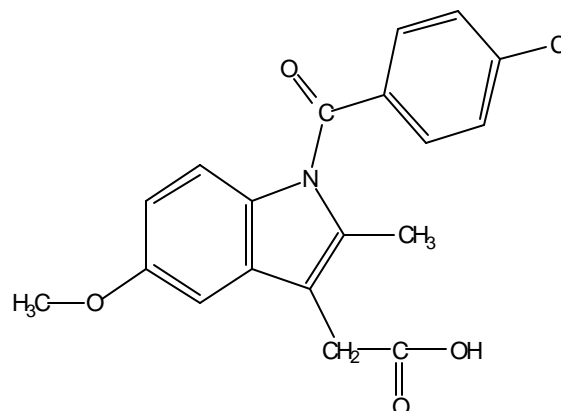


Indomethacin
Product No. I7378**Cas Number:** 53-86-1**Synonyms:** Amuno, Artracin, Artrinovo, Artrivia, N-p-Chlorobenzoyl-5-Methoxy-2-Methylindole-3-Acetic Acid, 1-(p-Chlorobenzoyl-5-Methoxy-2-Methylindole-3-Acetic Acid, 1-p-Chlorobenzoyl-5-Methoxy-2-Methylindol-3-yl)Acetic Acid, 1-(p-Chlorobenzoyl)-2-Methyl-5-Methoxyindole-3-Acetic Acid, 1-(p-Chlorobenzoyl)-2-Methyl-5-Methoxy-3-Indole-Acetic Acid, alpha-(p-Chlorobenzoyl)-2-Methyl-5-Methoxy-3-Indoyl)Acetic Acid, 1-p-Chloro-Benzoil-5-Metoxi-2-Metilindol-3-Acido Acetico (Spanish), Confortid, Dolovin, Idomethine, Imbrilon, Inacid, Indacin, Indocid, Indomecol, Indomed, Indomee, Indometacin, Indometacine, Indometacyna (Polish)**Physical Properties**

Appearance: White to white with a light yellow cast powder

Melting Point: Crystals exhibit polymorphism, melting point for one form approximately 155°C, for other approximately 162°C¹ $E^{mm}(230nm) = 20.8$ (in ethanol)¹ $E^{mm}(260nm) = 16.2$ (in ethanol)¹ $E^{mm}(319nm) = 6.29$ (in ethanol)¹pKa: 4.5¹

Molecular weight 357.79

Molecular formula C₁₉H₁₆ClNO₄**Stability / Storage as Supplied**

This product should be stored at room temperature.

Solubility / Solution StabilityIndomethacin is practically insoluble in water. It is soluble in ethanol, ether, acetone and castor oil.¹ Indomethacin as a free base is soluble 1 g/50 mL ethanol, 1 g/30 mL chloroform and 1 g/40-45 mL diethyl ether.⁵However, it should be noted that Indomethacin is not stable in alkaline solutions.⁵ Indomethacin solutions below pH 7.4 were stable. Solutions at pH 7.4 showed no changes up to 24 hours, but decomposition was rapid in alkaline solutions.⁶**Applications**Indomethacin is an anti-inflammatory, non-steroid agent² that blocks prostaglandin biosynthesis³ by inhibiting cyclooxygenase. This inhibitory activity is relevant to cancer chemoprevention because cyclooxygenase catalyzes the conversion of arachidonic acid to pro-inflammatory substances such as prostaglandins which can stimulate tumor cell growth and suppress immune surveillance.⁴ Pharmacokinetics in humans has been summarized.⁵ Indomethacin is metabolized in the liver. Excretion of indomethacin metabolites is predominantly in the urine.⁵**References**

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2. Shen, T.Y. et al., *J. Am. Chem. Soc.*, vol. 85, 488 (1963).
3. Kulmacz, R.J., *J. Biol. Chem.*, vol. 264, 14136 (1989).
4. Pezzuto, J.M. et al., *Science*, vol. 275, 218 (1997).415
5. *Martindale, The Extra Pharmacopoeia*, 30th ed., p. 20 (1993).
6. Curry, S.H. and Brown, E.A., *Can. J. Physiol. Pharmacol*, vol. 60 (1982).

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