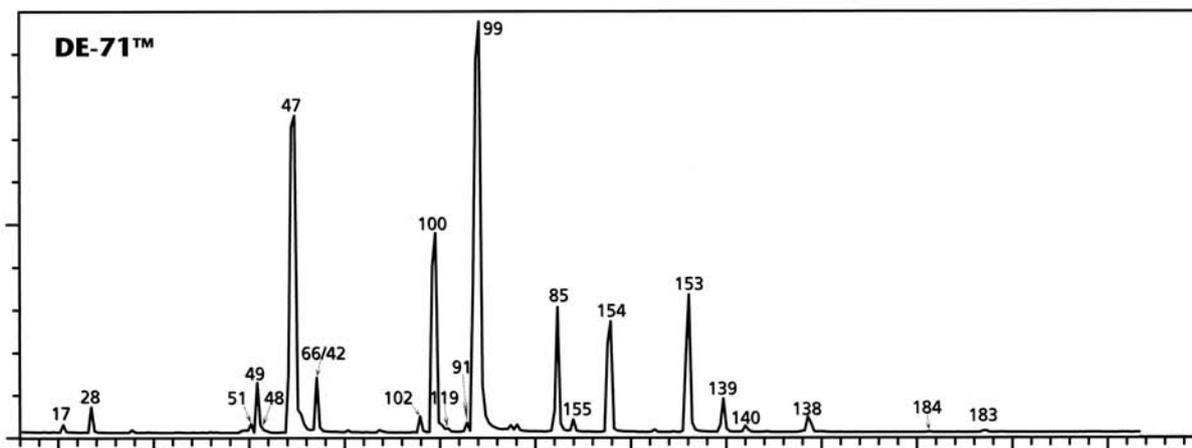
Catalogue Number	Product (nonane solution)	Qty/Conc
確 MBDE-MXA	Mass-Labelled PBDE Solution/Mixture	1.2 ml
	IUPAC	
	2,2',4,4'-Tetrabromo[¹³ C ₁₂]diphenyl ether	47L 5 µg/ml
	2,2',4,4',5-Pentabromo[¹³ C ₁₂]diphenyl ether	99L 5 µg/ml
	2,2',4,4',5,5'-Hexabromo[¹³ C ₁₂]diphenyl ether	153L 5 µg/ml
確 MBDE-MXB	Mass-Labelled PBDE Solution/Mixture	1.2 ml
	IUPAC	
	2,4,4'-Tribromo[¹³ C ₁₂]diphenyl ether	28L 5 µg/ml
	2,2',4,4',5,6'-Hexabromo[¹³ C ₁₂]diphenyl ether	154L 5 µg/ml
	2,2',3,4,4',5',6-Heptabromo[¹³ C ₁₂]diphenyl ether	183L 5 µg/ml
確 MBDE-MXC	Mass-Labelled PBDE Solution/Mixture	1.2 ml
	IUPAC	
	4-Bromo[¹³ C ₁₂]diphenyl ether	3L 5 µg/ml
	4,4'-Dibromo[¹³ C ₁₂]diphenyl ether	15L 5 µg/ml
	2,4,4'-Tribromo[¹³ C ₁₂]diphenyl ether	28L 5 µg/ml
	2,2',4,4'-Tetrabromo[¹³ C ₁₂]diphenyl ether	47L 5 µg/ml
	2,2',4,4',5-Pentabromo[¹³ C ₁₂]diphenyl ether	99L 5 µg/ml
	2,2',4,4',5,5'-Hexabromo[¹³ C ₁₂]diphenyl ether	153L 5 µg/ml
	2,2',4,4',5,6'-Hexabromo[¹³ C ₁₂]diphenyl ether	154L 5 µg/ml
	2,2',3,4,4',5',6-Heptabromo[¹³ C ₁₂]diphenyl ether	183L 5 µg/ml

BROMINATED DIPHENYL ETHER TECHNICAL MIXTURES: NEAT

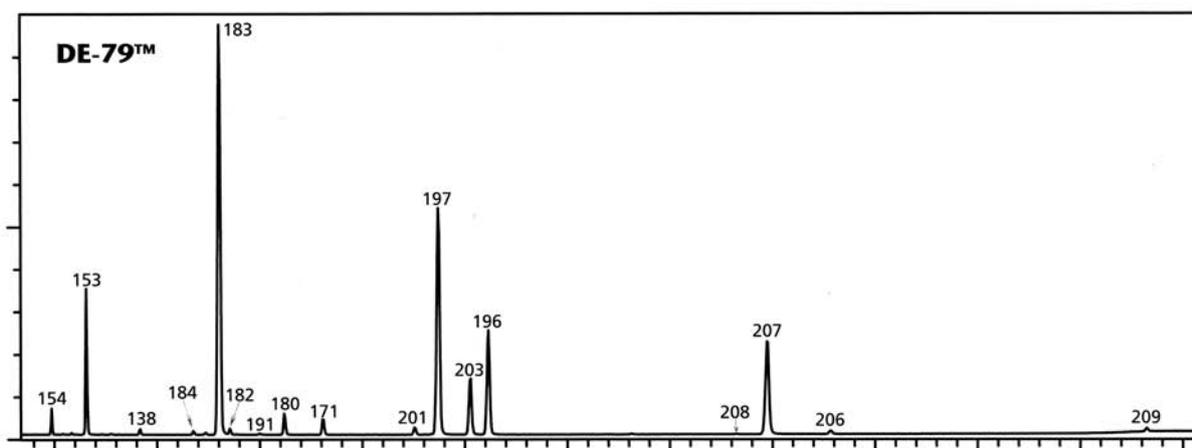
Catalogue Number	Product (neat)	Qty
確 TBDE-71X	Great Lakes Chemical DE-71™ Pentabromodiphenyl Oxide	100 milligrams
確 TBDE-79X	Great Lakes Chemical DE-79™ Octabromodiphenyl Oxide	100 milligrams
TBDE-83RX	Great Lakes Chemical DE-83R™ Decabromodiphenyl Oxide	100 milligrams

BROMINATED DIPHENYL ETHER TECHNICAL MIXTURES: SOLUTIONS

Catalogue Number	Product (toluene solution)	Qty/Conc
確 TBDE-71	Great Lakes Chemical DE-71™ Pentabromodiphenyl Oxide	1.2 ml 100 µg/ml
確 TBDE-79	Great Lakes Chemical DE-79™ Octabromodiphenyl Oxide	1.2 ml 100 µg/ml
TBDE-83R	Great Lakes Chemical DE-83R™ Decabromodiphenyl Oxide	1.2 ml 100 µg/ml

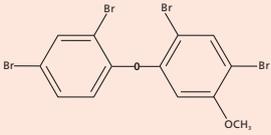
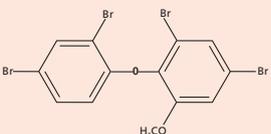
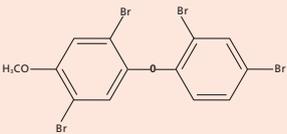
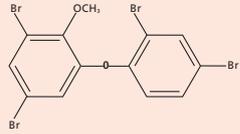
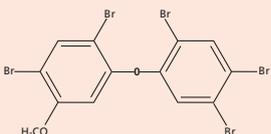
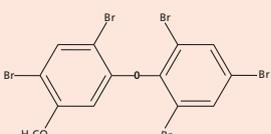
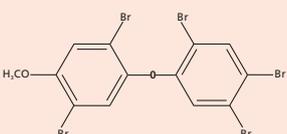


GC/MS Data for Great Lakes Chemical DE-71™ on a 30m DB-5HT column.



