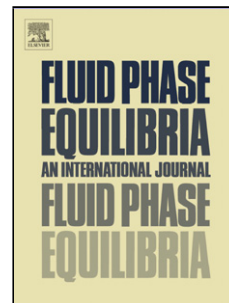


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Fluid Phase Equilibria, Study of phase equilibria and the physicochemical properties of selected pharmaceuticals

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Abstract

In this work the phase equilibria in binary system: (Drug + solvent) was examined and their physicochemical properties were analyzed. The investigated substances were: Synephrine (SYN), Isoprenaline hydrochloride (IPR) and Metaraminol bitartrate (MET). Solubility of this drugs was determined in three solvents: water, ethanol and 1-octanol. The molecular structure of these drugs is based on a phentylamine skeleton, therefore all studied pharmaceuticals have an aromatic structure with different amounts of hydroxyl groups located at an aromatic ring. They also have different substituents on the amino group inside the chemical chain. The amino-group confers basic properties of the molecule, whereas the phenolic -OH group is weakly acidic. The tested substances belong to the group of adrenergic drugs (adrenomimetics) and stimulate the sympathetic nervous system.

Solubilities of three drugs were measured in the temperature range from 270 K to 450 K at constant pH. All of studied systems were described as simple eutectic phase diagrams, with

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