Worked Example of Percent Yield

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Mass of aluminum for example = 100 g

Mass of alum product fcr example = 17.364 g

In order to find the percent yield, we need to know the expected or theoretical yield of alum.

Theoretical yield

1. This requires three steps:
2. Convert mass of Al to moles of Al

   1 g of Al = (1.000 g Al ÷ 26.98 g/mole)

   = 0.037 times moles
3. Convert moles of Al to moles of alum

   From the equation 1 Al > 1 alum. Thus, moles of alum = 0.037
4. Convert moles of alum to g of alum

   = (0.037) x [39.10 + 26.98 + 2 x (32 + 64)+ 12 (18)]

   = (0.037 x (474.08)

   = 17.54 g

Percent yield = x 100= x/ 17.54 x 100 = %