

13 Full-fat milk is made up of fat-free milk mixed with fat.

A volume of $1.000 \times 10^{-3} \text{ m}^3$ of full-fat milk has a mass of 1.035 kg. It contains 4.00% fat by volume.

The density of fat-free milk is $1.040 \times 10^3 \text{ kg m}^{-3}$.

What is the density of fat?

A $1.25 \times 10^2 \text{ kg m}^{-3}$

B $9.15 \times 10^2 \text{ kg m}^{-3}$

C $9.28 \times 10^2 \text{ kg m}^{-3}$

D $1.16 \times 10^3 \text{ kg m}^{-3}$