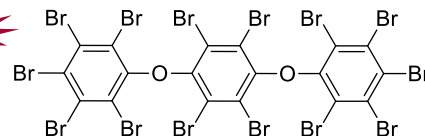




## Tetradecabromodiphenoxybenzene (TDBDPB) and some of its metabolites

Brominated flame retardants (BFRs) are widely used in various commercial products such as furniture, textiles, plastics, paints, and electronic appliances as additive and reactive substances to reduce flammability and hinder fire ignition.



There are at least 75 different BFRs which have been used in commercial products. One of them is Tetradecabromodiphenoxybenzene (TDBDPB), a compound with a high molecular weight due to its 14 bromine atoms. It was promoted as a compound with low rates of bioaccumulation, and excellent thermal and photolytic stability.

Studies have shown that TDBDPB does undergo UV and natural sunlight degradation. The findings do not stop at the expected debromination products. Most recently, various methoxylated debrominated TDBDPB metabolites were found in Herring Gull eggs from the Great Lakes of North America. G. Su et al has identified the spectra base structure of four MeO-pentabromoDPBs, a MeO-hexabromoDPB and a MeO-tetrabromoDPB as the metabolites.

To aid the ongoing research regarding the metabolism and environmental impact of TDBDPB, we have synthesized and now provide a variety of hydroxylated and methoxylated polybrominated diphenoxybenzene metabolites, as well as polybrominated diphenoxybenzene degradation products as reference standards.

Compound	Matrix	Cat. No.	Unit
4"-Hydroxy-2,2',2",4-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">HBDPB-401S</a>	1 mL
4"-Hydroxy-2,2',3',4-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">HBDPB-402S</a>	1 mL
4"-Hydroxy-2,2",4,6-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">HBDPB-403S</a>	1 mL
6"-Hydroxy-2,2",4,5"-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">HBDPB-404S</a>	1 mL
4"-Hydroxy-2,2",4,5-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">HBDPB-405S</a>	1 mL
6"-Hydroxy-2,2',3',4-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">HBDPB-406S</a>	1 mL
6"-Hydroxy-2,3',3",4-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">HBDPB-407S</a>	1 mL
4"-Hydroxy-2,3',3",4-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">HBDPB-408S</a>	1 mL
4"-Hydroxy-2,2',3",4-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">HBDPB-409S</a>	1 mL
6"-Hydroxy-2,2',2",4-tetrabromodiphenoxy benzene	50 µg/mL in AcCN	<a href="#">HBDPB-410S</a>	1 mL
4"-Hydroxy-2,2',2",4,5-pentabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">HBDPB-501S</a>	1 mL
6"-Hydroxy-2,2",3',4,5"-pentabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">HBDPB-502S</a>	1 mL
6"-Hydroxy-2,2",4,5",6-pentabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">HBDPB-503S</a>	1 mL
4"-Hydroxy-2,2',4,6,6'-pentabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">HBDPB-504S</a>	1 mL
6"-Hydroxy-2,2',2",4,5"-pentabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">HBDPB-505S</a>	1 mL
4"-Methoxy-2,2',2",4-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">MOBDPB-401S</a>	1 mL
4"-Methoxy-2,2',3',4-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">MOBDPB-402S</a>	1 mL
4"-Methoxy-2,2",4,6-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">MOBDPB-403S</a>	1 mL
6"-Methoxy-2,2",4,5"-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">MOBDPB-404S</a>	1 mL
4"-Methoxy-2,2",4,5-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">MOBDPB-405S</a>	1 mL
6"-Methoxy-2,2',3',4-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">MOBDPB-406S</a>	1 mL
6"-Methoxy-2,3',3",4-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">MOBDPB-407S</a>	1 mL
4"-Methoxy-2,3',3",4-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">MOBDPB-408S</a>	1 mL
4"-Methoxy-2,2',3",4-tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">MOBDPB-409S</a>	1 mL
6"-Methoxy-2,2',2",4-tetrabromodiphenoxy benzene	50 µg/mL in AcCN	<a href="#">MOBDPB-410S</a>	1 mL
4"-Methoxy-2,2',2",4,5-pentabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">MOBDPB-501S</a>	1 mL
6"-Methoxy-2,2',3',4,5"-pentabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">MOBDPB-502S</a>	1 mL
6"-Methoxy-2,2",4,5",6-pentabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">MOBDPB-503S</a>	1 mL
4"-Methoxy-2,2',4,6,6'-pentabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">MOBDPB-504S</a>	1 mL
6"-Methoxy-2,2',2",4,5"-pentabromodiphenoxy benzene	50 µg/mL in AcCN	<a href="#">MOBDPB-505S</a>	1 mL
2,2',4,4"-Tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">BDPB-401S</a>	1 mL
2,2',2",4-Tetrabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">BDPB-402S</a>	1 mL
2,2',2",4,4"-Pentabromodiphenoxybenzene	50 µg/mL in AcCN	<a href="#">BDPB-501S</a>	1 mL

### Reference Paper

In Vitro Metabolism of Photolytic Breakdown products of Tetradecabromo-1,4-diphenoxybenzene Flame Retardant in Herring Gull and Rat Liver Microsomal Assays. Environ. Sci. Technology, 2016, 50 (15), pp8335-8343

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