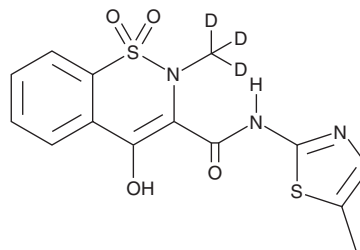


# PRODUCT INFORMATION



## Meloxicam-d<sub>3</sub> Item No. 25508

**CAS Registry No.:** 942047-63-4  
**Formal Name:** 4-hydroxy-2-(methyl-d<sub>3</sub>)-N-(5-methyl-2-thiazolyl)-2H-1,2-benzothiazine-3-carboxamide, 1,1-dioxide  
**MF:** C<sub>14</sub>H<sub>10</sub>D<sub>3</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub>  
**FW:** 354.4  
**Chemical Purity:** ≥95% (Meloxicam)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A 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-d<sub>3</sub> is intended for use as an internal standard for the quantification of meloxicam (Item No. 14906) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Meloxicam-d<sub>3</sub> is supplied as a solid. A stock solution may be made by dissolving the meloxicam-d<sub>3</sub> in the solvent of choice, which should be purged with an inert gas. Meloxicam-d<sub>3</sub> is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of meloxicam-d<sub>3</sub> in these solvents is approximately 20 mg/ml.

### Description

Meloxicam is a selective inhibitor of COX-2 (IC<sub>50</sub>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).<sup>1</sup> 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.<sup>2</sup> It inhibits pleural plasma exudation in a carrageenan-induced rat model of pleurisy when administered at a dose of 3 mg/kg.<sup>1</sup> In a canine model of unilateral osteoarthritis of the right stifle joint, meloxicam reduces prostaglandin E<sub>2</sub> (PGE<sub>2</sub>) levels in plasma and right stifle joint synovial fluid when administered at a dose of 0.2 mg/kg.<sup>3</sup> 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<sub>2</sub> 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, gastric mucosal, and synovial fluid prostanoid synthesis in dogs. *Am. J. Vet. Res.* **63**(11), 1527-1531 (2002).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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