Cell-Chip

Innovation by bioswisstec Ltd serves life science

The counting chamber looks like the familiar Neubauer „improved" hemocytometer: The cells are distributed over 3 x 3 large squares, each with 1 mm edge length and with a surface area of 1 mm².
Count your cells as usual - With the Cell-Chip, you inject the sample, stained or unstained, into the desired chamber. Two separate counting chambers enable two counts per Cell-Chip.

Quick, easy and safe:

- Minimal counting tolerances
- High precision
- minimized risk of infection
- easy to recycle
- sterile, single wrapped

Product	Cat. No.	Dimensions	Volume	Depth of chamber	Pieces/ sterile unit	Pieces/ Box
Cell-Chip with counting grid Neubauer „improved" Individually packaged	505050	25x75x1.6 mm	10 µl	0.1 mm	1 Chip (for 2 counts)	50 Chips

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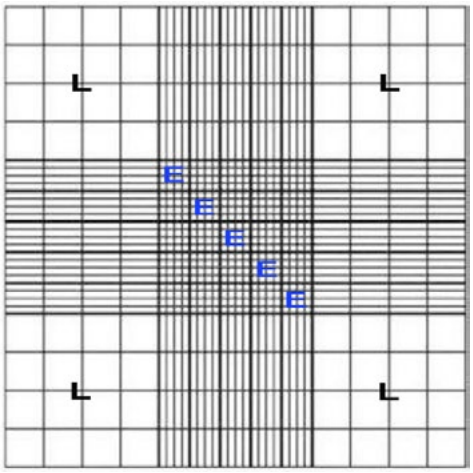
Details & Instructions

Structure of the „improved" counting chamber

The counting chamber consists of 9 large squares (3x3), of which 4 are corner squares (L). The corner squares (L) are divided into 16 squares (4x4). The central square is divided into 5x5 squares (E) that are divided into 4x4.



Volume details for the L-squares

The area of the L-squares results from the edge lengths:
1 mm x 1 mm = 1 mm^2.
At a chamber depth of 0.1 mm this results in a volume of 0.1 mm^3 in the L-squares (conversion: 0.1 mm^3 correspond to 0.1 µl or 10^{-4} ml.)

Counting with the Cell-Chip

Leukocyte counting (1:20 dilution)	Amount of Leukocytes
1. Dilute blood using accepted laboratory methods 2. Load 10 µl of diluted sample into the sample injection area 3. Count the erythrocytes in the 5 small squares (four small corner squares and one small middle square) of the large center square	leukocytes per ml = (cells in 4 corner squares/ 4) x 20 (dilution factor) x 10^4 (volume factor)
Mammalian Cell counting	**Amount of Mammalian Cells**
1. Treat the cell samples with Trypsin-EDTA. 2. Carefully remove the supernatant with a pipette tip without disturbing the pellet 3. Add an appropriate volume of growth media or PBS to dilute to a final concentration of 5x10^3 cells/ml to 5x10^6 cells per ml 4. Thoroughly resuspend the cell pellet with a pipette 5. Check visually if there are any cell clumps or agglomerates 6. Load 10 µl of sample into the sample injection area 7. Count the cells in 5 large squares	mammalian cells per ml = (cells in 5 large squares/5) x dilution factor x 10^4 (volume factor)
Erythrocyte counting (1:200 dilution)	**Amount of Erythrocytes**
1. Dilute blood using accepted laboratory methods 2. Load 10 µl of diluted sample into the sample injection area 3. Count the erythrocytes in the 5 small squares (four small corner squares and one small middle square) of the large center square	erythrocytes per ml = cells in 5 small squares x 5 x 200 (dilution factor) x 10^4 (volume factor)