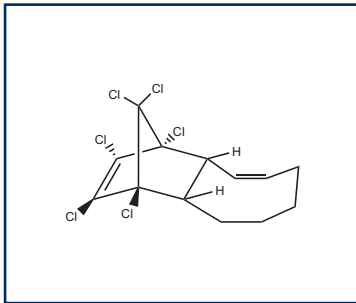
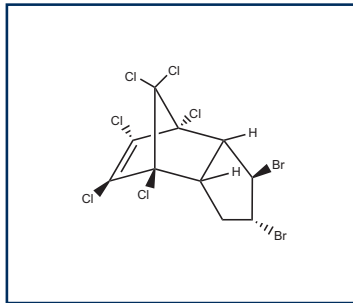
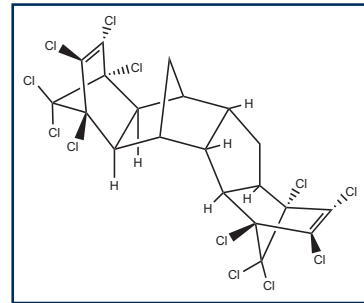
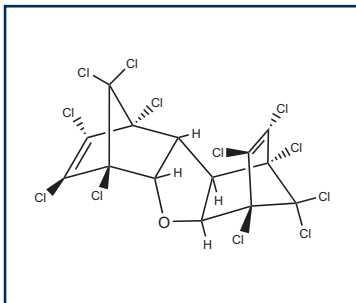
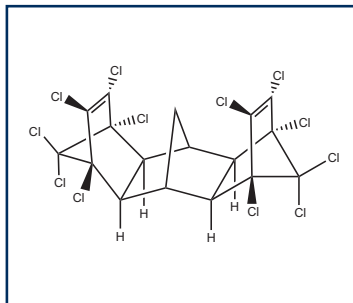
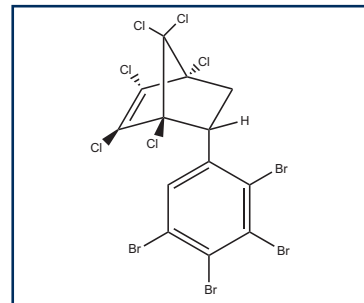
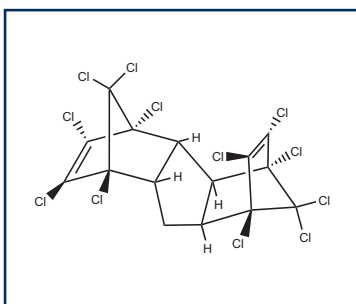
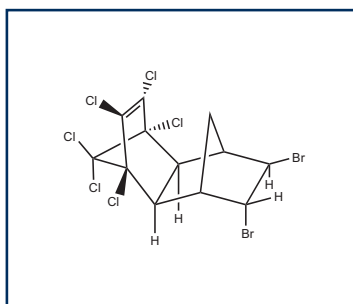
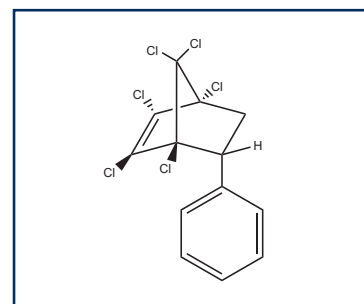


**NEW HALOGENATED FLAME RETARDANTS****EFRs (Experimental Flame Retardants)**

Halogenated flame retardants are most often associated with high profile brominated compounds such as polybrominated diphenyl ethers (PBDEs). However, the production, use, and fate of chlorinated and mixed chlorinated/brominated flame retardants has started to garner more attention recently due to reports of their presence in various environmental samples. For instance, it is believed that a family of flame retardants arising from Diels-Alder reactions of hexachlorocyclopentadiene has been in use for many years (e.g. Dechlorane Plus, Dec-604, etc.) albeit, in some cases, at an experimental level. In response to this, Wellington has synthesized the following series of compounds:

**1,3-DPMA****DBCD****Dec-601****Dec-602****Dec-603****Dec-604****CPlus****DBALD****HCPN**

Catalogue Number	Product (toluene)	Qty	Conc
1,3-DPMA	1,3-Dechlorane Plus® Mono Adduct	1.2 ml	50 µg/ml
DBCD	Dibromochlordene	1.2 ml	50 µg/ml
Dec-601	Dechlorane 601	1.2 ml	50 µg/ml
Dec-602	Dechlorane 602	1.2 ml	50 µg/ml
Dec-603	Dechlorane 603	1.2 ml	50 µg/ml
Dec-604	Dechlorane 604	1.2 ml	50 µg/ml
CPlus	Chlordene Plus	1.2 ml	50 µg/ml
DBALD	Dibromoaldrin	1.2 ml	50 µg/ml
HCPN	Hexachloro(phenyl)norbornene	1.2 ml	50 µg/ml

Dechlorane Plus® is a registered trademark of Occidental Chemical Corporation.

IUPAC NAMES:

1,3-DPMA = *rac*-(1*R*,2*R*,9*S*,10*S*)-1,10,11,12,13,13-hexachlorotricyclo[8.2.1.0^{2,9}]-trideca-3,11-diene

DBCD = *rac*-(1*R*,2*R*,3*aS*,4*S*,7*R*,7*aR*)-1,2-dibromo-4,5,6,7,8,8-hexachloro-2,3,3*a*,4,7,7*a*-hexahydro-1*H*-4,7-methanoindene

Dec-601 = *rac*-(1*R*,2*S*,3*S*,4*S*,7*R*,8*R*,10*S*,11*S*,12*S*,13*S*,16*R*,17*R*)-4,5,6,7,13,14,15,16,19,19,20,20-dodecachloroheptacyclo[9.6.1.1^{4,7}.1^{13,16}.0^{2,10}.0^{3,8}.0^{12,17}]icosa-5,14-diene

Dec-602 = 1,2,3,4,6,7,8,9,10,10,11,11-dodecachloro-1,4,4*a*,5*a*,6,9,9*a*,9*b*-octahydro-1,4:6,9-dimethanodibenzofuran

Dec-603 = 1,2,3,4,5,6,7,8,12,12,13,13-dodecachloro-1,4,4*a*,5,8,8*a*,9,9*a*,10,10*a*-decahydro-1,4:5,8:9,10-trimethanoanthracene

Dec-604 = *endo*-5-(2,3,4,5-tetrabromophenyl)-1,2,3,4,7,7-hexachloro-bicyclo[2.2.1]hept-2-ene

CPlus = *rac*-(1*R*,4*S*,4*aR*,4*bR*,5*S*,8*R*,8*aR*,9*aR*)-1,2,3,4,5,6,7,8,10,10,11,11-dodecachloro-4,4*a*,4*b*,5,8,8*a*,9,9*a*-octahydro-1*H*-1,4:5,8-dimethanofluorene

DBALD = *rac*-(1*R*,2*S*,3*S*,4*S*,4*aS*,5*R*,8*S*,8*aR*)-2,3-dibromo-5,6,7,8,9,9-hexachloro-1,2,3,4,4*a*,5,8,8*a*-octahydro-1,4:5,8-dimethanonaphthalene

HCPN = *endo*-5-phenyl-1,2,3,4,7,7-hexachloro-bicyclo[2.2.1]hept-2-ene

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