

Polarographic and microcalorimetric study of the interaction between glutathione and amoxicillin

Squella, J. A.

Benavente, G.

Gallo, B.

Paredes, S.

Nuñez-Vergara, L. J.

The enthalpies of the reaction between glutathione and amoxicillin have been measured directly using a flow microcalorimeter. Comparative results are obtained by using an ac polarographic method previously developed in our laboratories. The results obtained imply that glutathione reacts with amoxicillin spontaneously and that this process is exothermic at physiological pH and temperature. Evidence of this interaction is very important in order to permit the postulation of a new biotransformation route for amoxicillin. Furthermore, the comparable results of two very different methods strongly support our previous statement that polarography is a very important tool for the study of interactions of biological significance. © 1988.