

Question #62969, Chemistry / General Chemistry

I have a 10 ml sprayer that has about 80 sprays of a solution.

The substance is 1000 ppm per 1 gram. What is the concentration per spray in mcg per spray will I get?

The molar mass is 274.44 g/mol.

Solution:

1000 ppm = 1000 mg/L = 1000 mcg/ml

$$\frac{10 \text{ ml}}{80 \text{ sprays}} = 0.125 \frac{\text{ml}}{\text{spray}}$$
$$c = 0.125 \frac{\text{ml}}{\text{spray}} \times 1000 \frac{\text{mcg}}{\text{ml}} = 125 \frac{\text{mcg}}{\text{spray}}$$

Answer:

125 mcg/spray