P35 Staphylococcus epidermis adhesion on modified urea/urethane elastomers

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Block Urea/Urethane copolymer films present elastomeric properties with the possible tuning of their surface properties within a wide range, and are therefore considered relevant surfaces for microbial adhesion studies. In particular, Urea/Urethane elastomers develop multi-stable states^a with surface topography features with remarkable regularity^b. Moreover, complex surface structures may be obtained by suitable mechanical action, UV radiation treatment and also by extraction of the elastomer with a selected solvent. In the present work, different surfaces were assayed for *S. epidermidis* adhesion during 2 h and the extent of bacterial adhesion was evaluated by automatic cell enumeration. A general trend was observed, relating the increase in the number of adhered cells with the increase of the surface roughness. The detailed relation between the surface properties of the modified elastomers (namely their surface topography characteristics and surface tension) and the *S. Epidermidis* surface adhesion density is reported and discussed.