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Research Article

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## PROTEIN BINDING: A STUDY OF INTERACTION BETWEEN DICLOFENAC SODIUM AND BOVINE SERUM ALBUMIN

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### ABSTRACT

*The study was designed to examine the binding of Diclofenac sodium with bovine serum albumin (BSA) (Ex vivo) at different concentration levels of Bovine serum albumin (BSA) under controlled temperature 37<sup>0</sup>C and phosphate buffer pH7.4 conditions. The protein binding behavior of Diclofenac sodium (sodium[o-(2,6-dichloroanilino)phenyl]acetate) in BSA was investigated by U.V spectroscopy Analysis. Spectroscopic estimations of drug release were made with a constant Diclofenac Sodium concentration while varying the concentration of BSA. The drug protein binding is distinguishable at different levels of BSA (mg) as there was a mark decrease in percentage of Diclofenac Sodium release from 77.5 % (Control) to 71.78%. Comparable results were obtained with different BSA concentrations indicating that albumin is probably the responsible protein which decreases the release of drug. The difference in extent of binding of BSA with similar drug samples were significantly showing the promising effect of BSA over Diclofenac Sodium release when drug dissolution profile was observed.*

**Key words:** Bovine serum Albumin, Diclofenac sodium, Protein binding