



## Transfer Thermodynamics of Triclosan from Water to Organic Solvents with Different Hydrogen Bonding Capability

Daniel R. DELGADO <sup>1</sup>, Alejandro SOSNIK <sup>2</sup> & Fleming MARTÍNEZ <sup>1\*</sup>

<sup>1</sup> *Pharmaceutical Physicochemical Research Group, Department of Pharmacy, Faculty of Sciences, National University of Colombia, Bogotá D.C., Colombia.*

<sup>2</sup> *The Group of Biomaterials and Nanotechnology for Improved Medicines (BIONIMED), Department of Pharmaceutical Technology, Faculty of Pharmacy and Biochemistry, University of Buenos Aires, and National Science Research Council (CONICET), Buenos Aires, Argentina.*

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**SUMMARY.** The thermodynamic functions Gibbs energy, enthalpy and entropy for the dissolution and mixing processes of triclosan (TS) in water are presented. These quantities were calculated by means of the van't Hoff and Gibbs equations from solubility values determined at temperatures ranging between 293.15 and 313.15 K. In addition, the corresponding thermodynamic quantities of the drug transfer processes from water to different organic solvents displaying different hydrogen bonding capability were also calculated. In all the evaluated cases, Gibbs energy of transfer comprised negative values, indicating the preference of TS for all the organic media evaluated. Nevertheless, enthalpy and entropy of transfer assumed positive or negative values according to every specific system. It was clear that hydrogen bonding plays a significant role in the dissolution and transfer processes of this antibacterial agent.

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