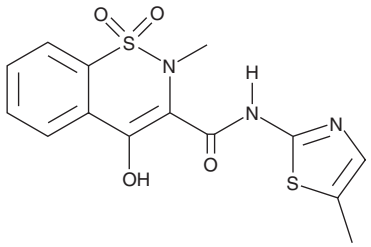
PRODUCT INFORMATION

Meloxicam

Item No. 14906

CAS Registry No.:	71125-38-7
Formal Name:	4-hydroxy-2-methyl-N-(5-methyl-2-thiazolyl)-1,1-dioxide-2H-1,2-benzothiazine-3-carboxamide
Synonym:	UH-AC 62XX
MF:	$C_{14}H_{13}N_3O_4S_2$
FW:	351.4
Purity:	≥95%
UV/Vis.:	λ_{max}: 253, 348, 355 nm
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

Meloxicam is supplied as a crystalline solid. A stock solution may be made by dissolving the meloxicam in the solvent of choice. Meloxicam is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of meloxicam in these solvents is approximately 20 mg/ml.

Meloxicam is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, meloxicam should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Meloxicam 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

Meloxicam is a selective inhibitor of COX-2 (IC_{50}s = 11.8 and 143 µM for COX-2 and COX-1, respectively, in an enzyme activity assay) and a non-steroidal anti-inflammatory drug (NSAID).[1] Meloxicam (0.03%) reduces croton oil-induced increases in TNF-α and IL-1β mRNA levels and increases IL-10 mRNA levels in cornea in a rabbit model of acute ocular inflammation.[2] It inhibits pleural plasma exudation in a carrageenan-induced rat model of pleurisy when administered at a dose of 3 mg/kg.[1] In a canine model of unilateral osteoarthritis of the right stifle joint, meloxicam reduces prostaglandin E_2 (PGE_2) levels in plasma and right stifle joint synovial fluid when administered at a dose of 0.2 mg/kg.[3] Formulations containing meloxicam have been used in the treatment of osteoarthritis and rheumatoid arthritis.

References

1. Ogino, K., Hatanaka, K., Kawamura, M., *et al.* Evaluation of pharmacological profile of meloxicam as an anti-inflammatory agent, with particular reference to its relative selectivity for cyclooxygenase-2 over cyclooxygenase-1. *Pharmacology* **55(1)**, 44-53 (1997).
2. Cruz, R., Quintana-Hau, J.D., González, J.R., *et al.* Effects of an ophthalmic formulation of meloxicam on COX-2 expression, PGE_2 release, and cytokine expression in a model of acute ocular inflammation. *Br. J. Ophthalmol.* **92(1)**, 120-125 (2008).
3. Jones, C.J., Streppa, H.K., Harmon, B.G., *et al. In vivo* effects of meloxicam and aspirin on blood, gasteric mucosal, and synovial fluid prosanoid synthesis in dogs. *Am. J. Vet. Res.* **63(11)**, 1527-1531 (2002).

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