

PRELIMINARY RESULTS

AFA MIC assays

A/C cluster representative strain (ICE25) is more susceptible to lauric (C12:0), linoleic (C18:2 Δ 9,12) and palmitoleic (C16: Δ 9) acids than the B cluster representative strain (19N), as shown in Figure 1 and Table 1.

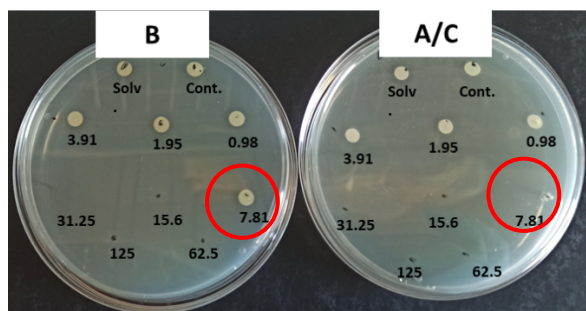


Figure 1 – *S. epidermidis* growth in the presence of lauric acid (concentrations in $\mu\text{g}/\text{mL}$). After 20 h of growth with different lauric acid concentrations, a culture aliquot was plated in TSA and was incubated at 37°C for 24 hours. At 7.81 $\mu\text{g}/\text{mL}$, bacterial growth was only observed for the strain belonging to the B lineage (surrounded by the red circle).

Table 1 - Minimum inhibitory concentrations (MIC) and minimum bactericidal concentrations (MBC) in $\mu\text{g}/\text{mL}$ of lauric, linoleic and palmitoleic acids for *S. epidermidis* representative strains of B and A/C lineages.

Fatty acid	MIC		MBC	
	19N	ICE25	19N	ICE25
Lauric acid (C12:0)	15.6	7.8	15.6	7.8
Linoleic acid (C18:2Δ9,12)	>4000	250*	>4000	>4000
Palmitoleic acid (C16:Δ9)	>500	31.2	-	-

*Values for 60% growth inhibition

3D-reconstructed skin cytotoxicity assays

Lauric, linoleic and palmitoleic acids (AFA) do not show cytotoxicity on the 3D reconstructed skin model at the respective MIC concentrations determined for the SE pathogenic strain.

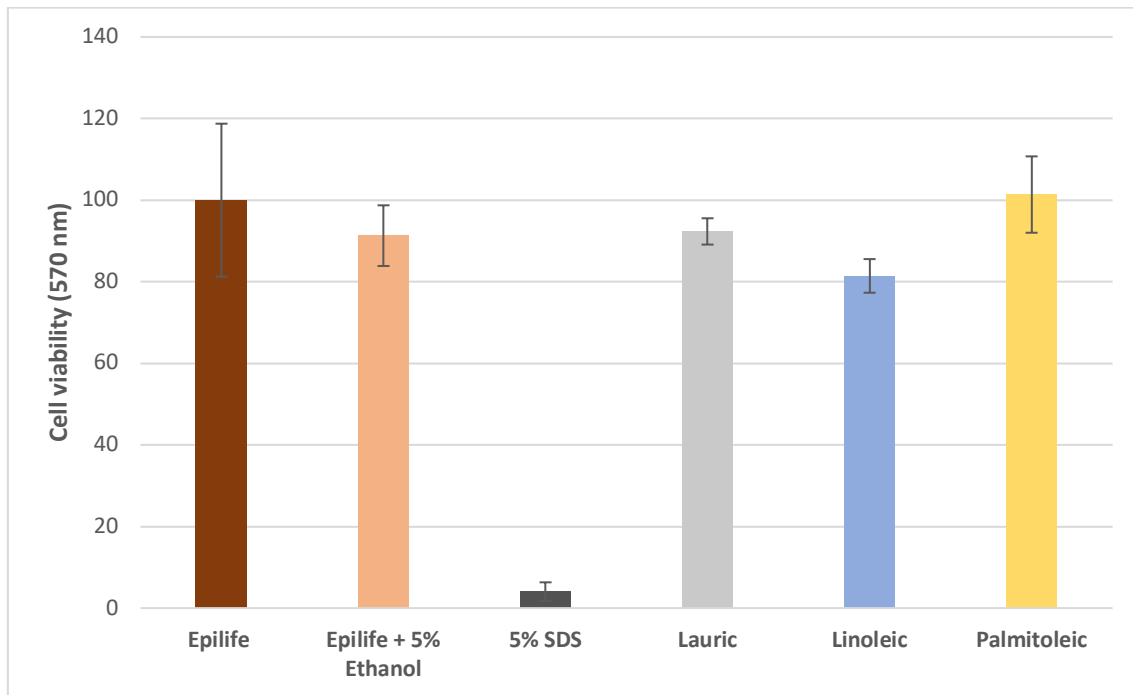


Figure 2 - Cell viability on the 3D RHE model considering Epilife medium as 100% cell viability. Epilife+5% ethanol and 5% SDS were used as negative and positive controls, respectively.