

RELATIONSHIP BETWEEN BIOSURFACTANT PRODUCTION AND PHYSICOCHEMICAL SURFACE PROPERTIES FOR 18 PSEUDOMONAS FLUORESCENS ISOLATED FROM DIFFERENT ENVIRONMENTS.

Authors T. Meylheuc⁽¹⁾, M. Renault⁽¹⁾, Marc Feuilleley⁽²⁾, Nicole Orange⁽²⁾, M-N. Bellon-Fontaine⁽¹⁾

Address ⁽¹⁾ INRA - Unité de Recherche en Bioadhésion et Hygiène des Matériaux, 25, avenue de la République F-91744 Massy Cedex, France

⁽²⁾ Laboratoire de Microbiologie du Froid, 43, rue Saint Germain, 27000 Evreux, France

Abstract In many fields, the hygienic quality of materials depends on the control of their surface biocontamination. Actually, it is well known that the primary phase of this biocontamination phenomenon is mainly governed by physicochemical interactions between microorganism and solid surface. These interactions depend directly on cell wall composition of microorganisms, and hence could differ from strain to strain. In addition, they can be modified by the production of exocellular compounds such as biosurfactants, enzymes, ... In this context and taking into account the economic impact of solid surface biocontamination by *P. fluorescens*, we determined the hydrophobic/hydrophilic, electrical and Lewis acid-base surface properties of 18 strains of *P. fluorescens* isolated from various environments (medical, food, and soil) as well as their ability to produce biosurfactants and hemolysin.