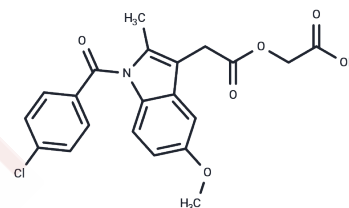


## Acemetacin

## Chemical Properties

CAS No. :	53164-05-9
Formula:	C <sub>21</sub> H <sub>18</sub> ClNO <sub>6</sub>
Molecular Weight:	415.82
Storage:	Store at low temperature Powder: -20°C for 3 years   In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



## Biological Description

Description	Acemetacin (TVX 1322) is a carboxymethyl ester of indometacin and a potent non-steroidal anti-inflammatory drug derived from indol-3-acetic acid, with its activity primarily attributed to its active metabolite, indomethacin. In clinical trials, acemetacin shows better gastric tolerability compared to indomethacin.
Targets(IC50)	COX
In vitro	In rats pre-treated with COX-2 and NOS inhibitors, despite significant inhibition of COX activity, Acemetacin significantly reduces gastrointestinal damage compared to Indomethacin.
In vivo	Acemetacin exerts its anti-inflammatory effect by inhibiting the synthesis of prostaglandins (PG). In inflamed synovial tissue, Acemetacin (10 μM) prevents the release of Prostaglandin E2 (PGE2). It inhibits the release of prostaglandin E2 in joint synovial tissues in vitro. During the incubation of gastric mucosa, the concentration-dependent inhibition of PGE accumulation by Acemetacin is not as effective as Indomethacin, and its reduction effect on gastric 6-keto-PGF1α and thromboxane B2 is also lower than that of Indomethacin.

## Solubility Information

Solubility	H <sub>2</sub> O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 77 mg/mL (185.18 mM),Sonication is recommended. Ethanol: 54 mg/mL (129.86 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.81 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.4049 mL	12.0244 mL	24.0489 mL
5 mM	0.481 mL	2.4049 mL	4.8098 mL
10 mM	0.2405 mL	1.2024 mL	2.4049 mL
50 mM	0.0481 mL	0.2405 mL	0.481 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

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Wada Y, et al. *Jpn J Pharmacol*, 1984, 34(4), 468-470.

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