

Study of the Effect of Amino Acid Additives on the Process of Chlorpromazine Release from Membranes

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Chlorpromazine (CPM) is a widely used drug. It is a surface-active micelle-forming substance and is characterized by significant presystemic metabolism. Therefore, it is interesting to study the effect of additives on the process of CPM transfer into the body. Amino acids have been selected as additives that have been successfully used to control the release rate of drugs, enhance the efficiency of drug delivery systems, improve the solubility and stability of drugs, facilitate targeted drug delivery, etc.

The CPM release profile from dialysis membranes was studied in the presence of amino acids in the donor solution. The released CPM was determined by a method based on the use of blood red salt, ferric chloride and acetic acid and measuring the optical density of the resulting colored solution. It was found that the weight percentage of CPM release from cellulose membranes is significantly lower in the presence of aspartic acid additives, than in the case of gamma-aminobutyric acid additives at their equal concentrations.