

Product Name: Zearalenone

Product Number: Z012

CAS Number: 17924-92-4

Molecular Formula: $C_{18}H_{22}O_5$

Molecular Weight: 318.4

Appearance: White solid

Storage Conditions: -20°C

Description: Zearalenone is a resorcylic acid lactone produced by a number of *Fusarium* sp.. Zearalenone acts as a non-steroidal estrogen, binding to estrogen receptor and is uterotrophic. Zearalenone induces reproductive problems in animals and, in some animal models, is thought to be a primary initiator of hepatic tumors. In vivo, zearalenone undergoes metabolic reduction to the more estrogenic zearalenol. Contamination of grains, notably maize, by *Fusarium* species gives rise to high levels of zearalenone and is regarded as an important food quality issue for both human and animal health.

Zearalenone is soluble in ethanol, methanol, DMF, DMSO, and has limited solubility in water.

References: Identification of the naturally occurring isomer of zearalenol produced by *Fusarium roseum* 'Gibbosum' in rice culture. Hagler W.M. et al. Appl. Environ. Microbiol. 1979, 37, 849.

Estrogenic activity of zearalenone and zearalenol in the neonatal rat uterus. Teratology 1984, 90, 383-392.

Binding properties of zearalenone mycotoxins to hepatic estrogen receptors. Powell-Jones W. et al. Mol. Pharmacol. 1981, 20, 35-42.

Influence of mycotoxin zearalenone and its derivatives (alpha and beta zearalenol) on apoptosis and proliferation of cultured granulosa cells from equine ovaries. Minervini F. et al. Reprod Biol Endocrinol. 2006, 4, 62.

Review on the toxicity, occurrence, metabolism, detoxification, regulations and intake of zearalenone: an oestrogenic mycotoxin. Zinedine A. et al. Food Chem. Toxicol. 2007, 45, 1.