GC/MS Data for Great Lakes Chemical DE-79™ on a 30m DB-5HT column.

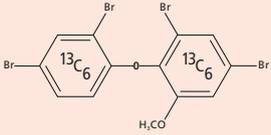
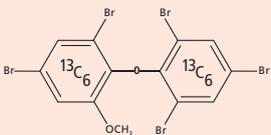
NATIVE METHOXY-BROMODIPHENYL ETHERS (MeO-BDEs)

Catalogue Number	Product
5MBDE47	 <p>2,2',4,4'-Tetrabromo-5-methoxydiphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
6MBDE47	 <p>2,2',4,4'-Tetrabromo-6-methoxydiphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
4PMBDE49	 <p>2,2',4,5-Tetrabromo-4-methoxydiphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
2PMBDE68	 <p>2',3,4',5-Tetrabromo-2-methoxydiphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
5PMBDE99	 <p>2,2',4,4',5-Pentabromo-5'-methoxydiphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
5PMBDE100	 <p>2,2',4,4',6'-Pentabromo-5-methoxydiphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
4PMBDE101	 <p>2,2',4,5,5'-Pentabromo-4'-methoxydiphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
4PMBDE103	 <p>2,2',4,5,6'-Pentabromo-4-methoxydiphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>

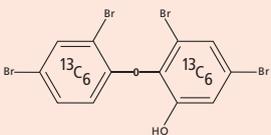
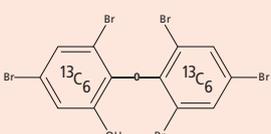
METHOXY-BROMODIPHENYL ETHERS: SOLUTION/MIXTURE

Catalogue Number	Product (nonane solution)	Qty/Conc
MeOBDES	Methoxy-Bromodiphenyl Ethers Solution/Mixture	1.2 ml
	2,2',4,4'-Tetrabromo-5-methoxydiphenyl ether	5 µg/ml
	2,2',4,4'-Tetrabromo-6-methoxydiphenyl ether	5 µg/ml
	2,2',4',5-Tetrabromo-4-methoxydiphenyl ether	5 µg/ml
	2',3,4',5-Tetrabromo-2-methoxydiphenyl ether	5 µg/ml
	2,2',4,4',5-Pentabromo-5'-methoxydiphenyl ether	5 µg/ml
	2,2',4,4',6'-Pentabromo-5-methoxydiphenyl ether	5 µg/ml
	2,2',4,5,5'-Pentabromo-4'-methoxydiphenyl ether	5 µg/ml
	2,2',4',5,6'-Pentabromo-4-methoxydiphenyl ether	5 µg/ml

MASS-LABELLED METHOXY-BROMODIPHENYL ETHERS

Catalogue Number	Product
M6MBDE47	 <p>2,2',4,4'-Tetrabromo-6-methoxy[¹³C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>
M6PMBDE100	 <p>2,2',4,4',6'-Pentabromo-6'-methoxy[¹³C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane</p>

MASS-LABELLED HYDROXY-BROMODIPHENYL ETHERS

Catalogue Number	Product
M6HBDE47	 <p>2,2',4,4'-Tetrabromo-6-hydroxy[¹³C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol</p>
M6PHBDE100	 <p>2,2',4,4',6'-Pentabromo-6'-hydroxy[¹³C₁₂]diphenyl ether 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol</p>

NATIVE HEXABROMOCYCLODODECANE ISOMERS (HBCDs)

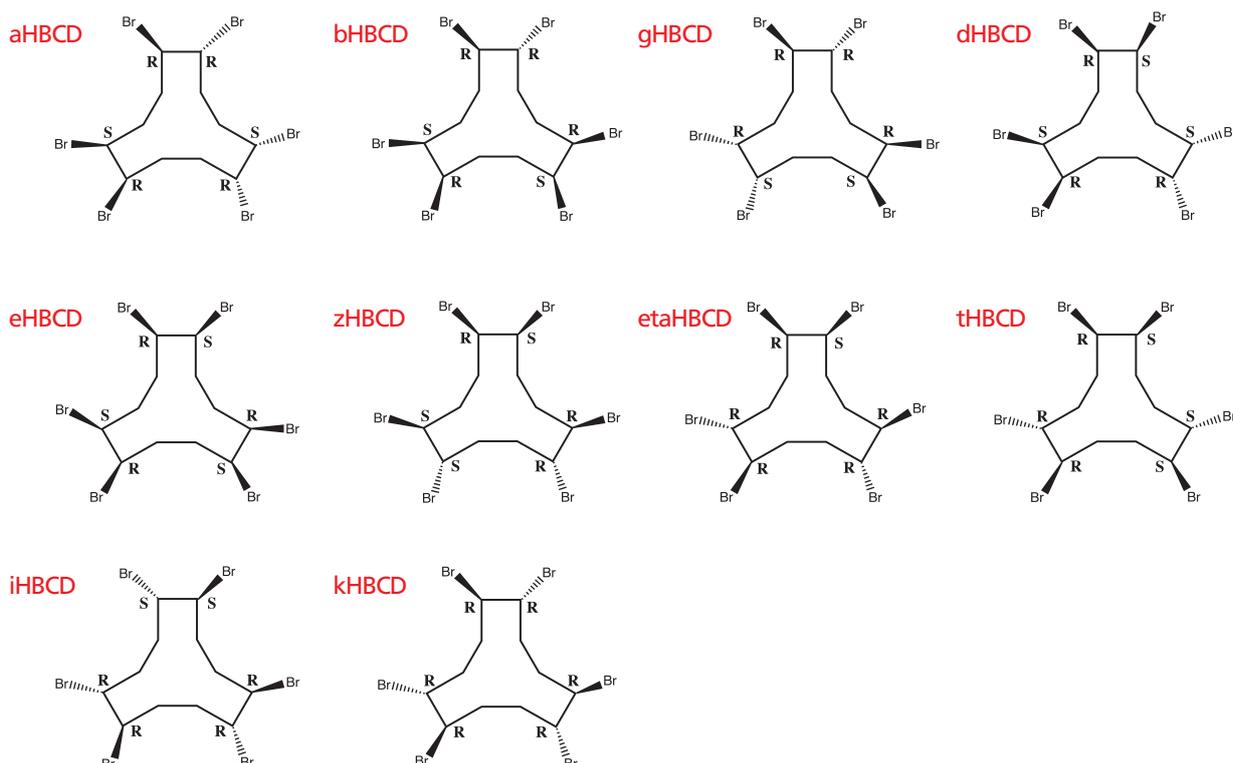
Catalogue Number	Product (toluene solution)	Qty/Conc
aHBCD	α -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
bHBCD	β -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
gHBCD	γ -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
dHBCD	δ -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
eHBCD	ε -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
zHBCD	ζ -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
etaHBCD	η -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
tHBCD	θ -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
iHBCD	ι -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
kHBCD	κ -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml

