



Obtain Total Spore Count (TSC) of the original spore suspension in 1 mL:

$$\text{TSC} = \text{ASC} \times 10,000 \times \text{DF}$$

Where ASC is an Average Spore Count of the 4 squares of the hemocytometer highlighted in yellow; 10,000 is the conversion factor for the 0.1 μL volume of 1 yellow square of the hemocytometer to 1 mL of spore suspension; DF is a Dilution Factor.

For example, DF of 100 means a 1:100 dilution, or 1 part of the original spore suspension + 99 parts of water.



Calculate the volume of the original spore suspension V (mL) to be added to water to prepare the desired volume N (mL) of the needed Spore Suspension Concentration (SSC) used for inoculation of seeds.

$$V = \text{SSC} / \text{TSC} \times N$$

For example, if ASC is 18, DF = 100, N = 10, and SSC is 1,000,000 spores/mL (1,000 spores/ μL), then:

$$\text{TSC} = 18 \times 10,000 \times 100 = 18,000,000 \text{ spores/mL};$$

$$V = 1,000,000 / 18,000,000 \times 10 = 0.56 \text{ (mL) of the original spore suspension to be added to 9.44 mL of sterile water.}$$