

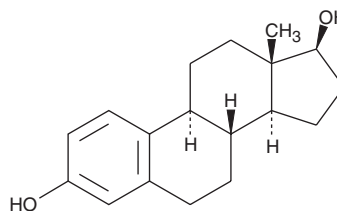
Product Information



Estradiol

Catalog No. 10006315

CAS Registry No.: 50-28-2
Formal Name: estra-1,3,5(10)-triene-3,17 β -diol
Synonyms: β -Estradiol; 17 β -Estradiol; 17 β -Oestradiol
MF: C₁₈H₂₄O₂
FW: 272.4
Purity: \geq 98%
Stability: \geq 2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

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

Estradiol is supplied as a crystalline solid. A stock solution may be made by dissolving the estradiol in an organic solvent purged with an inert gas. Estradiol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of estradiol in these solvents is at least 2.5 mg/ml in ethanol and 20 mg/ml in DMSO and DMF.

Estradiol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, estradiol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Estradiol has a solubility of 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Estrogens direct the development of the female genotype in embryogenesis and at puberty. Estradiol is the major estrogen secreted by the premenopausal ovary. It is synthesized from testosterone primarily in the ovarian granulosa cells and placenta, but small amounts can be produced in the adrenal gland.^{1,2} Plasma estradiol levels increase gradually between days 1-7 of the menstrual cycle followed by a sharp increase to a peak value of about 300 pg/ml on day 12, just prior to ovulation.^{3,4}

References

1. Vance, D.E. Cholesterol and related derivatives, Chapter 23, *in* Biochemistry. Zubay, G., editor, 2nd ed., Macmillan Publishing Company, New York, 725-748 (1988).
2. Miller, W.L. and Tyrrell, J.B. The adrenal cortex, Chapter 12, *in* Endocrinology and metabolism. Felig, P., Baxter, J.D., and Frohman, L.A., editors, 3rd ed., McGraw-Hill, Inc. Health Professions Division, New York, 555-711 (1995).
3. Erickson, G.F. The ovary: Basic principles and concepts. A. physiology, Chapter 17, *in* Endocrinology and metabolism. Felig, P., Baxter, J.D., and Frohman, L.A., editors, 3rd ed., McGraw-Hill, Inc. Health Professions Division, New York, 973-1015 (1995).
4. Munro, C.J., Stabenfeldt, G.H., Cragun, J.R., *et al.* Relationship of serum estradiol and progesterone concentrations to the excretion profiles of their major urinary metabolites as measured by enzyme immunoassay and radioimmunoassay. *Clin. Chem.* **37**, 838-844 (1991).

Related Products

Estradiol EIA Kit - Cat. No. 582251 • Testosterone EIA Kit - Cat. No. 582701 • Mifepristone - Cat. No. 10006317 • Levonorgestrel - Cat. No. 10006318 • Norgestrel - Cat. No. 10006319 • Tibolone - Cat. No. 10006321 • Estriol - Cat. No. 10006484 • Ethinyl Estradiol - Cat. No. 10006486 • Estradiol Benzoate - Cat. No. 10006487 • Gestrinone - Cat. No. 10006488

WARNING: THIS PRODUCT IS NOT FOR HUMAN OR ANIMAL DISEASE DIAGNOSIS OR THERAPEUTIC DRUG USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSD supervisor at your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

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