Zaltoprofen

CAS Registry No.: 74711-43-6

Formal Name: 10,11-dihydro-a-methyl-10-oxo-dibenzo[b,f]thiepin-2-acetic acid

Synonyms: CN 100, Soleton

MF: C_{17}H_{14}O_{3}S

FW: 298.4

Purity: ≥98%

UV/Vis.: \( \lambda_{\text{max}} \) 228, 329 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years

Zaltoprofen is supplied as a crystalline solid. A stock solution may be made by dissolving the zaltoprofen in the solvent of choice, which should be purged with an inert gas. Zaltoprofen is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of zaltoprofen in these solvents is approximately 11, 16, and 25 mg/ml, respectively.

Zaltoprofen is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, zaltoprofen should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Zaltoprofen has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Zaltoprofen is a cyclooxygenase (COX) inhibitor that displays slight preferential inhibition for COX-2 (IC_{50}s = 1.3 and 0.34 μM for COX-1 and COX-2, respectively). Independent of COX inhibition, zaltoprofen has also been reported to inhibit bradykinin-induced nociceptive responses by blocking the activation of protein kinase C.

References