

# Buamètre de maille de NaCl

## Matériel :

- pycno
- échantillon solide + 1 lig
- NaCl
- spatule
- cyclohexane.

On pèse le pycno seul  
 $m_{pycno} = 33,1143 \text{ g}$

On ajoute du sel.  
 $m_{pycno+sel} = 37,2170 \text{ g}$

On ajoute le cyclo  
 $m_{cyclo} = 74,8170 \text{ g}$   
 $+ pycno + sel$

$$m_{sel} = m_{pycno+sel} - m_{pycno}$$

$$m_{cyclo} = m_{cyclo+pycno+sel} - m_{pycno+sel} = 37,6000 \text{ g}$$

$$V_{sel} = V_{pycno} - V_{cyclo} = 2,009 \text{ mL}$$

$$V_{pycno} = 50,276 \text{ mL}$$

$$V_{cyclo} = m_{cyclo} \times \rho_{cyclo} = 48,2670 \text{ mL}$$

$$\begin{aligned} &\uparrow 779 \text{ kg/m}^3 \\ &0,779 \text{ kg/L} \end{aligned}$$

$$m_{sel} = 4,1027 \text{ g}$$

$$\rho_{sel} = \frac{4,1027 \text{ g}}{2,042 \text{ mL}} = 2,012 \text{ g/mL}$$

$$\rho_{sel}^{theo} = 2,460 \text{ g/mL} = 2,460 \text{ g/cm}^3$$

$$V_{cristal} = a^3$$

$$m_{cristal} = \frac{M(\text{NaCl})}{\rho_A}$$

$$\rho_{cristal} = \frac{M(\text{NaCl})}{\rho_A a^3}$$

$$a = \sqrt[3]{\frac{M(\text{NaCl})}{\rho_A \rho_{cristal}}} = 575 \text{ pm}$$

$$M(\text{NaCl}) = 58,44 \text{ g/mol}$$

$$\rho_A = 6,02 \times 10^3 \text{ mol}^{-1}$$