

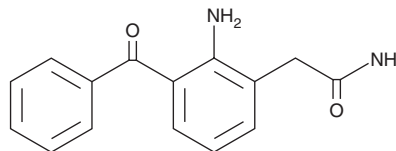
# PRODUCT INFORMATION



## Nepafenac

Item No. 23700

CAS Registry No.: 78281-72-8  
Formal Name: 2-amino-3-benzoyl-benzeneacetamide  
Synonyms: AHR 9434, AL 6515  
MF:  $C_{15}H_{14}N_2O_2$   
FW: 254.3  
Purity:  $\geq 98\%$   
UV/Vis.:  $\lambda_{max}$ : 238 nm  
Supplied as: A crystalline solid  
Storage:  $-20^{\circ}\text{C}$   
Stability:  $\geq 4$  years



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

### Laboratory Procedures

Nepafenac is supplied as a crystalline solid. A stock solution may be made by dissolving the nepafenac in the solvent of choice, which should be purged with an inert gas. Nepafenac is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of nepafenac in ethanol is approximately 0.5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

### Description

Nepafenac is a prodrug form of amfenac, a non-steroidal anti-inflammatory drug (NSAID) and an inhibitor of COX-1 and COX-2.<sup>1</sup> Nepafenac is an inhibitor of prostaglandin (PG) synthase 1 ( $IC_{50} = 64.3 \mu\text{M}$ ) that inhibits the production of PGs in isolated rabbit iris/ciliary body.<sup>2</sup> It also reduces protein and  $\text{PGE}_2$  (Item No. 14010) accumulation in a rabbit model of acute ocular inflammation when applied topically at a concentration of 0.1% prior to paracentesis. Formulations containing nepafenac have been used in the treatment of pain and inflammation associated with cataract surgery.

### References

1. Gamache, D.A., Graff, G., Brady, M.T., et al. Nepafenac, a unique nonsteroidal prodrug with potential utility in the treatment of trauma-induced ocular inflammation: I. Assessment of anti-inflammatory efficacy. *Inflammation* **24**(4), 357-370 (2000).
2. Ke, T.L., Graff, G., Spellman, J.M., et al. Nepafenac, a unique nonsteroidal prodrug with potential utility in the treatment of trauma-induced ocular inflammation: II. In vitro bioactivation and permeation of external ocular barriers. *Inflammation* **24**(4), 371-384 (2000).

#### 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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