

## **INFLUENCE OF ADSORPTION PRE-TREATMENT ON THE EXTENT OF DAIRY FOULING OF HEAT TRANSFER SURFACES**

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### **ABSTRACT**

In the dairy industry, protein adsorption is considered to be the initial stage in substantial milk fouling. Considering the importance of the formation of this first layer, milk adsorption on the stainless steel heat exchange surface might be exploited as a means of influencing the behaviour of milk protein deposition during normal operation. In this study, milk component pre-adsorption on the stainless steel surface is treated as a separate (pre-) step before normal heat exchange starts. Different temperatures and pHs were employed for this investigation. The results indicate that pre-adsorption treatment of the stainless steel heat exchanger surface was effective in reducing milk fouling in a certain range of surface temperatures. Optimal conditions were identified.