

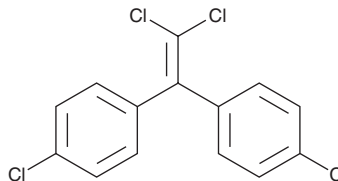
# PRODUCT INFORMATION



## *p,p'*-DDE

Item No. 24241

**CAS Registry No.:** 72-55-9  
**Formal Name:** 1,1'-(2,2-dichloroethenylidene)bis[4-chloro-benzene]  
**Synonyms:** 4,4'-DDE, *p,p'*-Dichlorodiphenyldichloroethylene, 4,4'-Dichlorodiphenyldichloroethylene, NSC 1153  
**MF:** C<sub>14</sub>H<sub>8</sub>Cl<sub>4</sub>  
**FW:** 318.0  
**Purity:** ≥98%  
**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

*p,p'*-DDE is supplied as a solid. A stock solution may be made by dissolving the *p,p'*-DDE in the solvent of choice, which should be purged with an inert gas. *p,p'*-DDE is slightly soluble in chloroform.

### Description

*p,p'*-DDE is a metabolite and degradation product of the organochlorine pesticide DDT.<sup>1</sup> It accumulates in smallmouth buffalo, channel catfish, and largemouth bass as well as sediment in the Huntsville Spring Branch-Indian Creek tributary system surrounding a DDT manufacturing plant where it is considered a persistent organic pollutant (POP). *p,p'*-DDE inhibits estrogen binding to rainbow trout estrogen receptors (rtERs) with an IC<sub>50</sub> value of 8 μM.<sup>2</sup> It induces concentration-dependent secretion of estradiol by granulosa and theca cell co-cultures isolated from porcine ovarian follicles.<sup>3</sup> *p,p'*-DDE (50-100 μM) also decreases ATP levels, the proportion of sperm with high mitochondrial membrane potential, and motility of human sperm *in vitro*.<sup>4</sup>

### References

1. Garrison, A.W., Cyterski, M., Roberts, K.D., *et al.* Occurrences and fate of DDT principal isomers/metabolites, DDA, and o,p'-DDD enantiomers in fish, sediment and water at a DDT-impacted superfund site. *Environ. Pollut.* **194**, 224-234 (2014).
2. Matthews, J., Celius, T., Halgren, R., *et al.* Differential estrogen receptor binding of estrogenic substances: A species comparison. *J. Steroid. Biochem. Mol. Biol.* **74**(4), 223-234 (2000).
3. Wójtowicz, A.K., Gregoraszczyk, E.L., Ptak, A., *et al.* Effect of single and repeated *in vitro* exposure of ovarian follicles to o,p'-DDT and p,p'-DDT and their metabolites. *Pol. J. Pharmacol.* **56**(4), 465-472 (2004).
4. Tavares, R.S., Amaral, S., Paiva, C., *et al.* *In vitro* exposure to the organochlorine p,p'-DDE affects functional human sperm parameters. *Chemosphere* **120**, 443-446 (2015).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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