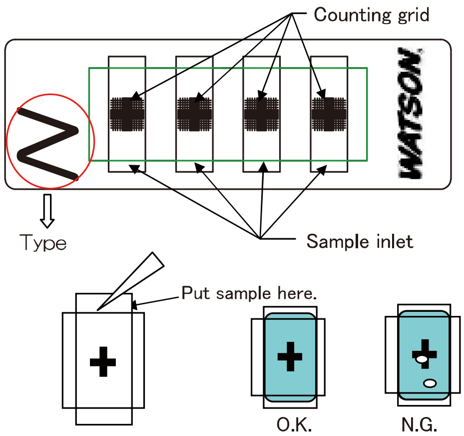
4 Grid Cell Counter Plate

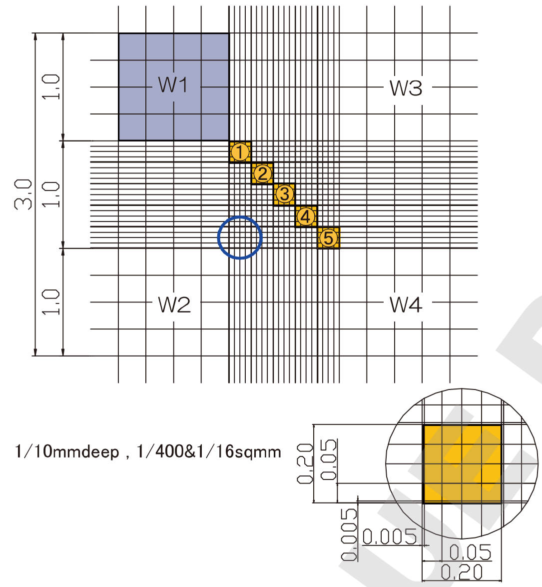


How to use

1. Pipette 10μl sample from the sample inlet, slowly.
   ※ Pipette 20μl only for Fuchs Rosenthal type.
2. Set the plate on a microscope and keep it still for 2-3 minutes.
3. Count cells referring to a rule in "Cell Counting Method"
4. Calculate accoring to the method of each type.

N【Neubauer Improved】

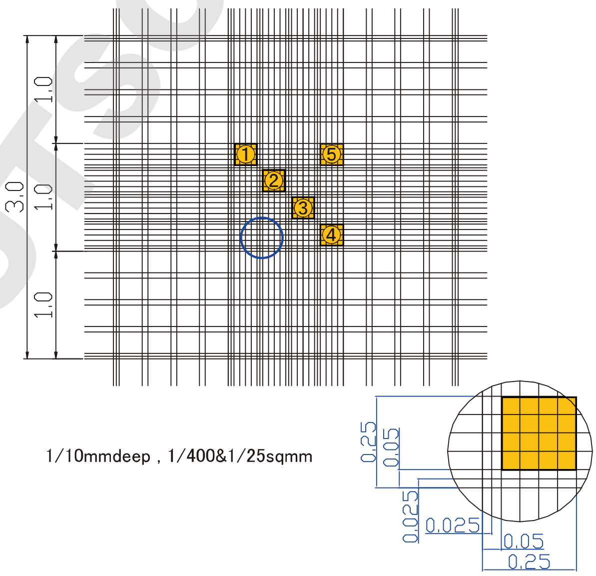
(177-112C)



1/10mmdeep , 1/400&1/16sqmm

B【Burker-turk】

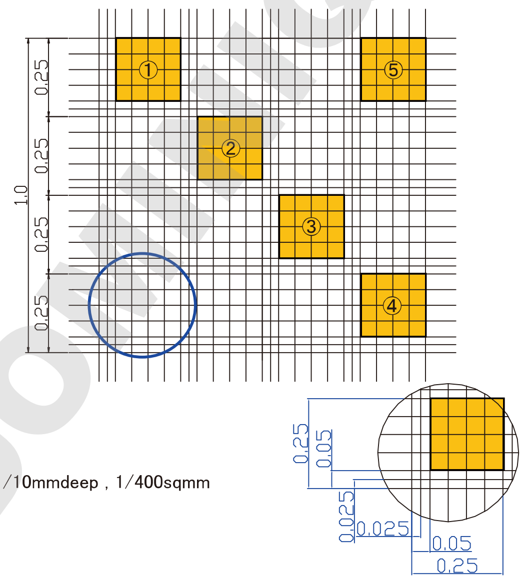
(177-212C)



