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Surface adhesion and confinement variation of Staphylococcus aurius on SAM surfaces ALICIA AMROSKI, MORGAN OLSEN, JOSEPH CALABRESE, Lock Haven University of Pennsylvania, Lock Haven PA 17745, United States, RESHANI SENEVIRATHNE, Don's Food Products, Schwenksville, PA 19473, United States, INDRAJITH SENEVIRATHNE, Lock Haven University of Pennsylvania, Lock Haven PA 17745, United States — Controlled surface adhesion of non - pathogenic gram positive strain, Staphylococcus aureus is interesting as a model system due to possible development of respective biosensors for prevention and detection of the pathogenic strain methicillin resistant Staphylococcus aureus (MRSA) and further as a study for bio-machine interfacing. Self Assembled Monolayers (SAM) with engineered surfaces of linear thiols on Au(111) were used as the substrate. Sub cultured S. aureus were used for the analysis. The SAM layered surfaces were dipped in 2 – 4 Log/ml S. aureus solution. Subsequent surface adhesion at different bacterial dilutions on surfaces will be discussed, and correlated with quantitative and qualitative adhesion properties of bacteria on the engineered SAM surfaces. The bacteria adhered SAM surfaces were investigated using intermittent contact, noncontact, lateral force and contact modes of Atomic Force Microscopy (AFM).

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