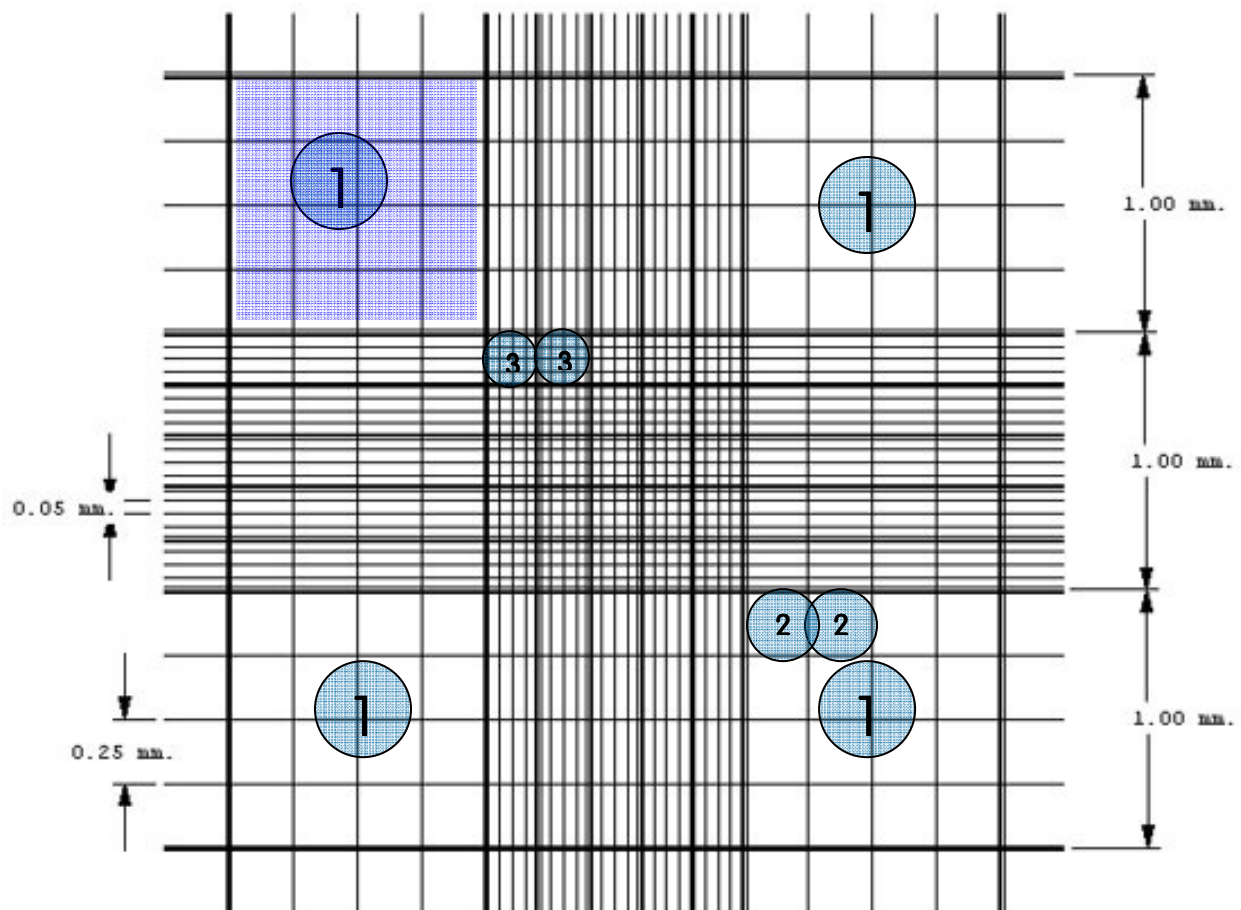


Neubauer Chamber Formulae

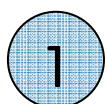
Calculations with Neubauer chamber made easy.



SQUARE 1

Area = 1 mm x 1mm = 1 mm²

Volume = 1 mm² x 0,1 mm = 0,1 mm³ = 1 x 10⁻⁴ ml



$$\text{Cell concentration} = \frac{\text{Total Cells Counted}}{\text{Number of squares}} \times 10.000$$

SQUARE 2

$$\text{Area} = 0,25\text{mm} \times 0,25\text{mm} = 0,0625 \text{ mm}^2$$

$$\text{Volume} = 0,0625\text{mm}^2 \times 0,1 \text{ mm} = 6,25 \times 10^{-3} \text{ mm}^3 = 6,25 \times 10^{-6} \text{ ml}$$

2

$$\text{Cell concentration} = \frac{\text{Total Cells Counted}}{\text{Number of squares}} \times 160.000$$

SQUARE 3

$$\text{Area} = 0,2 \text{ mm} \times 0,2 \text{ mm} = 0,04 \text{ mm}^2$$

$$\text{Volume} = 0,04\text{mm}^2 \times 0,1 \text{ mm} = 4 \times 10^{-3} \text{ mm}^3 = 4 \times 10^{-6} \text{ ml}$$

3

$$\text{Cell concentration} = \frac{\text{Total Cells Counted}}{\text{Number of squares}} \times 250.000$$

SQUARE 4

1/16th of SQUARE 3, only NEUBAUER improved – central grid

$$\text{Area} = 0,05 \text{ mm} \times 0,05 \text{ mm} = 0,0025 \text{ mm}^2$$

$$\text{Volume} = 0,0025\text{mm}^2 \times 0,1 \text{ mm} = 2,5 \times 10^{-4} \text{ mm}^3 = 2,5 \times 10^{-7} \text{ ml}$$



$$\text{Cell concentration} = \frac{\text{Total Cells Counted}}{\text{Number of squares}} \times 4 \times 10^6$$