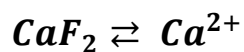**Answer on Question #67510, Chemistry / General Chemistry**

How much water must be added to 92.135 g of fluorite (CaF_2) yield a 1 ppm fluoride solution?

Solution:

$$CaF_2 \rightleftarrows Ca^{2+}$$

M(CaF_2**)** = 78.07 g/mol

In 78.074 g CaF_2 is 37.996 g F^-

In 92.135 g CaF_2 is **x** g F^-

_____

m(F^-) = 44.839 g

1 ppm = 1 mg/kg

$1*10^{-3}$ g F^- in 1 kg solution

44.839 g in **y** kg solution

_____

44839.02 – 92.135 = 44746.88 (kg) – H_2O

Answer: 44746.88 kg H_2O.