¹³C-LABELLED HEXABROMOCYCLODODECANE ISOMERS

Catalogue Number	Product (toluene solution)	Qty/Conc
MaHBCD	α -1,2,5,6,9,10-Hexabromo[¹³ C ₁₂]cyclododecane	1.2 ml 50 μ g/ml
MbHBCD	β -1,2,5,6,9,10-Hexabromo[¹³ C ₁₂]cyclododecane	1.2 ml 50 μ g/ml
MgHBCD	γ -1,2,5,6,9,10-Hexabromo[¹³ C ₁₂]cyclododecane	1.2 ml 50 μ g/ml

DEUTERATED HEXABROMOCYCLODODECANE ISOMERS

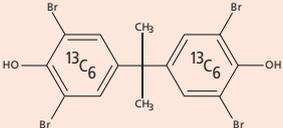
Catalogue Number	Product (toluene solution)	Qty/Conc
DaHBCD	d18- α -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
DbHBCD	d18- β -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
DgHBCD	d18- γ -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml



TETRABROMOBISPHENOL-A (TBBPA)

Catalogue Number	Product (methanol solution)	Qty/Conc
TBBPA	3,3',5,5'-Tetrabromobisphenol-A	1.2 ml 50 µg/ml

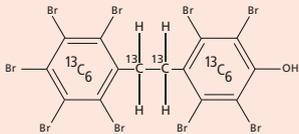
MASS-LABELLED TETRABROMOBISPHENOL-A

Catalogue Number	Product
MTBBPA	 <p>3,3',5,5'-Tetrabromobisphenol-A [rings; ¹³C₁₂] 1.2 ml; 50 µg/ml (±2.5 µg/ml); in methanol; Isotopic purity; 99% or greater</p>

DECABROMODIPHENYLETHANE (DBDPE)

Catalogue Number	Product (toluene solution)	Qty/Conc
DBDPE	1,2-Bis(pentabromophenyl)ethane	1.2 ml 25 µg/ml

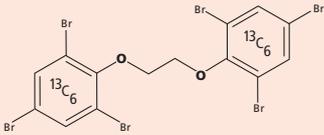
MASS-LABELLED DECABROMODIPHENYLETHANE

Catalogue Number	Product
MDBDPE	 <p>1,2-Bis(pentabromophenyl)ethane [¹³C₁₄] 1.2 ml; 25 µg/ml (±1.2 µg/ml); in toluene; Isotopic purity; 99% or greater</p>

1,2-BIS(2,4,6-TRIBROMOPHENOXY)ETHANE (BTBPE)

Catalogue Number	Product (nonane solution)	Qty/Conc
BTBPE	1,2-Bis(2,4,6-tribromophenoxy)ethane	1.2 ml 50µg/ml

MASS-LABELLED 1,2-BIS(2,4,6-TRIBROMOPHENOXY)ETHANE

Catalogue Number	Product
MBTBPE	 <p>1,2-Bis(2,4,6-tribromo[¹³C₆]phenoxy)ethane 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane; Isotopic purity; 99% or greater</p>

HEXABROMOBENZENE (HBB)

Catalogue Number	Product (toluene solution)	Qty/Conc
HBB	Hexabromobenzene	1.2 ml 50 µg/ml

MASS-LABELLED HEXABROMOBENZENE

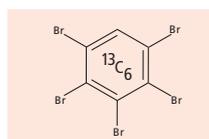
Catalogue Number	Product
MHBB	 Hexabromo[¹³ C ₆]benzene 1.2 ml; 50 µg/ml (±2.5 µg/ml); in toluene; Isotopic purity; 99% or greater

PENTABROMOBENZENE (PBBZ): NATIVE AND MASS-LABELLED

Catalogue Number	Product (toluene solution)	Qty/Conc
PBBZ	Pentabromobenzene	1.2 ml 50 µg/ml
MPBBZ	Pentabromo[¹³ C ₆]benzene	1.2 ml 50 µg/ml



PBBZ



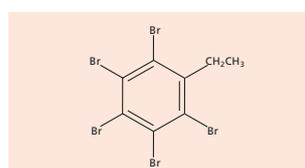
MPBBZ

PENTABROMOETHYLBENZENE (PBEB)

Catalogue Number	Product (toluene solution)	Qty/Conc
PBEB	Pentabromoethylbenzene	1.2 ml 50 µg/ml

PENTABROMOTOLUENE (PBT)

Catalogue Number	Product (toluene solution)	Qty/Conc
PBT	Pentabromotoluene	1.2 ml 50 µg/ml



Pentabromoethylbenzene



Pentabromotoluene

TETRABROMO-P-XYLENE (pTBX)

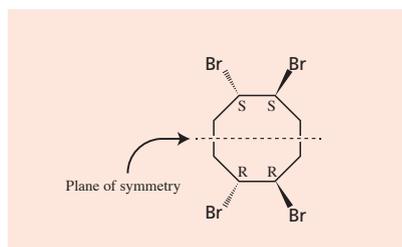
Catalogue Number	Product (toluene solution)	Qty/Conc
pTBX	2,3,5,6-Tetrabromo-p-xylene	1.2 ml 50 µg/ml



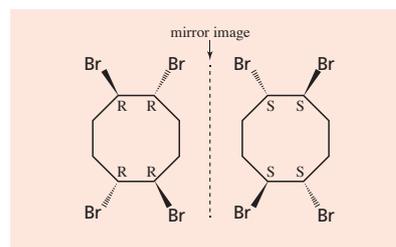
2,3,5,6-Tetrabromo-p-xylene

1,2,5,6-TETRABROMOCYCLOOCTANE(TBCO)

