Questions on ppm Answers

1. The World Health Organisation recommends a limit for arsenic in drinking of water of 0.0100 mg dm^{-3}. This concentration in ppm is

A. 0.0100 ppm B. 10.0 ppm C. 100 ppm D. 10 000 ppm

2. A 2.0 dm^3 sample of water was found to contain 30 μg of arsenic. The concentration in ppm is

A. 15 ppm B. 15000 ppm C. 6.7 ppm D. 0.015 ppm

3. A room contained 40.0 m^3 of air. The concentration of $H_2S(g)$ in the room is 0.500 ppm by volume. The volume of H_2S in the room is

A. 20.0 cm^3 B. 2.00 x 10^{-5} cm^3 C. 2.00 cm^3 D. 8.00 cm^3

4. The concentration of strontium in a sample of drinking water was 8.10x10^{-3} g dm^{-3}. The concentration in ppm is

A. 8.10x10^{-3} ppm B. 8.10 ppm C. 8100 ppm D. 8.10x10^{-9} ppm

5. The concentration of calcium in a sample of water was 480 ppm. The mass of calcium in a 50.0 g sample of this water is

A. 0.0240 g B. 9.60 g C. 0.104 g D. 24000 g

6. Air contains 0.033% CO_2 by volume. The concentration in ppm by volume is

A. 330 ppm B. 0.033 ppm C. 33000 ppm D. 33x10^{-4} ppm

7. Air contains 2.0 ppm CH_4 by volume. The volume of CH_4 in 1000 dm^3 of air is

A. 2.0 cm^3 B. 2.0 dm^3 C. 20 cm^3 D. 500 cm^3

8. If the volume of the ozone layer is approximately 5.0x10^{18} m^3 and the concentration of ozone is about 5.0 ppm, what is the volume of ozone in the ozone layer?

A. 2.5x10^{13} dm^3 B. 2.5x10^{16} dm^3 C. 1.0x10^{12} dm^3 D. 1.0x10^{15} dm^3

9. The concentration of selenium in the Earth's crust is 50.0 ppb, by mass, where ppb stands for *parts per billion* and 1 billion is 10^9. Calculate the mass of selenium in mg that would be present in 5.85 kg of crustal rock. [2]

50.0/10^9 x 5850 = 2.93x10^{-4} g

0.293 mg

SMOSNOTES