CHITOSAN- LATEX MEMBRANE COMPOSITES FILM FOR HEAVY METAL REMOVAL

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INTRODUCTION

The affinity membrane has emerged as an alternative to the particle media, to overcome mass transfer resistance. The hydrophobic membrane is from the commercially available materials, such as polysulfone, polycarbonate, etc. The most these materials are relative expensive. **There has been increased interest in the use of the membrane process for the separation of heavy metal mixtures. Heavy contamination of various water resources is of great concern because of the toxic effect to the human beings and other animals and plants in the environment. Great efforts to develop new effective membrane from chitosan-latex with good mechanical and chemical properties.**

PREPARATION OF LATEX-CHITOSAN MEMBRANE COMPOSITES FILM

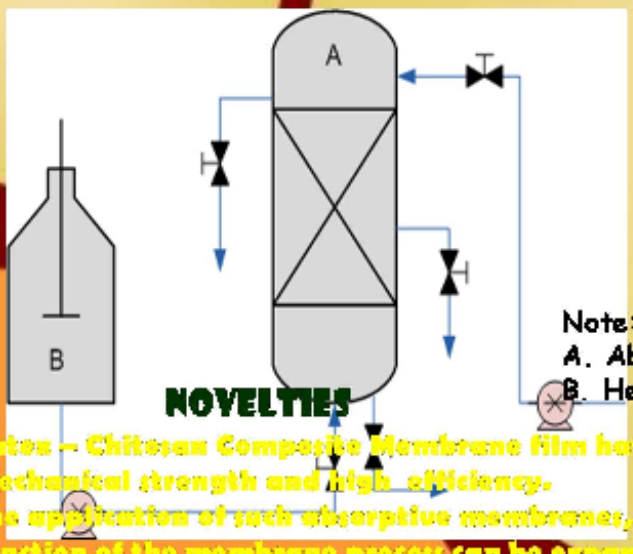
FLOW DIAGRAM OF ABSORPTION PROCESS

Table 1. Technical data of Chitosan-Latex membrane

Composite Membrane	Tensile Strength (MPa)	Permeation Flux $\times 10^{-4}$ ($ml/cm^2.s$)	Efficiency (%)
Unmodified membrane			
Modified Membrane	29.6	2.12	92

Table 2. Comparison price of some polymer membrane

Membrane	Price / Cost
Cellulose Acetate Membrane	RM 385
Latex-Chitosan Membrane	RM 14



NOVELTIES

- Latex – Chitosan Composite Membrane film have good mechanical strength and high efficiency.
- The application of such absorptive membranes, the function of the membrane process can be expanded