Nordihydroguaiaretic Acid
Item No. 70300

CAS Registry No.: 500-38-9
Formal Name: 4,4’-(2,3-dimethyl-1,4-butanediyl)bis-1,2-benzenediol
Synonyms: NDGA, NSC 4291
MF: C_{18}H_{22}O_4
FW: 302.4
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 1 year from the QC date provided on the Certificate of Analysis, when stored properly

**Laboratory Procedures**

Nordihydroguaiaretic Acid (NDGA) is supplied as a crystalline solid. A stock solution may be made by dissolving the NDGA in the solvent of choice. NDGA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of NDGA in ethanol and DMSO is approximately 100 mg/ml and approximately 25 mg/ml in DMF. Stock solutions prepared in oxygen-free solvents will be stable for at least one week if protected from light and stored at 0-4°C.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of NDGA can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of NDGA in PBS, pH 7.2, is approximately 0.05 mg/ml. We do not recommend storing the aqueous solution for more than one day.

**Description**

NDGA is a non-selective lipooxygenase (LO) inhibitor which blocks cysteinyl leukotriene (CysLT) synthesis. NDGA inhibits A-23187-induced CysLT biosynthesis in rat peritoneal cells with an IC_{50} value of 5-7 µM. The IC_{50} values are 3.0-5.0 µM for human platelet 12-LO and 0.91 µM for rabbit reticulocyte 15-LO.

**References**