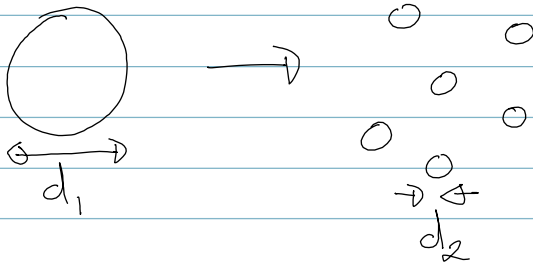


SPECIFIC NUMBER CONCENTRATION

$$= \frac{N}{M} \quad \text{PARTICLES / g}$$



$$S.N. = \frac{M}{\frac{\pi d_1^3}{6} \rho} = \frac{6M}{\pi d_1^3 \rho}$$

$$\frac{S.N._2}{S.N._1} = \frac{\left(\frac{6M}{\pi d_2^3 \rho}\right)}{\left(\frac{6M}{\pi d_1^3 \rho}\right)} = \left(\frac{d_1}{d_2}\right)^3$$

$$S.N._2 = S.N._1 \left(\frac{d_1}{d_2}\right)^3$$

E.g. $d_1 = 200 \text{ nm}$ $S.N._2 = S.N._1 \left(\frac{200}{20}\right)^3$
 $d_2 = 20 \text{ nm}$ $= S.N._1 10^3$

$$\Rightarrow \boxed{S.N._2 = 1000 S.N._1}$$