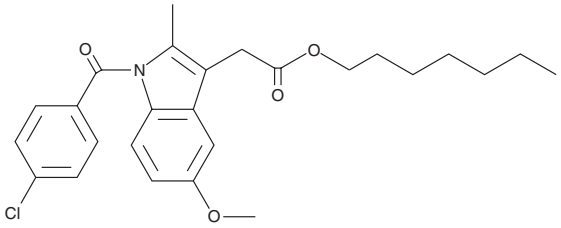
PRODUCT INFORMATION

Indomethacin heptyl ester

Item No. 70271

CAS Registry No.:	282728-47-6
Formal Name:	1-(4-chlorobenzoyl)-5-methoxy-2-methyl-1H-indole-3-acetic acid, 1-heptyl ester
MF:	$C_{26}H_{30}ClNO_4$
FW:	456.0
Purity:	≥98%
UV/Vis.:	λ_{max}: 230, 260, 319 nm
Supplied as:	A solution in methyl acetate
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Indomethacin heptyl ester is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the indomethacin heptyl ester under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of indomethacin heptyl ester in these solvents is approximately 18, 17, and 19 mg/ml, respectively.

Description

Indomethacin is a potent but non-selective inhibitor of both COX-1 and COX-2 in sheep and humans.[1] Structurally, indomethacin is a substituted indole acetic acid, wherein the carboxylate can be derivatized as an ester or amide. These derivatives show enhanced selectivity for the COX-2 isoform. For example, the IC_{50} for indomethacin heptyl ester for the inhibition of human recombinant COX-2 is 0.04 µM, making it more than 1,700 times more potent as an inhibitor of COX-2 than COX-1.[2] While indomethacin itself has an IC_{50} of 0.05 µM for the inhibition of COX-2, it also inhibits COX-1 with a corresponding IC_{50} of 0.67 µM.[2]

References

1. Barnett, J., Chow, J., Ives, D., *et al.* Purification, characterization and selective inhibition of human prostaglandin G/H synthase 1 and 2 expressed in the baculovirus system. *Biochim. Biophys. Acta* **1209(1)**, 130-139 (1994).
2. Kalgutkar, A.S., Marnett, A.B., Crews, B.C., *et al.* Ester and amide derivatives of the nonsteroidal antiinflammatory drug, indomethacin, as selective cyclooxygenase-2 inhibitors. *J. Med. Chem.* **43(15)**, 2860-2870 (2000).

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