Catalogue Number	Product (toluene solution)	Qty/Conc
aTBCO	(1 <i>R</i> ,2 <i>R</i> ,5 <i>S</i> ,6 <i>S</i>)-1,2,5,6-Tetrabromocyclooctane	1.2 ml 50 µg/ml
bTBCO	<i>rac</i> -(1 <i>R</i> ,2 <i>R</i> ,5 <i>R</i> ,6 <i>R</i>)-1,2,5,6-Tetrabromocyclooctane	1.2 ml 50 µg/ml



aTBCO



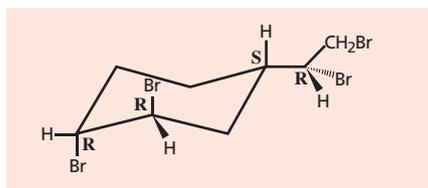
bTBCO

TETRABROMOETHYLCYCLOHEXANE (TBECH)

Catalogue Number	Product (toluene solution)	Qty/Conc
bTBECH	<i>rac</i> -(1 <i>R</i> ,2 <i>R</i>)-1,2-dibromo-(4 <i>S</i>)-4-((1 <i>S</i>)-1,2-dibromoethyl)cyclohexane	1.2 ml 50 µg/ml

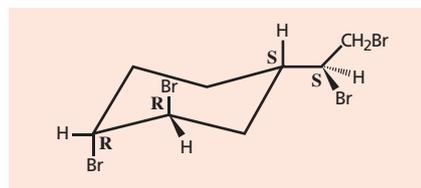
TETRABROMOETHYLCYCLOHEXANE ISOMERIC SOLUTION/MIXTURES

Catalogue Number	Product (toluene solution)	Qty/Conc
abTBECH	1:1 mix of aTBECH and bTBECH	1.2 ml
aTBECH	<i>rac</i> -(1 <i>R</i> ,2 <i>R</i>)-1,2-dibromo-(4 <i>S</i>)-4-((1 <i>R</i>)-1,2-dibromoethyl)cyclohexane	50 µg/ml
bTBECH	<i>rac</i> -(1 <i>R</i> ,2 <i>R</i>)-1,2-dibromo-(4 <i>S</i>)-4-((1 <i>S</i>)-1,2-dibromoethyl)cyclohexane	50 µg/ml
gdTBECH	1:1 mix of gTBECH and dTBECH	1.2 ml
gTBECH	<i>rac</i> -(1 <i>R</i> ,2 <i>R</i>)-1,2-dibromo-(4 <i>R</i>)-4-((1 <i>R</i>)-1,2-dibromoethyl)cyclohexane	50 µg/ml
dTBECH	<i>rac</i> -(1 <i>R</i> ,2 <i>R</i>)-1,2-dibromo-(4 <i>R</i>)-4-((1 <i>S</i>)-1,2-dibromoethyl)cyclohexane	50 µg/ml



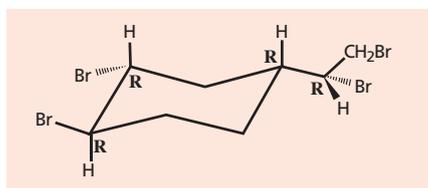
aTBECH

rac-(1*R*,2*R*)-1,2-dibromo-(4*S*)-4-((1*R*)-1,2-dibromoethyl)cyclohexane



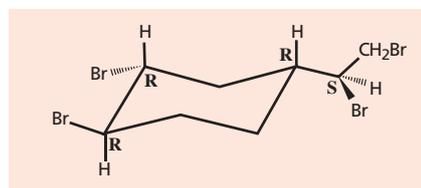
bTBECH

rac-(1*R*,2*R*)-1,2-dibromo-(4*S*)-4-((1*S*)-1,2-dibromoethyl)cyclohexane



gTBECH

rac-(1*R*,2*R*)-1,2-dibromo-(4*R*)-4-((1*R*)-1,2-dibromoethyl)cyclohexane

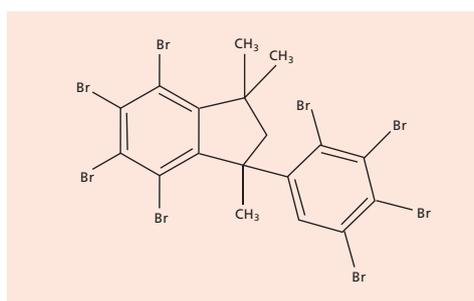


dTBECH

rac-(1*R*,2*R*)-1,2-dibromo-(4*R*)-4-((1*S*)-1,2-dibromoethyl)cyclohexane

OCTABROMOTRIMETHYLPHENYLINDANE

Catalogue Number	Product (toluene solution)	Qty/Conc
OBIND	4,5,6,7-Tetrabromo-1,1,3-trimethyl-3-(2,3,4,5-tetrabromophenyl)-indane	1.2 ml 50 µg/ml



Octabromotrimethylphenylindane

BIS(2-ETHYLHEXYL)TETRABROMOPHTHALATE (BEHTBP)

Catalogue Number	Product (toluene solution)	Qty/Conc
BEHTBP	Bis(2-ethylhexyl)tetrabromophthalate	1.2 ml 50 µg/ml

2-ETHYLHEXYL-2,3,4,5-TETRABROMO BENZOATE (EHTBB)

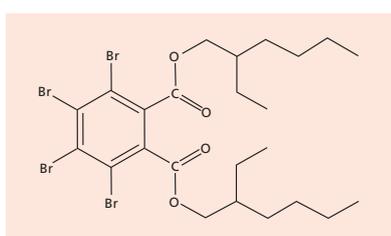
Catalogue Number	Product (toluene solution)	Qty/Conc
EHTBB	2-ethylhexyl-2,3,4,5-Tetrabromobenzoate	1.2 ml 50 µg/ml

HEXACHLOROCYCLOPENTENYL-DIBROMOCYCLOOCTANE (HCDBCO)

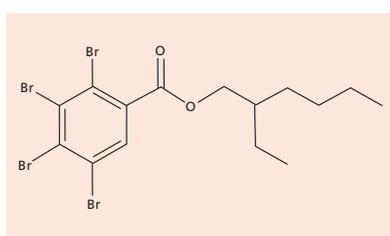
Catalogue Number	Product (toluene solution)	Qty/Conc
HCDBCO	<i>rac</i> -(1 <i>R</i> ,2 <i>R</i> ,5 <i>R</i> ,6 <i>R</i> ,9 <i>S</i> ,10 <i>S</i>)-5,6-dibromo-1,10,11,12,13,13-hexachlorotricyclo[8.2.1.0 ^{2,9}]tridec-11-ene	1.2 ml 50 µg/ml

