



Indomethacin Solubility in Propylene Glycol + Water Mixtures According to the Extended Hildebrand Solubility Approach

Andrés R. HOLGUÍN, Daniel R. DELGADO & Fleming MARTÍNEZ*

*Grupo de Investigaciones Farmacéutico-Fisicoquímicas, Departamento de Farmacia,
Facultad de Ciencias, Universidad Nacional de Colombia, A.A. 14490, Bogotá, D.C., Colombia.*

SUMMARY. In this work the Extended Hildebrand Solubility Approach (EHSA) was applied to evaluate the solubility of the analgesic drug indomethacin in propylene glycol + water mixtures at 298.15 K. An acceptable correlative capacity of EHSA was found using a regular polynomial model in order four (overall deviation lower than 2.2 %), when the *W* interaction parameter is related to the solubility parameter of the mixtures. Nevertheless, the deviations obtained in the estimated solubility with respect to experimental solubility were similar to those obtained directly by means of an empiric regression of the experimental solubility as a function of the mixtures' solubility parameters.

KEY WORDS: Binary mixtures, Extended Hildebrand solubility approach, Indomethacin, Solubility parameter.

* Author to whom correspondence should be addressed. *E-mail:* fmartinezr@unal.edu.co