INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI
SHORT ABSTRACT OF THESIS

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SHORT ABSTRACT

The main objective of this work is to prepare asymmetric polymeric membranes with increased hydrophilic properties. It is well known that three surface modification techniques are mainly used for increasing the hydrophilicity of membrane. First by plasma treatment, second by coating and third by blending. Among these three methods, blending is a simple technique and it does not require complicated steps. So, in the present work polymeric membranes were modified by blending different additives. All the additives used in this thesis, increased the hydrophilicity of modified membranes compared to plain membranes. Apart from this, Tartaric acid (both enantiomeric and racemic) provides the electrostatic repulsive property to the modified membranes.

Polysulfone ultrafiltration membranes with increased hydrophilicity were prepared using the polyvinyl pyrrolidone (PVP) of different molecular weights with constant molecular weight of polyacrylic acid (PAA), copolymer poly(N vinyl pyrrolidone-co-isatoic anhydride) poly(VP-co-IAH), enantiomeric and racemic effect of tartaric acid (TA) and amino alcohol plasticizers (AAPs).