



A REVIEW

Membrane separation technology in food and allied industry

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SUMMARY :

Membrane filtration is a technique that uses a physical barrier, a porous membrane or filter, to separate particles in a fluid. Particles are separated on the basis of their size and shape with the use of pressure and specially designed membranes with different pore sizes. Although there are different membrane filtration methods (reverse osmosis, nanofiltration, ultrafiltration and microfiltration, in order of increasing pore size), all aim to separate or concentrate substances in a liquid. Developments in novel membrane processes, including electrodialysis and pervaporation, increased the array of applications in combination with other technologies for alternate uses in fruit juices and beverages. Food industry applications make use of four basic module designs: spiral-wound, tubular, hollow-fibre and plate-and-frame styled systems. The technology can be applied to several production methods, including milk-solids separations in the dairy industry, juice clarification and concentration, concentration of whey protein, sugar and water purification and waste management.

KEY WORDS : Membrane, Beverages, Dairy, Water, Sugar, Fouling, Economics

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