Answer on Question #69556 - Chemistry - General Chemistry

Question: An organic compound contains 4% sulphur. Find its minimum molecular mass.

Solution:

$$\omega(S) = \frac{x \cdot M(S)}{M(compound)}$$

where x is number of sulfur atoms.

$$M(compound) = \frac{x \cdot M(S)}{\omega(S)}$$

The minimum molecular mass will be at x = 1:

$$M(compound) = \frac{x \cdot M(S)}{\omega(S)} = \frac{1 \cdot 32}{0.04} = 800\ ({}^{g}/_{mol})$$

Answer: The minimum molecular mass is 800 g/mol