Task:
An 850-mL sample was placed in a beaker and evaporated. The remaining suspended solids were determined to have a mass of 0.001 g. The specific gravity of acetone is 0.79 g/cm^3.
(a) Determine the concentration of the sample as mg/L.
(b) Determine the concentration of the sample as ppm.

Answer:
a) 0,001 g = 1 mg
850 ml = 0.85 l

The concentration of the solution is: $\dfrac{1.00}{0.85} = 1.18\dfrac{mg}{l}$

b) $\rho = \dfrac{m}{V}$

$m = \rho V$

$m = 0.79 \cdot 0.85 = 0.67\,kg$

That is why, the concentration of the solution in ppm is:

$\dfrac{1.00}{0.67} = 1.49\,ppm$