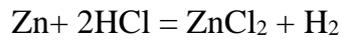


Two metals are in alloy, but only Zn reacts with HCl, Cu will not react with HCl, because it is less reactive than H₂.

Reaction between Zn and HCl”



It is possible to find mass of Zn from this reaction and volume of H₂.

$PV=nRT$, where P is pressure (728 mmHg =95.06 kPa),V volume(1.26L) , R constant 8.31, T is temperature in Kelvin (22+ 273 =295K), and n is amount.

$$n = PV/RT = 95.06*1.26 / 8.31*295 = 0.049 \text{ mol}$$

n is also = m/M_w , where M_w is molecular mass of Zn , m is mass.

$$m = M_w*n = 65.38 * 0.049 = 3.02 \text{ g}$$

Now percent of Zn in alloy is:

$$w = 3.02/6.11 *100\% =49.47\%$$