Video worksheet – converting concentrations between units.

1. Calculate the concentration, in % (m/v), when a mass of 5.32 grams of salt (NaCl) is dissolved in 350 mL of water

2. A volume of 200.0 ml of a 15.0% (w/v) hydrochloric acid solution will contain what mass of acid?

3. A wine bottle is labelled as 13.0 % (v/v) ethanol. Given the density of ethanol is 0.789 g/mL, calculate the concentration of ethanol in % (m/v).

4. Benzene is a known carcinogen. It is found in the flesh of a fish caught in the bay at a concentration of 235 ppm. Calculate the concentration of benzene, in %m/m, found in the fish sample.

5. A sample of contaminated water is found to contain lead nitrate ,$Pb(NO_3)_2$, at a concentration of 5.3% (m/v). Express the concentration of lead nitrate in mol/lire.

6. A sample of bore water is found to contain salt ,NaCl, at a concentration of 13.2 M.
Express the concentration of NaCl in % (m/v).

7. A 200.0 gram sample of contaminated soil was found to contain lead at a concentration of 0.084 % (m/m). Lead concentration of less than 600 ppm are deemed safe. Is the soil safe?

8. A sample of contaminated water was found to contain lead at a concentration of 0.000184% (m/m). Express the concentration of lead in the water in ppb.

9. Find the molarity of 30% (w/v) H_2O_2 solution.