2,4,6-TRIBROMOPHENYL ETHERS

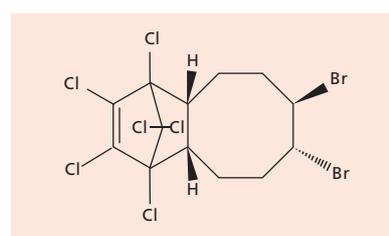
Catalogue Number	Product (toluene solution)	Qty/Conc
ATE	Allyl 2,4,6-tribromophenyl ether	1.2 ml 50 µg/ml
DPTE	2,3-Dibromopropyl 2,4,6-tribromophenyl ether	1.2 ml 50 µg/ml
BATE	2-Bromoallyl 2,4,6-tribromophenyl ether	1.2 ml 50 µg/ml



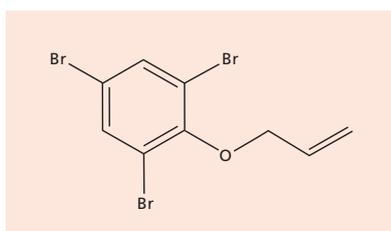
BEHTBP



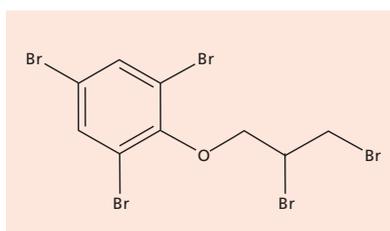
EHTBB



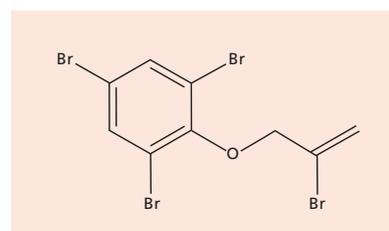
HCDBCO



ATE



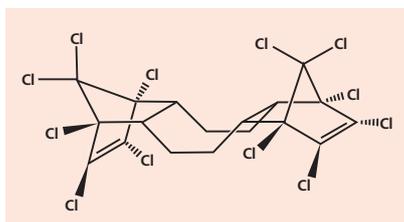
DPTE



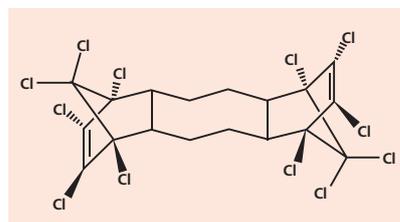
BATE

DECHLORANE PLUS®

Catalogue Number	Product (toluene solution)	Qty/Conc
s-DP	<i>syn</i> -Dechlorane Plus®	1.2 ml 50 µg/ml
a-DP	<i>anti</i> -Dechlorane Plus®	1.2 ml 50 µg/ml



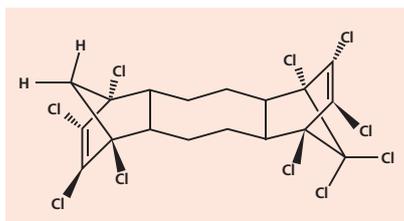
syn-Dechlorane Plus®



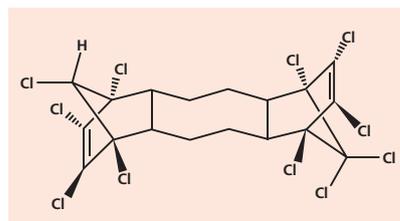
anti-Dechlorane Plus®

DECHLORINATED DECHLORANE PLUS®

Catalogue Number	Product (toluene solution)	Qty/Conc
aCl10DP	Cl10 Dechlorane Plus®	1.2 ml 50 µg/ml
aCl11DP	Cl11 Dechlorane Plus®	1.2 ml 50 µg/ml



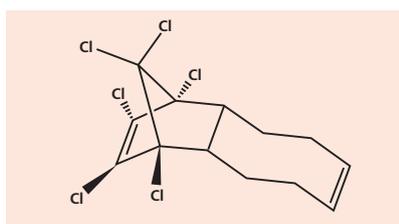
Cl10 Dechlorane Plus®



Cl11 Dechlorane Plus®

DECHLORANE PLUS® MONO ADDUCT

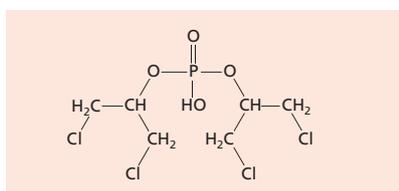
Catalogue Number	Product (toluene solution)	Qty/Conc
DPMA	Dechlorane Plus® Mono adduct	1.2 ml 50 µg/ml



Dechlorane Plus® mono adduct

ORGANOPHOSPHATE

Catalogue Number	Product (acetonitrile solution)	Qty/Conc
BDCP	Bis(1,3-dichloro-2-propyl)phosphate	1.2 ml 48.5 µg/ml



NATIVE BROMINATED BIPHENYLS (PBBs)