1/10mmdeep , 1/400&1/25sqmm

Thoma

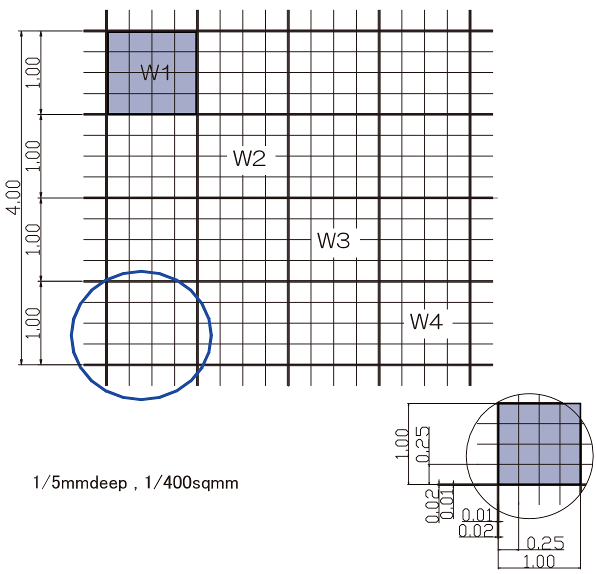
(177-312C)



1/10mmdeep , 1/400sqmm

Fuchs Rosenthal

(177-512C)



1/5mmdeep , 1/400sqmm

Cell Counting Method

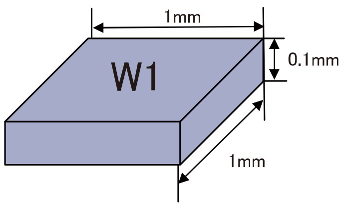
To count large cells such as cultured cells.
Leukocyte count A per 1 μl is calculated by the formula below, when cell counts in large compartments W1,W2,W3,W4 (each amounts to 16 midium complatments)average to be a.

$$A = a \times 10 \times \text{Dilution Rate}$$

※Adjust so that the count in a large compartment (16 midium compartments) is around 100.

Large compartment dimension

ex.)



A cube of 1mm x 1mm x 0.1mm.

The volume of a large compartment (16midium compartment) is
$1mm \times 1mm \times 0.1mm = 0.1mm^3 = 0.1\mu l$
When cell count average over W1～W4 is a,
the cell count per 0.1 μl of the liquid used for countig is a.

Therefore, cell count A per 1 μl of the original liquid is

$$A = \{a/(1mm \times 1mm \times 0.1mm)\} \times \text{Dilution Rate}$$

$$A = (a/0.1\mu l) \times \text{Dilution Rate}$$

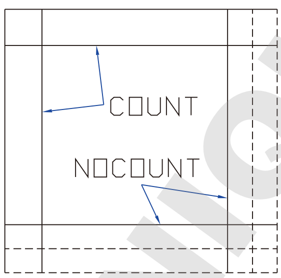
$$A = a \times 10 \times \text{Dilution Rate}$$

To count small cells such as yeasts, blood cells, etc.
Count cells in each compartment ①,②,③,④,⑤ (the total amounts to 80 minimum compartments) and sum up.
Blood cell count R per 1 μl is calculated by the formula below when the total blood cell count summed up is r.

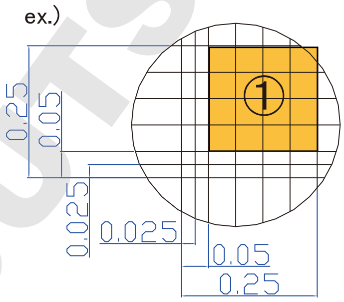
$$R = r \times 50 \times \text{Dilution Ratio}$$

※A gap between the cell counts of any 2 midium compartments (16 minimum compartments) must not exceed 20.
※Any set of 16 minimum compartments can be taken as a midium compartment ①～⑤, but they need to be well spread.
※
(1) In case of triple lines, use the most inner line.
(2) Count cells on the top and left lines.
Cells on the bottom and right lines are not to be counted.

ex.)



ex.)



The volume of a cube 0.2mm x 0.2mm x 0.1mm is
$4 \times 10^{-3}mm^3 = 4 \times 10^{-3}\mu l$
Sum up the cell counts in ①～⑤.
→ It amounts to the cell count in $5 \times 4 \times 10^{-3}$ μl
When the total cell count of ①～⑤ summed up is r,
the cell count in $2 \times 10^{-2}\mu l$ is r.
Therefore, cell count R per 1 μl of the original liquid is

$$R = \{r/5 \times (0.2mm \times 0.2mm \times 0.1mm)\} \times \text{Dilution Rate}$$

$$R = \{r/2 \times 10^{-2}\mu l\} \times \text{Dilution Rate}$$

$$R = r \times 50 \times \text{Dilution Rate}$$

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