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Development of specialized prebiotic shampoo for normal to oily hair

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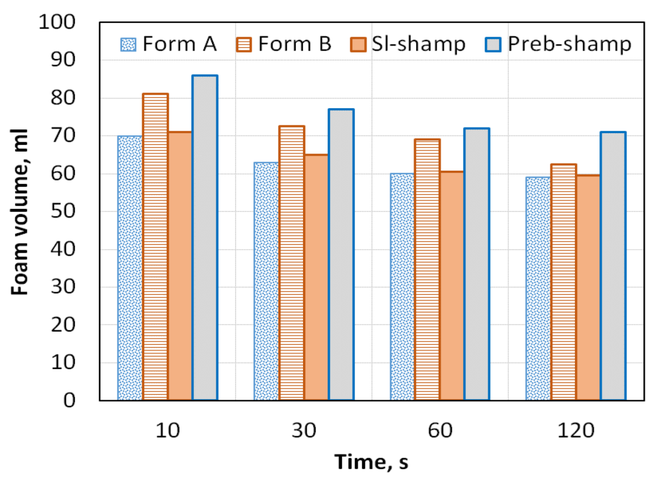
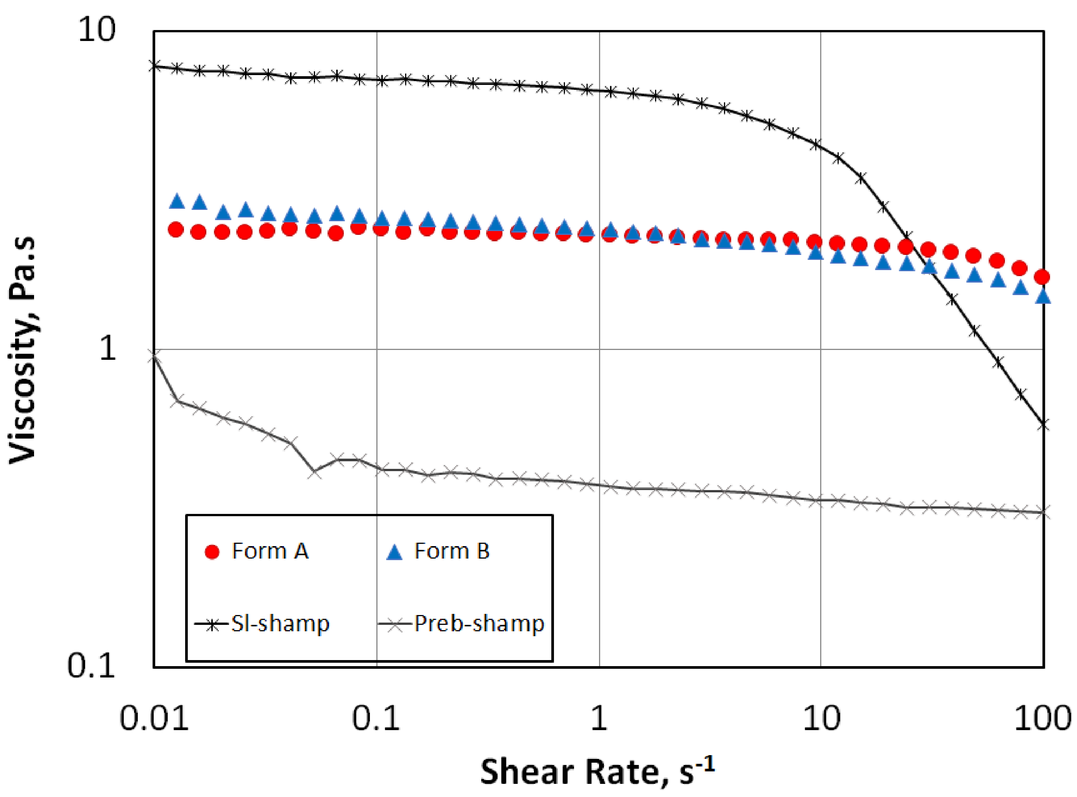
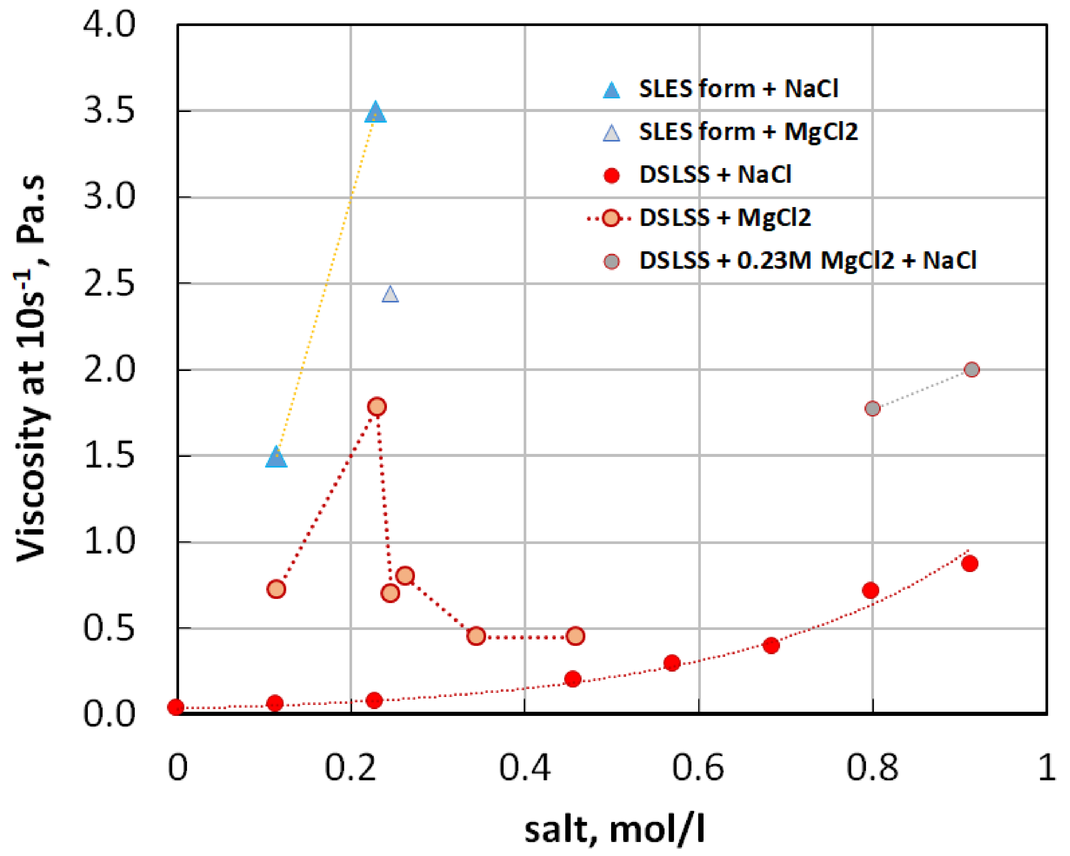
Shampoo formulations on the basis of combination of three surfactants - anionic, amphoteric and nonionic, with active ingredients inulin, salicylic and hyaluronic acid, have been prepared. The combination of active ingredients would slow down the processes of self-secretion from the sebaceous glands and regulate the microflora on the surface of the skin. Three different anionic surfactants were used - sodium laureth sulfate (SLES), di-sodium laureth sulfosuccinate (DSLSS), and disodium cocoyl glutamate (SCG).



Successful optimization of the rheology of DSLSS prebiotic shampoo formulation has been obtained by using $MgCl_2$ and a thickener PEG/PPG-120/10 Trimethylolpropane Trioleate. SLES shampoo formulation with the same actives has been prepared with NaCl instead of $MgCl_2$ and PEG/PPG-120/10 Trimethylolpropane Trioleate. Two selected successful formulations, A with DSLSS, and B with SLES, had identical rheological behavior and foaming, which were well comparable to representative commercial shampoos.



Characteristic viscosity peak of the DSLSS formulation vs the concentration of $MgCl_2$ was observed similarly to the characteristic peaks observed with SLES formulations vs the concentration of NaCl. Very probably the origin of the viscosity peaks is similar and deserved further investigation to reveal the common physicochemical description and to allow successful prediction of the rheological behavior of compositions of practical interest.



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