Catalogue Number	Product (nonane solution)	Qty/Conc
BB-1	2-Bromobiphenyl	1.2 ml 50 µg/ml
BB-2	3-Bromobiphenyl	1.2 ml 50 µg/ml
BB-3	4-Bromobiphenyl	1.2 ml 50 µg/ml
BB-4	2,2'-Dibromobiphenyl	1.2 ml 50 µg/ml
BB-7	2,4-Dibromobiphenyl	1.2 ml 50 µg/ml
BB-9	2,5-Dibromobiphenyl	1.2 ml 50 µg/ml
BB-10	2,6-Dibromobiphenyl	1.2 ml 50 µg/ml
BB-15	4,4'-Dibromobiphenyl	1.2 ml 50 µg/ml
BB-18	2,2',5-Tribromobiphenyl	1.2 ml 50 µg/ml
BB-22	2,3,4'-Tribromobiphenyl	1.2 ml 50 µg/ml
BB-26	2,3',5-Tribromobiphenyl	1.2 ml 50 µg/ml
BB-29	2,4,5-Tribromobiphenyl	1.2 ml 50 µg/ml
BB-30	2,4,6-Tribromobiphenyl	1.2 ml 50 µg/ml
BB-31	2,4',5-Tribromobiphenyl	1.2 ml 50 µg/ml
BB-37	3,4,4'-Tribromobiphenyl	1.2 ml 50 µg/ml
BB-38	3,4,5-Tribromobiphenyl	1.2 ml 50 µg/ml
BB-49	2,2',4,5'-Tetrabromobiphenyl	1.2 ml 50 µg/ml
BB-52	2,2',5,5'-Tetrabromobiphenyl	1.2 ml 50 µg/ml
BB-53	2,2',5,6'-Tetrabromobiphenyl	1.2 ml 50 µg/ml
BB-56	2,3,3',4'-Tetrabromobiphenyl	1.2 ml 50 µg/ml
BB-75	2,4,4',6-Tetrabromobiphenyl	1.2 ml 50 µg/ml
BB-77	3,3',4,4'-Tetrabromobiphenyl	1.2 ml 50 µg/ml
BB-80	3,3',5,5'-Tetrabromobiphenyl	1.2 ml 50 µg/ml
BB-101	2,2',4,5,5'-Pentabromobiphenyl	1.2 ml 50 µg/ml
BB-103	2,2',4,5',6-Pentabromobiphenyl	1.2 ml 50 µg/ml
確 BB-153	2,2',4,4',5,5'-Hexabromobiphenyl	1.2 ml 50 µg/ml
確 BB-154	2,2',4,4',5,6'-Hexabromobiphenyl	1.2 ml 50 µg/ml
確 BB-155	2,2',4,4',6,6'-Hexabromobiphenyl	1.2 ml 50 µg/ml
確 BB-156	2,3,3',4,4',5-Hexabromobiphenyl	1.2 ml 50 µg/ml
確 BB-169	3,3',4,4',5,5'-Hexabromobiphenyl	1.2 ml 50 µg/ml
BB-180	2,2',3,4,4',5,5'-Heptabromobiphenyl	1.2 ml 50 µg/ml
BB-194	2,2',3,3',4,4',5,5'-Octabromobiphenyl	1.2 ml 50 µg/ml
BB-205	2,3,3',4,4',5,5',6-Octabromobiphenyl	1.2 ml 50 µg/ml
BB-206	2,2',3,3',4,4',5,5',6-Nonabromobiphenyl	1.2 ml 50 µg/ml
BB-209	Decabromobiphenyl	1.2 ml 50 µg/ml

確 第一種特定化学物質

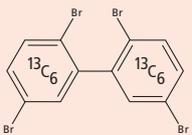
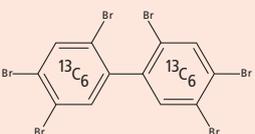
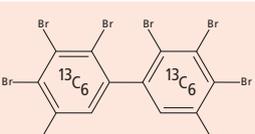
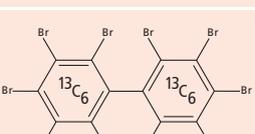
NATIVE BROMINATED BIPHENYLS: SOLUTION/MIXTURE

Catalogue Number	Product (nonane solution)	Qty/Conc
確 PBB-MXA	Native PBB Solution/Mixture	1.2 ml
	IUPAC	
	4-Bromobiphenyl	3
	4,4'-Dibromobiphenyl	15
	2,2',5-Tribromobiphenyl	18
	2,2',5,5'-Tetrabromobiphenyl	52
	2,2',4,5,5'-Pentabromobiphenyl	101
	2,2',4,4',5,5'-Hexabromobiphenyl	153
	2,2',3,4,4',5,5'-Heptabromobiphenyl	180
	2,2',3,3',4,4',5,5'-Octabromobiphenyl	194
	2,2',3,3',4,4',5,5',6-Nonabromobiphenyl	206
	Decabromobiphenyl	209

POLYBROMINATED BIPHENYL TECHNICAL MIXTURES

Catalogue Number	Product (nonane solution)	Qty/Conc
確 TBB-BP6	Great Lakes Chemical Firemaster BP-6™ Hexabromobiphenyl	1.2 ml 100 µg/ml
TBB-809D	Chemical Fabrik Kalk Bromkal 80-9D™ Nonabromobiphenyl	1.2 ml 100 µg/ml

MASS-LABELLED BROMINATED BIPHENYLS

Catalogue Number	Product
MBB-52	 <p>2,2',5,5'-Tetrabromo[¹³C₁₂]biphenyl 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane; Isotopic purity; 99% or greater</p>
確 MBB-153	 <p>2,2',4,4',5,5'-Hexabromo[¹³C₁₂]biphenyl 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane; Isotopic purity; 99% or greater</p>
MBB-194	 <p>2,2',3,3',4,4',5,5'-Octabromo[¹³C₁₂]biphenyl 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane; Isotopic purity; 99% or greater</p>
MBB-209	 <p>Decabromo[¹³C₁₂]biphenyl 1.2 ml; 50 µg/ml (±2.5 µg/ml); in nonane; Isotopic purity; 99% or greater</p>

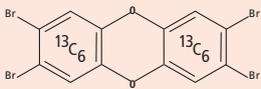
MASS-LABELLED BROMINATED BIPHENYLS: SOLUTION/MIXTURE

Catalogue Number	Product (toluene solution)	Qty/Conc
確 MBB-MXA	Mass-Labelled PBB Solution/Mixture	1.2 ml
	IUPAC	
	2,2',5,5'-Tetrabromo[¹³ C ₁₂]biphenyl	52L 1 µg/ml
	2,2',4,4',5,5'-Hexabromo[¹³ C ₁₂]biphenyl	153L 2 µg/ml
	2,2',3,3',4,4',5,5'-Octabromo[¹³ C ₁₂]biphenyl	194L 2 µg/ml
	Decabromo[¹³ C ₁₂]biphenyl	209L 5 µg/ml

NATIVE BROMINATED DIBENZO-p-DIOXINS (PBDDs)

Catalogue Number	Product (toluene solution)	Qty/Conc
BDD-1	1-Bromodibenzo-p-dioxin	1.2 ml 50 µg/ml
BDD-27/28	2,7/2,8-Dibromodibenzo-p-dioxin mix	1.2 ml 50 µg/ml
BDD-237	2,3,7-Tribromodibenzo-p-dioxin	1.2 ml 50 µg/ml
BDD-1234	1,2,3,4-Tetrabromodibenzo-p-dioxin	1.2 ml 50 µg/ml
BDD-1378	1,3,7,8-Tetrabromodibenzo-p-dioxin	1.2 ml 50 µg/ml
BDD-2378	2,3,7,8-Tetrabromodibenzo-p-dioxin	1.2 ml 50 µg/ml
BDD-12378	1,2,3,7,8-Pentabromodibenzo-p-dioxin	1.2 ml 50 µg/ml
BDD-12478	1,2,4,7,8-Pentabromodibenzo-p-dioxin	1.2 ml 50 µg/ml
BDD-12346789	Octabromodibenzo-p-dioxin	1.2 ml 10 µg/ml

MASS-LABELLED BROMINATED DIBENZO-p-DIOXIN

Catalogue Number	Product
MBDD-2378	 <p>2,3,7,8-Tetrabromo[¹³C₁₂]dibenzo-p-dioxin 1.2 ml; 50 µg/ml (±2.5 µg/ml); in toluene; Isotopic purity; 99% or greater</p>

