Answer on Question #70967, Chemistry / General Chemistry :

In one experiment,the burning of 0.312 g sulfur produced 0.623 g sulfur dioxide as the sole product of the reaction in second experiment, 0.842 g sulfur must have been burned in the second experiment?

Solution.

$m(S) = 0.312g$

$m(SO_2) = 0.623g$

$m_1(S) = 0.842g$

$m_1(SO_2) - ?$

Reaction SO_2:

$S + O_2 \rightarrow SO_2$

Draw up a proportion:

$$\frac{m(S)}{m_1(S)} = \frac{m(SO_2)}{m_1(SO_2)}$$

And:

$$\frac{0.312g}{0.842g} = \frac{0.623g}{m_1(SO_2)}$$

$$m_1(SO_2) = \frac{0.842 \cdot 0.623}{0.312}$$

$m_1(SO_2) = 1.681g$

Answer: $m_1(SO_2) = 1.681g$ **.**

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