PRODUCTION INFORMATION

Norgestimate
Item No. 16547

CAS Registry No.: 35189-28-7
Formal Name: (17α)-17-(acetyloxy)-13-ethyl-18,19-dinorpregn-4-en-20-yn-3-one 3-oxime
Synonym: Dexnorgestrel acetate
MF: C_{23}H_{31}NO_{3}
FW: 369.5
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: \( \lambda_{max} \): 241 nm

Laboratory Procedures

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

Norgestimate is supplied as a crystalline solid. A stock solution may be made by dissolving the norgestimate in the solvent of choice. Norgestimate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of norgestimate in these solvents is approximately 2, 14, and 16 mg/ml, respectively.

Norgestimate is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, norgestimate should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Norgestimate has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Progesterone (Item No. 15876) is a steroid secreted by the corpus luteum and placenta. It is responsible for preparing the uterine lining for implantation of a fertilized ovum and to maintain pregnancy. Norgestimate is a synthetic progesterone analog (i.e., a progestin) that acts as a prodrug to norelgestromin, the primary active metabolite, and levonorgestrel (Item No. 10006318).\(^1\) It is deacetylated in the intestine and liver to form the two active metabolites.\(^1\) Norgestimate selectively binds the progesterone receptor and is androgenically neutral.\(^2,3\) A USP-approved grade of norgestimate is formulated in combination with ethynyl estradiol and provided under the trade name Ortho-Tri-Cyclen™ for use as an oral contraceptive.

References