

Sørli et al.:

Prediction of Acute Inhalation Toxicity Using *In Vitro* Lung Surfactant Inhibition

Supplementary Data

Tab. S1: Experiments done and number of mice used to determine toxicity of IPs

Product	No. of mice and type of <i>in vivo</i> tests	Total no. of mice
"Wood impregnation"	Screening test with 4 mice 3 concentrations with 6, 8 and 8 mice per group	26 ^A
"Stain repellent super"	5 concentrations with 10 mice per group	50 ^B
"Liquid stain protection"	24 mice exposed to different concentrations or in range-finding experiments, 4 mice exposed to maximum tolerated concentration	28
"Facéal oleo MG"	11 mice in range-finding experiments, 7 exposed to maximum tolerated concentration	18
"HG textile"	14 mice in range-finding experiments, 6 exposed to maximum tolerated concentration	20
"HG leather"	8 mice in range-finding experiments, 6 exposed to maximum tolerated concentration	14
"Antismuds"	3 concentrations with 8, 7 and 8 mice per group	23
"Footwear protector"	Screening test with 4 mice 2 concentrations with 8 mice per group	20 ^A
"Nakano Impregnation"	10 mice in range-finding experiments, 6 exposed to maximum tolerated concentration	16
"Non-absorbing floor materials"	5 concentrations with 7, 9, 9, 10 and 10 mice per group	45 ^C
"Rim sealer"	3 concentrations with 6 mice per group	18 ^A
"Stain repellent nano"	3 concentrations with 10 mice per group	30
"Stain repellent"	3 concentrations with 10 mice per group	30
"Bath and tiles"	2 concentrations with 10 and 20 mice per group	30 ^C
"Facéal oleo HD"	8 mice in range-finding experiments, 6 mice exposed to the maximal concentration possible to generate	14
"Special textile coating"	5 mice exposed to maximal concentration that could be generated 6 mice exposed to maximal concentration that could be generated (repetition)	11 ^D
"Textiles and leather concentrate"	5 mice exposed to maximal concentration that could be generated	5 ^D
"Textiles and leather"	Screening test with 4 mice 5 mice exposed to maximal concentration that could be generated	9 ^A
"Car glass"	Screening test with 4 mice 8 mice exposed to maximal concentration that could be generated	12 ^A
"Footwear repel"	4 mice in range-finding experiments, 5 mice exposed to the maximal concentration that could be generated	9
"Performance repel"	4 mice in range-finding experiments, 6 mice exposed to the maximal concentration that could be generated	10

^A Data from Sørli et al. (2015b); ^B Data from Duch et al. (2014); ^C Data from Nørgaard et al. (2010); ^D Data from Nørgaard et al. (2014)



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Tab. S2: Chemical composition of IPs

Product	Chemical composition	Aerosol data
"Wood impregnation"	Perfluoracrylate, water, glycoethers	ELPI ^A
"Stain repellent super"	Isooctyl trimethyl silane, alkyl silane, C9-C13 hydrocarbons	CPC ^B
"Liquid stain protection"	Fluorinated carboxylic acid resin, isoparaffinic hydrocarbon mixture	
"Faceal oleo MG"	Silane, fluorinated polymer, triethoxyisobutylsilane, petroleum	
"HG textile"	Naphta, n-butyl acetate, 2-methoxy-1-methylethyl acetate, 2-propanol	
"HG leather"	Naphta, n-butyl acetate	
"Antismuds"	Naphta, C9-C12 iso alkanes	
"Footwear protector"	Perfluoro acrylate, water, glycoethers	ELPI ^A
"Nakano impregnation"	Petroleum, isobutane, propane, butane, naphta	
"Non-absorbing floor materials"	Perfluorosilane/siloxane, 2-propanol	ELPI ^A
"Rim sealer"	Perfluorosilane/siloxane, 2-propanol, 1-methoxy-2-propanol, ethylacetate	ELPI ^A
"Stain repellent nano"	Isoalkane, cycloalkane, n-butyl acetate, naphta	
"Stain Repellent"	Naphta, C9-C12 iso-alkane	
"Bath and tiles"	Alkylsilane/siloxane, ethanol	ELPI ^A
"Faceal oleo HD"	Aqueous polymer suspension	
"Special textile coating"	Perfluorosilane/siloxane, water	ELPI ^A
"Textiles and leather concentrate"	Perfluorosilane/siloxane, water	ELPI ^A
"Textiles and leather"	Perfluorosilane/siloxane, water	ELPI ^A
"Car glass"	Alkylsilane/siloxane, ethanol	ELPI ^A
"Footwear repel"	Poly[3-((2-aminoethyl)amino)propyl]methyl(dimethyl)siloxane, hydroxy-terminated	
"Performance repel"	Poly[3-((2-aminoethyl)amino)propyl]methyl(dimethyl)siloxane, hydroxy-terminated	

