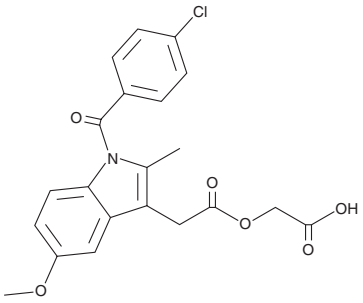
PRODUCT INFORMATION

Acemetacin

Item No. 29615

CAS Registry No.:	53164-05-9
Formal Name:	1-(4-chlorobenzoyl)-5-methoxy-2-methyl-1H-indole-3-acetic acid, carboxymethyl ester
MF:	$C_{21}H_{18}ClNO_6$
FW:	415.8
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Acemetacin is supplied as a crystalline solid. A stock solution may be made by dissolving the acemetacin in the solvent of choice, which should be purged with an inert gas. Acemetacin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of acemetacin in ethanol is approximately 3 mg/ml and approximately 25 mg/ml in DMSO and DMF.

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 acemetacin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of acemetacin in PBS, pH 7.2, is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Acemetacin is a non-steroidal anti-inflammatory drug (NSAID) and a prodrug form of indomethacin (Item No. 70270).[1] It reduces zymosan-induced thromboxane B_2 (TXB_2; Item No. 19030) and prostaglandin E_2 (PGE_2; Item No. 14010) production in isolated rat whole blood and stomach, respectively, when administered at doses ranging from 2.7 to 83.8 µmol/kg. Acemetacin (1.3, 2.5, and 10 mg/kg) also reduces carrageenan-induced PGE_2 production in rat synovial membranes.[2] It decreases leukocyte infiltration in the exudate in a rat model of zymosan-induced air pouch inflammation when administered at doses of 27.9 and 83.8 µmol/kg.[1]

References

1. Chávez-Piña, A.E., McKnight, W., Dicay, M., *et al.* Mechanisms underlying the anti-inflammatory activity and gastric safety of acemetacin. *Br. J. Pharmacol.* **152(6)**, 930-938 (2007).
2. Wada, Y., Nakamura, M., Kogo, H., *et al.* Inhibitory effect of acemetacin, a prodrug of indomethacin, on prostaglandin E_2 release from inflamed synovial tissue. *Jpn. J. Pharmacol.* **34(4)**, 468-470 (1984).

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