

Assignment V

- Conductivities are often measured by comparing the resistance of a cell filled with some standard solutions. The conductivity of water is 76 mS/m at 25°C and 0.1M KCl(aq) is 1.1639 S/m. A cell has resistance of 33.21 Ohm when filled with 0.1M KCl(aq) and 300.0 Ohm when filled with 0.1M CH₃COOH. What is the molar conductivity of the acetic acid at that concentration and temperature
- Estimate the diffusion coefficient and the effective hydrodynamic radii of the alkali metal cations at 25°C using the data on ionic mobilities (p.939). Estimate the approximate number of water molecules dragged along by the cations. Take ionic radii from the Table 19.3 (p.938)