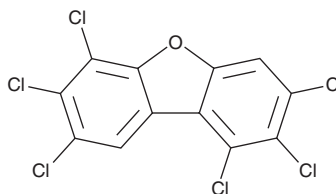


PRODUCT INFORMATION

1,2,3,6,7,8-Hexachlorodibenzofuran

Item No. 38621

CAS Registry No.: 57117-44-9
Synonyms: 1,2,3,6,7,8-HxCDF, PCDF 121
MF: C₁₂H₂Cl₆O
FW: 374.9
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

1,2,3,6,7,8-Hexachlorodibenzofuran is supplied as a solid. A stock solution may be made by dissolving the 1,2,3,6,7,8-hexachlorodibenzofuran in the solvent of choice, which should be purged with an inert gas. 1,2,3,6,7,8-Hexachlorodibenzofuran is slightly soluble in chloroform and ethyl acetate.

Description

1,2,3,6,7,8-Hexachlorodibenzofuran is a dioxin-like polychlorinated dibenzofuran (PCDF).¹ It induces expression of the genes encoding aryl hydrocarbon hydroxylase (AHH) and ethoxyresorufin-O-deethylase (EROD) in H-4-II-E rat hepatoma cells (EC₅₀s = 1.47 and 1.24 nM, respectively).² It reduces weight, induces thymic atrophy, and induces the expression of genes encoding the cytochrome P450 (CYP) isoform CYP1A1 and 4-chlorobiphenyl hydroxylase in rats (ED₅₀s = 3.2, 0.9, 0.35, and 0.21 μmol/kg, respectively).³ It has been found in the soil near municipal waste incinerators, in freshwater fish, and in human breastmilk.^{1,4,5}

References

1. Harnly, M., Stephens, R., McLaughlin, C., *et al.* Polychlorinated dibenzo-p-dioxin and dibenzofuran contamination at metal recovery facilities, open burn sites, and a railroad car incineration facility. *Environ. Sci. Technol.* **29**(3), 667-684 (1995).
2. Bandiera, S., Sawyer, T., Romkes, M., *et al.* Polychlorinated dibenzofurans (PCDFs): Effects of structure on binding to the 2,3,7,8-TCDD cytosolic receptor protein, AHH induction and toxicity. *Toxicology* **32**(2), 131-144 (1984).
3. Mason, G., Sawyer, T., Keys, B., *et al.* Polychlorinated dibenzofurans (PCDFs): Correlation between in vivo and in vitro structure-activity relationships. *Toxicology* **37**(1-2), 1-12 (1985).
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5. 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).

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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