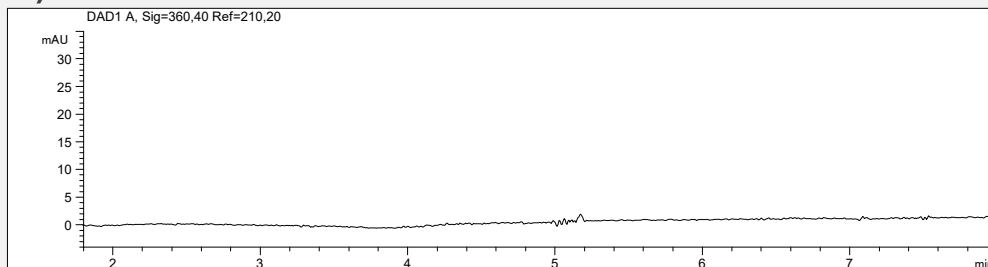
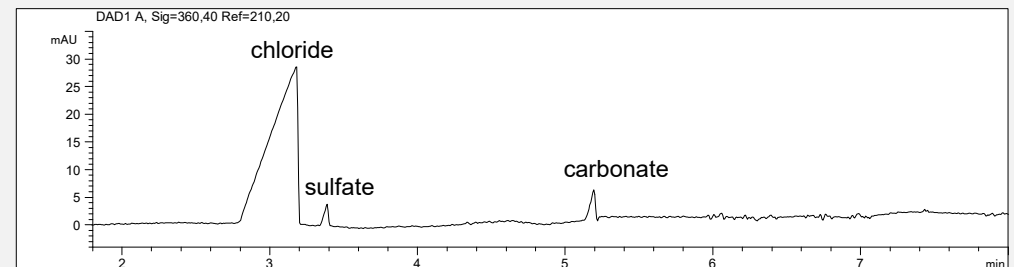


Determination of LOD and LOQ for anionic impurities in EMIM AlCl₄

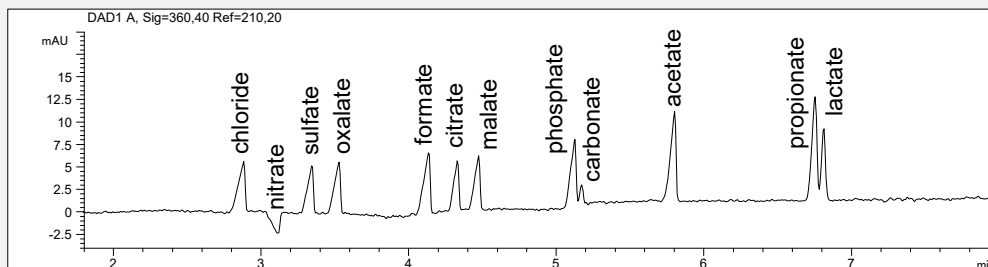
a) Blank: water



c) SST: chloride, addition of 10 mg/l sulfate and carbonate



b) Standard mixture possible impurities, each 20 mg/l



- **Mode: CZE**
- **Electrolyte: CE-Ai01**
- **Capillary: 50 µm ID, PVA, 64.5 cm**
- **Separation: -30 kV, 25°C**
- **Injection: pressure, 50 mbar, 10 s**
- **Detection: indirect UV, 210 nm**

Limit of detection (LOD), S/N=3:

- Sulfate in the SST solution: 1.3 mg/l
- Sulfate in the IOLI: 0.2 %

(calculation: ICH guidelines: LOD for S/N=3 and S/N=2*H/h)

→NOTE:

- The LOD of sulfate was calculated as a representative value for all anions and organic acids. The LOD for the other anions can vary depending on the peak height.
- The LOD for the potential impurities can be improved by using a lower sample dilution.