**PRODUCT INFORMATION**

2-Methoxyestradiol  
Item No. 13021

CAS Registry No.: 362-07-2  
Formal Name: 2-methoxy-estra-1,3,5(10)-triene-3,17β-diol  
Synonyms: 2-Hydroxyestradiol 2-methyl ether, 2-ME2, NSC 659853, Panzem  
MF: C_{19}H_{26}O_{3}  
FW: 302.4  
Purity: ≥95%  
UV/Vis.: λ_{max} 209, 287 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**

2-Methoxyestradiol (2-ME2) is supplied as a crystalline solid. A stock solution may be made by dissolving the 2-ME2 in the solvent of choice. 2-ME2 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 2-ME2 in these solvents is approximately 1, 20, and 30 mg/ml, respectively. 2-ME2 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 2-ME2 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 2-ME2 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

**Description**

2-ME2 is a natural metabolite formed by CYP450-mediated hydroxylation followed by catechol-O-methyltransferase (COMT) methylation of estradiol. Administration of 2-hydroxy estradiol (2-HE2) to rats results in formation and clearance of 2-ME2 with t_{1/2} values of 7.9 and 24.9 minutes, respectively.1 2-ME2 exhibits no affinity for estrogen receptors. 2-ME2 has achieved considerable attention as an anti-cancer agent acting as an angiogenesis inhibitor via the HIF-1α pathway.2-4 The levels of COMT and 2-ME2 are significantly lower in women with severe pre-eclampsia.5

**References**