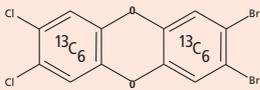
NATIVE BROMINATED DIBENZOFURANS (PBDfS)

Catalogue Number	Product (toluene solution)	Qty/Conc
BDF-4	4-Bromodibenzofuran	1.2 ml 50 µg/ml
BDF-24	2,4-Dibromodibenzofuran	1.2 ml 50 µg/ml
BDF-28	2,8-Dibromodibenzofuran	1.2 ml 50 µg/ml
BDF-138	1,3,8-Tribromodibenzofuran	1.2 ml 50 µg/ml
BDF-234	2,3,4-Tribromodibenzofuran	1.2 ml 50 µg/ml
BDF-238	2,3,8-Tribromodibenzofuran	1.2 ml 50 µg/ml
BDF-247	2,4,7-Tribromodibenzofuran	1.2 ml 50 µg/ml
BDF-1278	1,2,7,8-Tetrabromodibenzofuran	1.2 ml 50 µg/ml
BDF-2378	2,3,7,8-Tetrabromodibenzofuran	1.2 ml 50 µg/ml
BDF-12378	1,2,3,7,8-Pentabromodibenzofuran	1.2 ml 50 µg/ml
BDF-23478	2,3,4,7,8-Pentabromodibenzofuran	1.2 ml 50 µg/ml
BDF-1234678	1,2,3,4,6,7,8-Heptabromodibenzofuran	1.2 ml 25 µg/ml
BDF-12346789	Octabromodibenzofuran	1.2 ml 25 µg/ml

NATIVE BROMO/CHLORO DIBENZO-p-DIOXINS

Catalogue Number	Product (toluene solution)	Qty/Conc
7-B-23-CDD	7-Bromo-2,3-dichlorodibenzo-p-dioxin (96%)	1.2 ml 48 µg/ml
2-B-378-CDD	2-Bromo-3,7,8-trichlorodibenzo-p-dioxin (96%)	1.2 ml 48 µg/ml
2-B-1378-CDD	2-Bromo-1,3,7,8-tetrachlorodibenzo-p-dioxin (96%)	1.2 ml 48 µg/ml
23-B-78-CDD	2,3-Dibromo-7,8-dichlorodibenzo-p-dioxin	1.2 ml 50 µg/ml

MASS-LABELLED BROMO/CHLORO DIBENZO-p-DIOXIN

Catalogue Number	Product
M23-B-78-CDD	 <p>2,3-Dibromo-7,8-dichloro[¹³C₁₂]dibenzo-p-dioxin 1.2 ml; 50 µg/ml (±2.5 µg/ml); in toluene; Isotopic purity; 99% or greater</p>

NATIVE BROMO/CHLORO DIBENZOFURANS

Catalogue Number	Product (toluene solution)	Qty/Conc
8-B-23-CDF	8-Bromo-2,3-dichlorodibenzofuran	1.2 ml 50 µg/ml
8-B-234-CDF	8-Bromo-2,3,4-trichlorodibenzofuran	1.2 ml 50 µg/ml
3-B-278-CDF	3-Bromo-2,7,8-trichlorodibenzofuran	1.2 ml 50 µg/ml
4-B-2378-CDF	4-Bromo-2,3,7,8-tetrachlorodibenzofuran	1.2 ml 50 µg/ml
23-B-78-CDF	2,3-Dibromo-7,8-dichlorodibenzofuran	1.2 ml 50 µg/ml
12-B-78-CDF	1,2-Dibromo-7,8-dichlorodibenzofuran	1.2 ml 50 µg/ml
13-B-278-CDF	1,3-Dibromo-2,7,8-trichlorodibenzofuran	1.2 ml 50 µg/ml

MASS-LABELLED BROMO/CHLORO DIBENZOFURANS

Catalogue Number	Product (toluene solution)	Qty/Conc
M8-B-23-CDF	8-Bromo-2,3-dichloro[¹³ C ₁₂]dibenzofuran	1.2 ml 50 µg/ml
M3-B-278-CDF	3-Bromo-2,7,8-trichloro[¹³ C ₁₂]dibenzofuran	1.2 ml 50 µg/ml
M4-B-2378-CDF	4-Bromo-2,3,7,8-tetrachloro[¹³ C ₁₂]dibenzofuran	1.2 ml 50 µg/ml
M23-B-78-CDF	2,3-Dibromo-7,8-dichloro[¹³ C ₁₂]dibenzofuran	1.2 ml 50 µg/ml
M13-B-278-CDF	1,3-Dibromo-2,7,8-trichloro[¹³ C ₁₂]dibenzofuran	1.2 ml 50 µg/ml

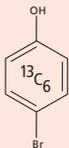
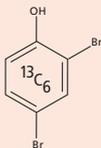
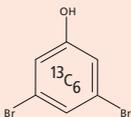
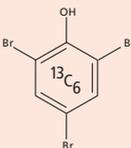
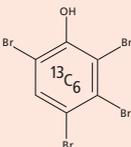
NATIVE BROMOPHENOLS

Catalogue Number	Product (toluene solution)	Qty/Conc
BRP-2	2-Bromophenol	1.2 ml 100 µg/ml
BRP-3	3-Bromophenol	1.2 ml 100 µg/ml
BRP-4	4-Bromophenol	1.2 ml 100 µg/ml
BRP-23	2,3-Dibromophenol	1.2 ml 100 µg/ml
BRP-24	2,4-Dibromophenol	1.2 ml 100 µg/ml
BRP-25	2,5-Dibromophenol	1.2 ml 100 µg/ml
BRP-26	2,6-Dibromophenol	1.2 ml 100 µg/ml
BRP-34	3,4-Dibromophenol	1.2 ml 100 µg/ml
BRP-35	3,5-Dibromophenol	1.2 ml 100 µg/ml
BRP-234	2,3,4-Tribromophenol	1.2 ml 100 µg/ml
BRP-235	2,3,5-Tribromophenol	1.2 ml 100 µg/ml
BRP-236	2,3,6-Tribromophenol	1.2 ml 100 µg/ml
BRP-245	2,4,5-Tribromophenol	1.2 ml 100 µg/ml
BRP-246	2,4,6-Tribromophenol	1.2 ml 100 µg/ml
BRP-345	3,4,5-Tribromophenol	1.2 ml 100 µg/ml
BRP-2345	2,3,4,5-Tetrabromophenol	1.2 ml 100 µg/ml
BRP-2346	2,3,4,6-Tetrabromophenol	1.2 ml 100 µg/ml
BRP-2356	2,3,5,6-Tetrabromophenol	1.2 ml 100 µg/ml
BRP-23456	Pentabromophenol	1.2 ml 100 µg/ml

