11-deoxy-16,16-dimethyl Prostaglandin E$_2$

**Item No. 14570**

**CAS Registry No.:** 53658-98-3  
**Formal Name:** 15R-hydroxy-16,16-dimethyl-9-oxo-prosta-5Z,13E-dien-1-oic acid  
**Synonym:** 11-deoxy-16,16-dimethyl PGE$_2$  
**MF:** C$_{22}$H$_{36}$O$_4$  
**FW:** 364.5  
**Purity:** ≥98%  
**Supplied as:** A solution in methyl acetate  
**Storage:** -20°C  
**Stability:** ≥1 year

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

**Laboratory Procedures**

11-deoxy-16,16-dimethyl Prostaglandin E$_2$ (11-deoxy-16,16-dimethyl PGE$_2$) is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of 11-deoxy-16,16-dimethyl PGE$_2$ in these solvents is approximately 100 mg/ml.

11-deoxy-16,16-dimethyl PGE$_2$ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 11-deoxy-16,16-dimethyl PGE$_2$ should be diluted with the aqueous buffer of choice. The solubility of 11-deoxy-16,16-dimethyl PGE$_2$ in PBS (pH 7.2) is approximately 5 mg/ml.

We do not recommend storing the aqueous solution for more than one day.

**Description**

11-deoxy-16,16-dimethyl PGE$_2$ is a stable synthetic analog of PGE$_2$. It is an agonist for both EP$_2$ and EP$_3$ receptors.$^1$ It is an effective inhibitor of gastric acid secretion and ulcer formation in the rat, with ED$_{50}$ values of 1 mg/kg and 0.021 mg/kg respectively.$^2$ It is 900 times more potent than PGF$_{2\alpha}$ in the contraction of human respiratory tract smooth muscle in vitro.$^3$

**References**