

Product Data Sheet

Product Name: 2,3,4,7,8-Pentachlorodibenzofuran

Cat. No.: GC90944

Chemical Properties

Cas. No. 57117-31-4

Formula $C_{12}H_3Cl_5O$

M.Wt 340.4

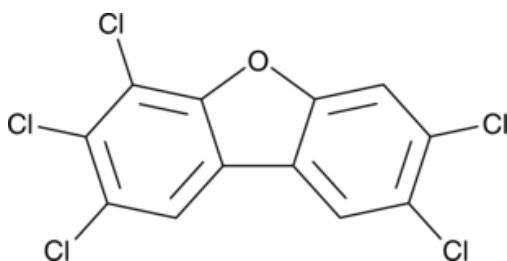
Solubility Acetone: Slightly soluble w/
sonication, Benzene: Slightly soluble

Storage Store at $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

2,3,4,7,8-Pentachlorodibenzofuran is a dioxin-like polychlorinated dibenzofuran (PCDF).¹ It induces the expression of genes encoding the cytochrome P450 (CYP) isoforms CYP1A1 and CYP1A2 in primary human hepatocytes ($EC_{50}s = 0.369$ and 0.329 nM, respectively) and aryl hydrocarbon hydroxylase (AHH) and ethoxyresorufin-O-deethylase (EROD) in H-4-II-E rat hepatoma cells ($EC_{50}s = 0.256$ and 0.134 nM, respectively).^{2,3} Serum levels of 2,3,4,7,8-pentachlorodibenzofuran are elevated in humans that consumed products from plants and animals grown and raised in dioxin-contaminated river sediments.¹ 2,3,4,7,8-Pentachlorodibenzofuran ($300 \mu g/kg$) decreases maternal and fetal weight and the number of live fetuses, as well as increases maternal tumor and liver weight and the percentage of fetuses with cleft palate, in developing fetuses in pregnant rat dams.⁴

Caution: Product has not been fully validated for medical applications. For research use only.

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