PRODUCT INFORMATION

Zearalenone
Item No. 11353

CAS Registry No.: 17924-92-4
Formal Name: (3S,11E)-3,4,5,6,9,10-hexahydro-14,16-dihydroxy-3-methyl-1H-2-benzoazycloptetradecin-1,7(8H)-dione
Synonyms: FES, Mycotoxin F₂, Toxin F₂, Zenone
MF: C₁₈H₂₂O₅
FW: 318.4
Purity: ≥98%
UV/Vis.: λ<sub>max</sub>: 236, 274, 316 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Zearalenone is supplied as a crystalline solid. A stock solution may be made by dissolving the zearalenone in the solvent of choice. Zearalenone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of zearalenone in these solvents is approximately 20 mg/ml.

Zearalenone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, zearalenone should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Zearalenone has a solubility of approximately 0.12 mg/ml in a 1:7 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Zearalenone is a mycotoxin produced by fungi in food and animal feeds.⁴ Although of low acute toxicity, zearalenone activates estrogen receptors, alters hormone levels, and hasten pre-pubertal development, especially in pigs.²³ While pre-pubertal animals appear to be more sensitive to zearalenone than older animals, the toxin can cause uterine, rectal, and vaginal prolapse, abortion, and infertility in older animals.⁴ Evidence for zearalenone effects have been observed in a wide variety of animals, including man.²⁴⁻⁵

References