Marks
6

- The solubility product constant of AgCl is $K_{sp} = 1.8 \times 10^{-10}\,\mathrm{M}^2$. Using the relevant electrode potentials found on the data page, calculate the reduction potential at 298 K of a half-cell formed by:

(a) an Ag electrode immersed in a saturated solution of AgCl.

Answer:

(b) an Ag electrode immersed in a 0.5 M solution of KCl containing some AgCl precipitate.

Answer:

Each of these half-cells is connected to a standard Cu^{2+}(1 M)/Cu(s) half-cell. In which half-cell, (a) or (b), will clear evidence of a reaction be seen? Describe the change(s) observed.