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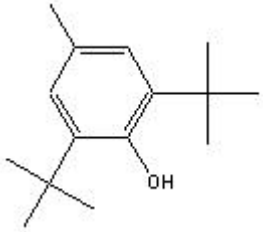
TECHNICAL INFORMATION

Catalog Number: 101162
Butylated Hydroxytoluene

Structure:



Molecular Formula: $C_{15}H_{24}O$
Molecular Weight: 220.36
CAS #: 128-37-0
Synonyms: BHT; 2,6-Di-tert-butyl-4-methylphenol; 2,6-bis(1,1-Dimethylethyl)-4-methylphenol; 2,6-Di-tert-butyl-p-cresol
Solubility: Insoluble in water; Freely soluble in toluene, soluble in methanol, ethanol (100 mg/ml), isopropanol, methyl ethyl ketone, acetone, Cellosolve, benzene and most other hydrocarbon solvents.[1] More soluble in food oils and fats than butylated hydroxyanisole.[1]
Description: A phenolic antioxidant. It has been shown to inhibit lipid peroxidation. It causes lung injury and promotes tumors in mice, but this may be due to a metabolite of BHT, 6-tert-butyl-2-[2'-(2'-hydroxymethyl)-propyl]-4-methylphenol. Metabolites of BHT have also been reported to induce DNA strand breaks and internucleosomal DNA fragmentation (a characteristic of apoptosis) in cultured cells. In rats, a single intraperitoneal injection of BHT (60 mg/kg body mass) results in a significant increase in nuclear DNA methyl transferase activity in the liver, kidneys, heart, spleen, brain and lungs. Incubation of alveolar macrophages with BHT significantly reduced the level of TNF-alpha which may explain the mechanism by which this antioxidant reduces inflammation. Preincubation of aspirin-treated platelets with BHT inhibits the secretion, aggregation, and protein phosphorylation induced by protein kinase C activators. BHT was also found to inhibit the initiation of hepatocarcinogenesis by aflatoxin B1.
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