



Solubility of Pioglitazone Hydrochloride in Polyethylene Glycol 600– Ethanol–Water Mixtures at 25 °C

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SUMMARY. The solubility of pioglitazone hydrochloride in polyethylene glycol 600 – ethanol - water mixtures at 25 °C was determined using flask shake method. The generated data extended the solubility database for further computational investigations and also was used to assess the prediction capability of a trained version of the Jouyban-Acree model for solubility prediction in mixed solvents at various temperatures. The accuracy of the predicted solubilities was evaluated by the mean percentage deviation (MPD) between the predicted and experimental solubilities. The overall MPD of the Jouyban-Acree model for the back-calculated solubility data in binary and ternary solvent mixtures was 13.1 ± 12.9 %.

KEY WORDS: Jouyban-Acree model; mixed solvents; pioglitazone hydrochloride; solubility prediction

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