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Electro-microfiltration of the mineral particles in dairy processing

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ABSTRACT

Two sintered stainless steel (SSS) microfiltration membranes (5 μm and 25 μm pore size respectively) were used for separating Alamin particles found in dairy processing. An external electric field was applied upon the membrane to provide a combination of rejective coulomb force, fluid shearing force and the bubbling rejection to the foulant. The electric field can be applied in two ways: 1) to mitigate the fouling deposit, and/or 2) to clean the fouled filtering surface. The divergence of pH in the retentate and permeate was studied.

Keywords: Electro-microfiltration; Membrane; Separation; Sintered stainless steel

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