Task. 9.7545 gram of a substance occupies 3.12 cm^3. Express its density by keeping the significant figures.

Solution. The density of a substance of mass m having volume V is equal to

$$\rho = \frac{m}{V}.$$

In our case $m = 9.7545$ and $V = 3.12\ cm^3$, whence

$$\rho = \frac{9.7545}{3.12} \approx 3.1264 \approx 3.13\ g/cm^3$$

Answer. $\rho \approx 3.13\ g/cm^3$