Supporting Information to “Direct quantification of total and biological ice nuclei in cloud water” by Joly et al.

Table S1. Ion composition of the 12 cloud water samples studied.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Na⁺</th>
<th>NH₄⁺</th>
<th>K⁺</th>
<th>Mg²⁺</th>
<th>Ca²⁺</th>
<th>Cl⁻</th>
<th>NO₃⁻</th>
<th>SO₄²⁻</th>
<th>Acetate</th>
<th>Formate</th>
<th>Oxalate</th>
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<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<td>n.a.</td>
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<td>12.3</td>
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<td>10.4</td>
<td>7.1</td>
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<td>13.6</td>
<td>0.7</td>
</tr>
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</table>

n.a.: not available
b.d.l.: below detection limit.
**Figure S1.** Composite images of 72-hours backtrajectory plots of the air masses analyzed. These are shown on 2 different maps for the sake of visual clarity. The plots were made using the HYSPLIT model with the GDAS1 meteorological data archive and default settings (Draxler and Rolph, 2010).
Figure S2. Principal component analysis (PCA) map of the chemical variables (black vectors) and of the concentrations of total IN measured at temperatures from -6°C to -12°C (red vectors). The analysis includes the samples for which all these data were available (n = 9).