



Certificate of analysis

Productname: Estrone

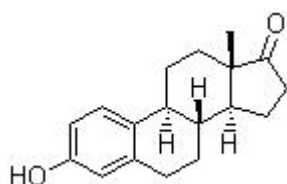
Cas number: 53-16-7

Molecular Formula: $C_{18}H_{22}O_2$

Molecular Weight: 270.37

Date of production: Feb. 01, 2013

Chemical structure:



Items	Specifications	Results
Appearance	Small, white crystals or white to creamy white, crystalline powder. Is odorless, and is stable in air	Conforms
Solubility	Practically insoluble in water; soluble in alcohol, in acetone, in dioxane, and in vegetable oils; slightly soluble in solutions of fixed alkali hydroxides.	Conforms
Clarity of solution	The solution is clear	Conforms
Identification	A: IR B: UV	Conforms
Specific optical rotation	$+158^{\circ} \sim +165^{\circ}$	$+161.9^{\circ}$
Loss in drying	$\leq 0.5\%$	0.2%
Residue on ignition	$\leq 0.5\%$	0.07%
Limit of equienin and equilin	Should meet the standards	Conforms
Ordinary impurities	Should meet the standards	Conforms
Residual Solvents	Should meet the standards	Conforms
Assay	97.0~103.0% (on the dried basis)	99.16%

Conclusion: It complies with the USP32 Standard.

Analyst: Zhao

Checker: Liu

Q.C Director. Fang F