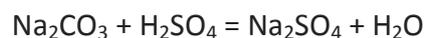
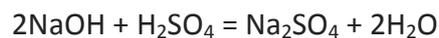


Answer on Question #42709 - Chemistry - Physical Chemistry

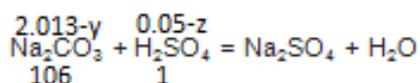
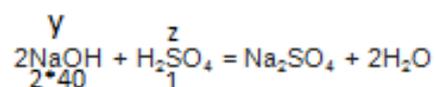


10 ml portion of the solution required 20 ml of H_2SO_4

250 ml – X ml

$$X = 500 \text{ ml} = 0.5 \text{ L of } \text{H}_2\text{SO}_4$$

0,1 · 0,5 = 0.05 moles of H_2SO_4 is required for complete neutralisation of 2,013 g of the sample



$$y/2 \cdot 40 = z/1,$$

$$(2.013-y)/106 = (0.05-z)/1,$$

$$y = 80z,$$

$$2.013-80z = (0.05-z) \cdot 106;$$

$$-80z + 106z = 5,3 - 2.013$$

$$26z = 3.287$$

$$z = 0.1266$$

$$y = 80 \cdot 0.1266 = 10.128 \text{ g of NaOH}$$

$$m(\text{Na}_2\text{CO}_3) = 2.013 - 10.128 = -8.115 \text{ g}$$

$$m(\%) = 0.053/2.013 \cdot 100\% = 2.63\%$$

Answer: 2.63%

<http://www.AssignmentExpert.com/>