

Calculation

(1) The depth of the counting chamber is 0.1 mm and the area counted is 4 sq mm (4 squares are counted, each with an area of 1.0 sq mm therefore, 4×1.0 sq mm = a total of 4 sq mm). The volume counted is: area \times depth = volume. Four sq mm \times 0.1 mm = 0.4 cu mm.

(2) The formula is as follows:

$$\text{Yeast cells (cells/mL)} = \frac{\text{Average number of chambers (2) yeast counted} \times \text{dilution factor}}{\text{Volume (0.4)}}$$