**PRODUCT INFORMATION**

**Ethynyl Estradiol**  
*Item No. 10006486*

- **CAS Registry No.:** 57-63-6  
- **Formal Name:** 19-norpregna-1,3,5(10)-trien-20-yne-3,17α-diol  
- **Synonyms:** Ethynyl β-Estradiol; Ethynyl 17β-Estradiol; Ethynyl 17β-Oestradiol; Ethynyl E2  
- **MF:** C₂₀H₂₄O₂  
- **FW:** 296.4  
- **Purity:** ≥98%  
- **Stability:** ≥2 years at -20°C  
- **Supplied as:** A crystalline solid  
- **UV/Vis.:** λ<sub>max</sub> 281 nm

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**Laboratory Procedures**

For long term storage, we suggest that ethynyl estradiol be stored as supplied at -20°C. It should be stable for at least two years.

Ethynyl estradiol is supplied as a crystalline solid. A stock solution may be made by dissolving the ethynyl estradiol in an organic solvent purged with an inert gas. Ethynyl estradiol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of ethynyl estradiol in these solvents is at least 20 mg/ml.

Ethynyl estradiol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ethynyl estradiol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Ethynyl estradiol has a solubility of 0.125 mg/ml in a 1:7 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

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**Description**

Estrogens direct the development of the female genotype in embryogenesis and at puberty. Estradiol is the major estrogen secreted by the premenopausal ovary. Ethynyl estradiol is a synthetic analog of 17β-estradiol (Item No. 10006315). A USP-approved grade of ethynyl estradiol is often formulated in combination with a progestin such as norgestrel (Item No. 10006319)/levonorgestrel (Item No. 10006318) or desogestrel and provided for use as an oral contraceptive. Efficacy of oral administration of ethynyl estradiol is facilitated by the ethynyl substitution at the C-17 position, which inhibits first pass hepatic metabolism. Ethynyl estradiol is also rapidly and almost completely absorbed from the gastrointestinal tract.

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**References**