Grey: from MSDS

ELPI: electrical low-pressure impactor; CPC: condensation particle counter

^A Data from Sørlie et al. (2015b); ^B Data from Duch et al. (2014)

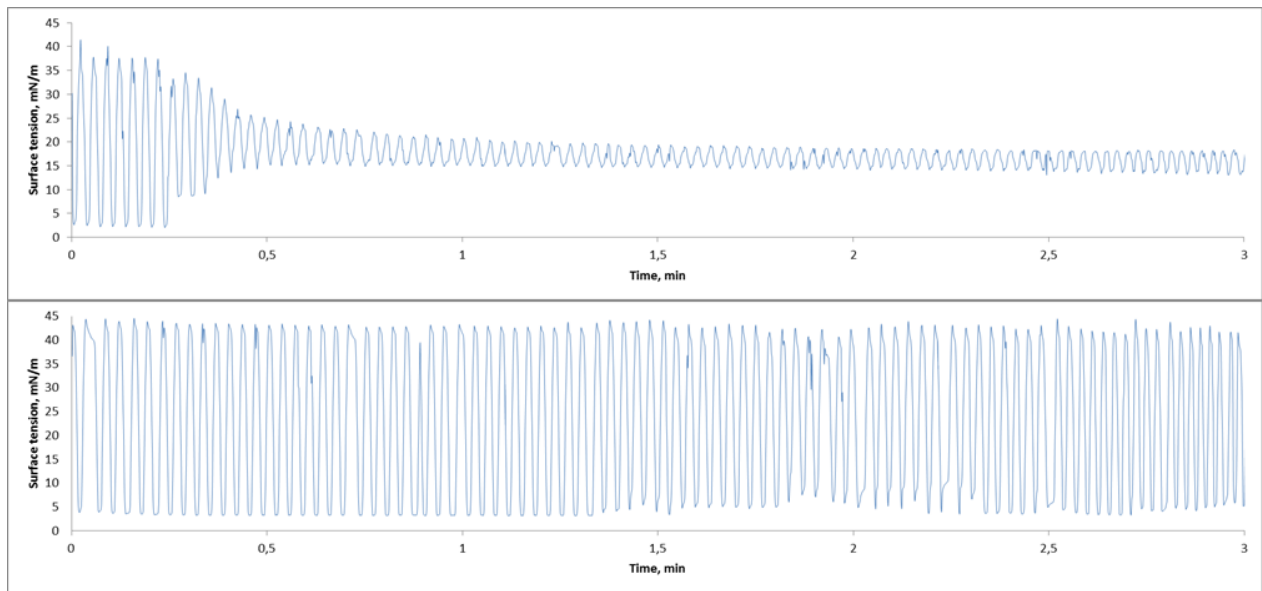


Fig. S1: Surface tension profile of the minimum surface tension plotted against time for a drop of LS exposed to an IP inhibiting function (top panel) or a non-inhibitory IP (bottom panel)
The inhibitory IP causes the minimum surface tension to increase to values above 10 mN/m.