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Abstract

The interaction between disulfiram (Antabus®) and silica was studied experimentally by adsorption from apolar solvent onto highly porous silica material (Santa Barbara Amorphous material-3, SBA-3) with large surface area. The adsorption isotherm was fitted to the Langmuir model by accounting two different affinities contributing to the overall behavior, which were attributed to two different types of silanol groups (*i.e.* geminal and vicinal) present on amorphous silica surfaces. This assumption was supported by theoretical calculations. Additionally, the model could describe the adsorption of ibuprofen to the carrier material, indicating that the model bears big potential for describing the interactions between silica surfaces and drug Download English Version:

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