

## **Meconium Impairs Pulmonary Surfactant by a Combined Action of Cholesterol and Bile Acids**

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**Supplementary Table 1:****Effect of meconium on the surface behavior of pulmonary surfactant as assessed in a captive bubble surfactometer, under quasi-static or dynamic conditions****Q-stat 4**

Sample	$\gamma$ min (mN/m)	$\gamma$ max (mN/m)	relative Area ( $\gamma$ min)
NS	1.7 ± 0.3	28.7 ± 1.5	0.79 ± 0.05
NS+Meconium	11.1 ± 9.5	25.9 ± 0.4	0.57 ± 0.18
NS+Chol/TA	5.1 ± 4.8	26.2 ± 0.9	0.55 ± 0.22
NS+Chol/M $\beta$ CD	5.0 ± 3.2	25.4 ± 0.7	0.58 ± 0.13

**Dyn 20**

NS	1.7 ± 0.3	32.5 ± 1.4	0.82 ± 0.02
NS+Meconium	1.4 ± 0.3	32.1 ± 0.8	0.82 ± 0.03
NS+Chol/TA	1.2 ± 0.8	31.2 ± 2.4	0.80 ± 0.06
NS+Chol/M $\beta$ CD	1.7 ± 0.4	31.2 ± 2.1	0.82 ± 0.04

NS: native surfactant; Q-stat 4: parameters obtained at the 4<sup>th</sup> quasi-static compression-expansion cycle;Dyn 20: parameters obtained at the 20<sup>th</sup> dynamic compression-expansion cycle.

Data are mean ± s.d. (n=6)

**Supplementary Table 2:**

**Compositional analysis of meconium**

<b>Component</b>	<b>Mass (mg/mg meconium)</b>
Proteins	0.015
Phospholipids	0.013
Cholesterol	0.040
Bile Acids	0.005

**Supplementary Table 3:**  
**Effect of exposure to meconium or to a mixture of bile acids and cholesterol on the thermotropic transition of native surfactant membranes, as evaluated by DSC**

<b>Sample</b>	<b>T<sub>m</sub> (°C)</b>	<b>Enthalpy (kcal/mol)</b>	<b>T<sub>1/2</sub> (°C)</b>
NS	35.7 ± 2.4	2.5 ± 0.3	9.9 ± 0.3
NS + Meconium	35.4 ± 0.4	1.5 ± 0.4	9.5 ± 1.5
NS + Chol/TA	35.7 ± 2.1	1.4 ± 0.3	9.3 ± 1.9

Data are mean ± s.d. (n=3)