

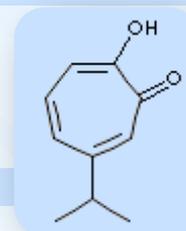
# beta-THUJAPLICIN

## SYNONYMS

Hinokitiol; 2-Hydroxy-6-propan-2-ylcyclohepta-2,4,6-trien-1-one; 2-Hydroxy-4-(1-methylethyl)-2,4,6-cycloheptatrien-1-one; Isopropyltropolone; beta-Thujaplicin; 2-Hydroxy-4-isopropyl-2,4,6-cycloheptatrien-1-one; 4-Isopropyltropolone; Hinokitol; 4-Isopropyltropolone; beta-Isopropyltropolon;

## PRODUCT IDENTIFICATION

CAS RN	499-44-5; 772-41-8; 333760-35-3
EINECS RN	207-880-7
FORMULA	C <sub>10</sub> H <sub>12</sub> O <sub>2</sub>
MOLE WEIGHT	164.21



## PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	clear to pale yellow crystals
MELTING POINT	48 – 53 C
BOILING POINT	303 – 304 C
DENSITY	
SOLUBILITY IN WATER	1200mg/l (soluble in alcohol)
pH	
VAPOR DENSITY	
REFRACTIVE INDEX	
FLASH POINT	

## STABILITY AND REACTIVITY

STABILITY	Stable under normal conditions.
INCOMPATIBLE MATERIALS	Strong oxidizing agents.
DECOMPOSITION PRODUCTS	Carbon monoxide, Carbon dioxide.
POLYMERIZATION	Has not been reported
NFPA RATINGS	

## SAFETY

HAZARD NOTES	Harmful. Harmful if swallowed.
EYE	May cause eye irritation.
SKIN	May cause skin irritation. May be harmful if absorbed through the skin.
INGESTION	Harmful if swallowed.
INHALATION	Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
CHRONIC	

## TRANSPORT & REGULATORY INFORMATION

UN NO.	
HAZARD CLASS	
PACKING GROUP	
HAZARD SYMBOL	XN
RISK PHRASES	22
SAFETY PHRASES	36

## OTHER INFORMATION

Hinokitiol (β-thujaplicin) is a tropolone-related compound that is present in the heartwood of several



# beta-THUJAPLICIN

cupressaceae, such as *Chamaecyparis obtusa* Sieb. et Zucc and *Thuja plicata* D. Don. Hinokitiol has antimicrobial activity against several microorganisms, such as influenza virus, *Staphylococcus aureus*, *Staphylococcus epidermidis*, and *Schistosoma mansoni*. The objective of this study was to clarify the in vitro inhibitory effects of hinokitiol on *C. trachomatis*. (source: <http://aac.asm.org/>)

Thujaplicin was found in the essential oil of *Thuja plicata* don *Thuopsis dolabrata sieb et zucc* by Erdtman, Gripenbberg and Nozoe in the 1930's. The structure of this substance was determined to be isopropyl cycloheptatrienolones in 1948. The existence of this substance in nature was predicted in 1945 by Dewar of the U.K in connection with the chemical structure of colchicin, a plant alkaloid, but the actual existence was not verified until thujaplicins were discovered and characterized. Thujaplicin has a very strong ability to inhibit the growth and resistance of most bacteria. It may be used to treat infections without any undesirable side effects or the generation of mutant resistant strains. Thujaplicin forms complex salts with metal ions such as Ca, Fe, Ni, Ag, Cu, Mn, Co, etc. These complex forms of salts are more stable. (source: <http://www.ntsresearch.com>)

In addition to its antimicrobial and preservative properties for the useful applications in cosmetics and personal care products, Hinokitiol shows cell stimulating, UV absorption and melanophore inhibiting abilities. Hinokitiol gives woody-mossy odor useful in the creation of fragrances.

## SALES SPECIFICATION

APPEARANCE	clear to pale yellow crystals
ASSAY	98.0% min (GC)

## PACKING

## PRICE

