

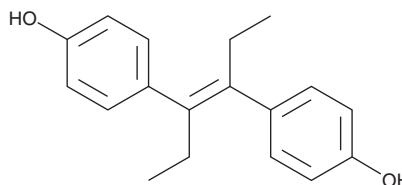
# PRODUCT INFORMATION



## Diethylstilbestrol

Item No. 10006876

**CAS Registry No.:** 56-53-1  
**Formal Name:** 4,4'[(1E)-1,2-diethyl-1,2-ethenediyl]bis-phenol  
**Synonym:** DES  
**MF:** C<sub>18</sub>H<sub>20</sub>O<sub>2</sub>  
**FW:** 268.4  
**Purity:** ≥98%  
**Supplied as:** A crystalline 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

Diethylstilbestrol (DES) is supplied as a crystalline solid. A stock solution may be made by dissolving the DES in an organic solvent purged with an inert gas. DES is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of DES in these solvents is approximately 30 mg/ml.

DES is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DES should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. DES has a solubility of approximately 0.15 mg/ml in a 1:5 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

DES is a synthetic estrogen receptor agonist that was prescribed to pregnant women in the late 1930s. It was banned in 1971 because of possible links to increased risk of breast cancer in mothers along with congenital abnormalities and increased risk of cancer in offspring.<sup>1</sup> DES is structurally related to, and is as potent as, estradiol in most assays, with a longer half-life. It has a relative binding affinity to sex hormone binding globulin (SHBG) of 0.2 compared to estradiol which has a relative binding affinity of 100. A concentration of 20 μM DES, displaces 30 ± 13% of 3H-estradiol from SHBG in serum.<sup>1,2</sup>

### References

1. Coelingh Bennink, H.J.T. Are all estrogens the same? *Maturitas* **47**, 269-275 (2003).
2. Jury, H.H., Zaxharewski, T.R., and Hammond, G.L. Interactions between human plasma sex hormone-binding globulin and xenobiotic ligands. *J. Steroid Biochem. Molec. Biol.* **75**, 167-176 (2000).

#### 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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