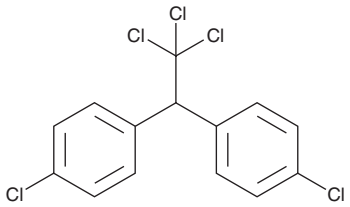
PRODUCT INFORMATION

p,p'-DDT

Item No. 24243

CAS Registry No.:	50-29-3
Formal Name:	1,1'-(2,2,2-trichloroethylidene)*bis*[4-chloro-benzene]
Synonyms:	4,4'-DDT, 4,4'-Dichlorodiphenyltrichloroethane, *p,p'*-Dichlorodiphenyltrichloroethane, Dicophaner, NSC 8939
MF:	$C_{14}H_9Cl_5$
FW:	354.5
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'-DDT is supplied as a solid. A stock solution may be made by dissolving the *p,p'*-DDT in the solvent of choice, which should be purged with an inert gas. *p,p'*-DDT is soluble in methanol (heated) and is slightly soluble in chloroform.

Description

p,p'-DDT is an organochlorine pesticide that induces 94.2% mortality of malaria mosquito (*A. quadrimaculatus*) fourth-instar larvae and 100% mortality of *A. aegypti* larvae when used at concentrations of 0.01 and 0.05 ppm, respectively.[1,2] It increases secretion of estradiol by granulosa and theca cell co-cultures isolated from porcine ovarian follicles when used at concentrations of greater than or equal to 4 ng/ml and increases apoptosis in isolated human peripheral blood mononuclear cells (PBMCs) when used at concentrations ranging from 80 to 150 µg/ml.[3,4] *p,p'*-DDT (5 nmol/kg, i.p.) increases tumor growth in a DLD1 colorectal adenocarcinoma nude mouse xenograft model.[5] It induces 100% mortality of *C. auratus* (goldfish) at 0.25 ppm and is lethal to rats but not hamsters (LD_{50}s = 120 and ~5,000 mg/kg, respectively).[1,6] *p,p'*-DDT is a persistent organic pollutant (POP) and is elevated in the sera of pregnant women in malaria-endemic regions of South Africa.[7]

References

1. Ginsburg, J.M. *Science* **105(2722)**, 233-234 (1947).
2. Jones, H.A., Incho, H.H., and Deonier, C.C. *J. Econ. Entomol.* **39(5)**, 672 (1946).
3. Pérez-Maldonado, I.N., Díaz-Barriga, F., de la Fuente, H., *et al. Environ. Res.* **94(1)**, 38-46 (2004).
4. Wójtowicz, A.K., Gregoraszczuk, E.L., Ptak, A., *et al. Pol. J. Pharmacol.* **56(4)**, 465-472 (2004).
5. Song, L.Z., J., Jin, X., Li, Z., *et al. Toxicol. Lett.* **229(1)**, 284-291 (2014).
6. Truhaut, R., Gak, J.C., and Graillot, C. *Eur. J. Toxicol. Environ. Hyg.* **7(3)**, 159-166 (1974).
7. Röllin, H.B., Sandanger, T.M., Hansen, L., *et al. Sci. Total. Environ.* **408(1)**, 146-152 (2009).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM