

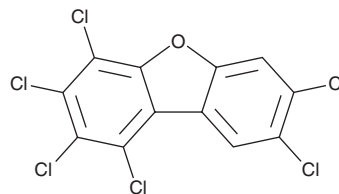
PRODUCT INFORMATION



1,2,3,4,7,8-Hexachlorodibenzofuran

Item No. 38619

CAS Registry No.: 70648-26-9
Synonyms: 1,2,3,4,7,8-HxCDF, PCDF 118
MF: $C_{12}H_2Cl_6O$
FW: 374.9
Purity: $\geq 90\%$
Supplied as: A solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

1,2,3,4,7,8-Hexachlorodibenzofuran is supplied as a solid. A stock solution may be made by dissolving the 1,2,3,4,7,8-hexachlorodibenzofuran in the solvent of choice, which should be purged with an inert gas. 1,2,3,4,7,8-Hexachlorodibenzofuran is slightly soluble in chloroform (warmed).

Description

1,2,3,4,7,8-Hexachlorodibenzofuran is a dioxin-like polychlorinated dibenzofuran (PCDF).¹ It induces the expression of the genes encoding the cytochrome P450 (CYP) isoforms CYP1A1 and CYP1B1, as well as the aryl hydrocarbon receptor repressor (AhRR) in primary human peripheral blood lymphocytes and increases ethoxyresorufin-O-deethylase (EROD) activity, a marker of CYP1A1 activity, in isolated human peripheral blood lymphocytes in a concentration-dependent manner. 1,2,3,4,7,8-Hexachlorodibenzofuran (300, 600, and 1,000 $\mu g/kg$) increases the percentage of mouse fetuses with cleft palates or hydronephrosis in pregnant dams.² It has been found in human breastmilk, freshwater fish, and in the air near municipal waste incinerators.³⁻⁵

References

1. van Ede, K.I., Gaisch, K.P.J., van den Berg, M., *et al.* Differential relative effect potencies of some dioxin-like compounds in human peripheral blood lymphocytes and murine splenic cells. *Toxicol. Lett.* **226(1)**, 43-52 (2014).
2. Birnbaum, L.S., Harris, M.W., Barnhart, E.R., *et al.* Teratogenicity of three polychlorinated dibenzofurans in C57BL/6N mice. *Toxicol. Appl. Pharmacol.* **90(2)**, 206-216 (1987).
3. Takekuma, M., Saito, K., Ogawa, M., *et al.* Levels of PCDDs, PCDFs and Co-PCBs in human milk in Saitama, Japan, and epidemiological research. *Chemosphere* **54(1)**, 127-135 (2004).
4. Tawara, K., Nishijo, M., Honda, R., *et al.* Effects of maternal dioxin exposure on newborn size at birth among Japanese mother-infant pairs. *Environ. Health Prev. Med.* **14(2)**, 88-95 (2009).
5. Hu, S.-W., ChangChien, G.-P., and Chan, C.-C. PCDD/Fs levels in indoor environments and blood of workers of three municipal waste incinerators in Taiwan. *Chemosphere* **55(4)**, 611-620 (2004).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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