

Answer on Question #55204 – Chemistry – General Chemistry

Question

A sample of a hydrated salt weighing 1.167 grams is heated until no more water is given off. the mass of the anhydrous was 0.629 gram. What is the mass water lost by the sample? Calculate the mass % of water in the hydrated salt.

Answer:

The mass of water lost is:

$$m(H_2O) = m_1 - m_2 = 1.167 - 0.629 = 0.538 \text{ g}$$

The mass % of water in the hydrated salt is:

$$\omega(H_2O) = \frac{m(H_2O)}{m_1} = \frac{0.538}{1.167} \cdot 100\% = 46.0 \%$$

Answer: 0.538 g; 46.0 %