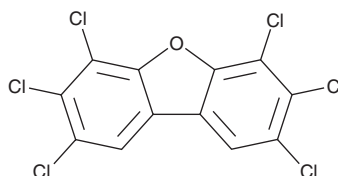


PRODUCT INFORMATION

2,3,4,6,7,8-Hexachlorodibenzofuran

Item No. 38623

CAS Registry No.: 60851-34-5
Synonyms: 2,3,4,6,7,8-HxCDF,
 PCDF 130
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

2,3,4,6,7,8-Hexachlorodibenzofuran is supplied as a solid. A stock solution may be made by dissolving the 2,3,4,6,7,8-hexachlorodibenzofuran in the solvent of choice, which should be purged with an inert gas. 2,3,4,6,7,8-Hexachlorodibenzofuran is slightly soluble in chloroform and DMSO (warmed).

Description

2,3,4,6,7,8-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 = 0.687 and 0.575 nM, respectively).² It has been found in the soil near municipal waste incinerators, in freshwater fish, and in human breastmilk.^{1,3,4} Fetal exposure to 2,3,4,6,7,8-hexachlorodibenzofuran negatively correlates with newborn size in humans.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. Zacharewski, T., Safe, L., Safe, S., *et al.* Comparative analysis of polychlorinated dibenzo-*p*-dioxin and dibenzofuran congeners in Great Lakes fish extracts by gas chromatography-mass spectrometry and in-vitro enzyme induction activities. *Environ. Sci. Technol.* **23**, 730-735 (1989).
4. 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).
5. 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).

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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