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**Effect of membrane material chemistry and properties on biofouling  
susceptibility during milk and cheese whey ultrafiltration**

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## **1 Introduction**

Fouling of filtration membranes remains a major issue affecting the efficiency of filtration processes. In the dairy industry, a number of studies have shown that fouling is initiated by the deposition of dairy constituents, mainly proteins and minerals, at the membrane surface during the filtration of dairy fluids [1–4]. While casein micelles quickly form a reversible fouling layer mostly removed with a rinsing cycle with water, whey proteins such as  $\beta$ -lactoglobulin and  $\alpha$ -lactalbumin are adsorbed irreversibly at the

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