NATIVE BROMOPHENOLS: SOLUTION/MIXTURE

Catalogue Number	Product (toluene solution)	Qty/Conc
BRPS	Native Bromophenols; Solution/Mixture	1.2 ml
	2-Bromophenol	5 µg/ml
	3-Bromophenol	5 µg/ml
	4-Bromophenol	5 µg/ml
	2,3-Dibromophenol	5 µg/ml
	2,4-Dibromophenol	5 µg/ml
	2,5-Dibromophenol	5 µg/ml
	2,6-Dibromophenol	5 µg/ml
	3,4-Dibromophenol	5 µg/ml
	3,5-Dibromophenol	5 µg/ml
	2,3,4-Tribromophenol	5 µg/ml
	2,3,5-Tribromophenol	5 µg/ml
	2,3,6-Tribromophenol	5 µg/ml
	2,4,5-Tribromophenol	5 µg/ml
	2,4,6-Tribromophenol	5 µg/ml
	3,4,5-Tribromophenol	5 µg/ml
	2,3,4,5-Tetrabromophenol	5 µg/ml
	2,3,4,6-Tetrabromophenol	5 µg/ml
	2,3,5,6-Tetrabromophenol	5 µg/ml
	Pentabromophenol	5 µg/ml

MASS-LABELLED BROMOPHENOLS

Catalogue Number	Product
MBRP-4	 <p>4-Bromo[¹³C₆]phenol 1.2 ml; 100 µg/ml (±5.0 µg/ml); in toluene</p>
MBRP-24	 <p>2,4-Dibromo[¹³C₆]phenol 1.2 ml; 100 µg/ml (±5.0 µg/ml); in toluene</p>
MBRP-35	 <p>3,5-Dibromo[¹³C₆]phenol 1.2 ml; 100 µg/ml (±5.0 µg/ml); in toluene</p>
MBRP-246	 <p>2,4,6-Tribromo[¹³C₆]phenol 1.2 ml; 100 µg/ml (±5.0 µg/ml); in toluene</p>
MBRP-2346	 <p>2,3,4,6-Tetrabromo[¹³C₆]phenol 1.2 ml; 100 µg/ml (±5.0 µg/ml); in toluene</p>
MBRP-23456	 <p>Pentabromo[¹³C₆]phenol 1.2 ml; 100 µg/ml (±5.0 µg/ml); in toluene</p>

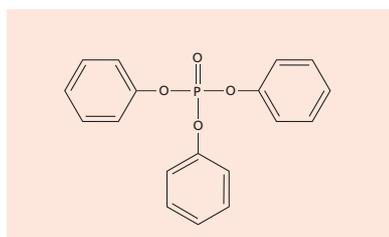
MASS-LABELLED BROMOPHENOLS: SOLUTION/MIXTURE

Catalogue Number	Product (toluene solution)	Qty/Conc
MBRPS	Mass-Labelled Bromophenol; Solution/Mixture	1.2 ml
	4-Bromo[¹³ C ₆]phenol	5 µg/ml
	2,4-Dibromo[¹³ C ₆]phenol	5 µg/ml
	2,4,6-Tribromo[¹³ C ₆]phenol	5 µg/ml
	2,3,4,6-Tetrabromo[¹³ C ₆]phenol	5 µg/ml
	Pentabromo[¹³ C ₆]phenol	5 µg/ml

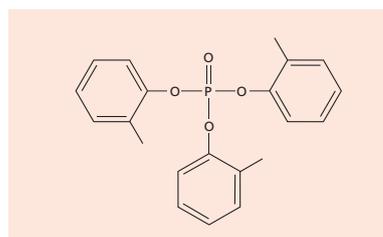
NATIVE ARYL PHOSPHATES

Catalogue Number	Product (toluene solution)	Qty/Conc
TPP	Triphenyl phosphate	1.2 ml 50 µg/ml
TOTP	Tri- <i>o</i> -tolyl phosphate	1.2 ml 50 µg/ml
TMTP	Tri- <i>m</i> -tolyl phosphate (97% purity)	1.2 ml 48.5 µg/ml
TPTP	Tri- <i>p</i> -tolyl phosphate	1.2 ml 50 µg/ml
T35DMPP	Tris(3,5-dimethylphenyl) phosphate	1.2 ml 50 µg/ml
T2IPPP	Tris(2-isopropylphenyl) phosphate	1.2 ml 50 µg/ml

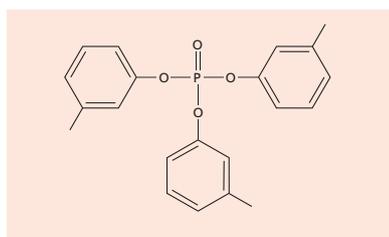
NOTE: TOTP is also known as tri-*o*-cresyl phosphate,
 TMTP is also known as tri-*m*-cresyl phosphate,
 and TPTP is also known as tri-*p*-cresyl phosphate.



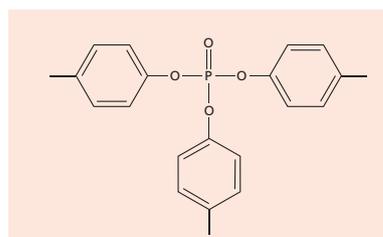
TPP



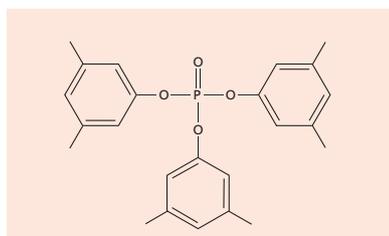
TOTP



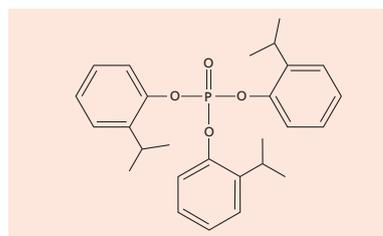
TMTP



TPTP



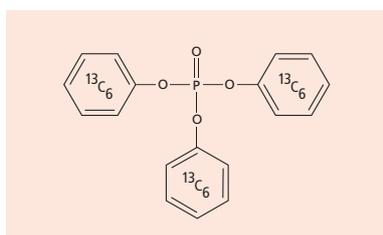
T35DMPP



T2IPPP

MASS-LABELLED TRIPHENYL PHOSPHATE

Catalogue Number	Product (toluene solution)	Qty/Conc
MTPP	¹³ C ₁₈ -Triphenyl phosphate	1.2 ml 50 µg/ml



MTPP



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