



$n = 0-1$.

The PPRs obtaining has been studied using peroxides I, II and III at the temperatures 383–413 K during 1–60 hours. The initiator amount is 0.5–15.0 mas %. The optimum conditions for PPRs synthesis have been determined. It has been shown that the synthesized resins have molecular mass 2150–5050, the epoxy number is 0.5–1.4 % and unsaturation is 12.7–16.9 g Br₂/100 g product. PPRs are used as additives to polymeric compositions.

FLOCCULATION BY HIGH PERFORMANCE MODIFIED POLYSACCHARIDES

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Global environment concerns and sustainable ecofriendly approach in development of materials for high technology have directed our efforts to generate better flocculants based on modified polysaccharides for waste water and industrial effluent treatment.

Plisaccharides are inexpensive, abundantly available from plant, forest and microbial resources, biodegradable and shear stable however poorly efficient at high doses. On the other hand polyacrylamide based

flocculants mostly used in waste water and industrial effluent treatment are highly efficient at very low doses, fragile and expensive.

Hence a new generation of flocculants have been developed by grafting polyacrylamide chains on purified polysaccharides. The grafting has been optimised. These flocculants are synergistically efficient at low doses, controlled biodegradable, shear resistant, inexpensive and ecofriendly. Dangling polyacrylamide chains on rigid polysaccharide backbone have easy approachability to contaminants in the suspensions. The higher the molecular weight and branching of polysaccharides, their grafts show better flocculation efficiency

Thus in conjunction with drag reduction model, a flocculation model has been developed which relates the settling velocity of the contaminant particles and radius of gyration, measure of pervaded volume by polymers in suspensions. The grafted polysaccharides outperform most of the commercially available flocculants. The grafted polysaccharides can be hydrolysed or can be cationised. Thus all the three classes of ionic, nonionic and cationic flocculants can be developed based on grafted polysaccharides.

These systems are multi functional and find applications in agriculture, biomedical systems, various industrial process and oil field operations and recently in nano technology. There are possibilities of improved synthesis and synergistic combination of there novel systems. Deatails of mataterials, mechanisms and applications of these ecofriendly and inexpensive systems are being presented in the plenary lecture.

THE OBTAINING OF EPOXY OLIGOMERS ON THE BASIS OF MONOMERS

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The epoxy oligomers on the basis of monomers are of great interest because products on their bases are characterized by the series of positive properties. Epoxy oligomers of such type are obtained by vinyl and diene