

C-Chip

DHC-N01-5
DHC-N01-2
INSTRUCTIONS

Disposable hemocytometer

System Neubauer Improved

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All specifications in this manual are subject to change without prior
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Documentation : DHC-N01(Rev A.02.10-06/06)
Published in Republic of Korea.

Safety symbols



Use by



Do not reuse



Lot number



Manufactured by



See instruction for use

How to use ?




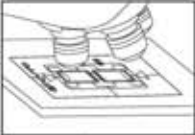
- 
open the pack
- 
Tear the edge of individual pack as shown
- 
Drop samples into a chamber directly through injection port
no need coverslip !
- 
Put C-Chip™ on microscope & count cells.

Figure 1

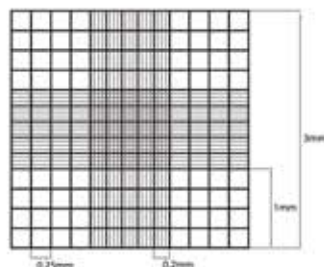
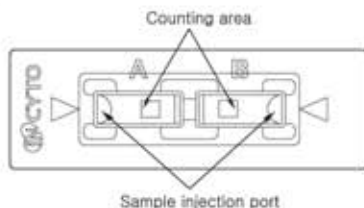


Figure 2



English

1. Precautions and warnings

The C-Chip (DHC-N01) is for single use only. Do not reuse. It should be used immediately after unsealing. The warranty on the C-Chip included in the conditions of supply is valid for 36 months from the date of manufacturing.

Long exposure to solvents will cause the slide to warp. Xylene and toluene based mounting media should be avoided. Glycerol, gelatin, and other aqueous based media are recommended.

2. Description

The C-Chip (DHC-N01) is a disposable plastic hemocytometer used for manual cell counting. It consists of surface-patterned two enclosed chambers with two ports for sample injection (Fig. 2). The DHC-N01 grid pattern is exactly same as the Neubauer Improved. It consists of 9 large squares, each measuring 1x1 mm, and the depth of the chamber is 0.1 mm. Each square has a total volume of 0.1 mm³ (10⁻⁴ cm³) (Fig. 1). The central square is divided into 25 small squares with triple lines and four corner squares are divided into 16 small squares.

3. Counting procedure

A. General methods

- Mix the samples well.
- Load 10 µl of sample into the sample injection area in Fig. 2, so that it fills the chamber by capillary action. (Please be careful not to make air bubbles.)
- Count the cells under microscope.

$$\text{Cells per ml} = \text{Average count per square} \times \text{dilution factor} \times \text{volume factor}$$

B. Mammalian cell counting

- Treat the cell samples with trypsin-EDTA.
- Carefully remove the supernatant with a pipette tip without disturbing the pellet.
- Add an appropriate volume of growth media or PBS to dilute to a final concentration of 5 x 10⁵ cells/ml to 5 x 10⁶ cells/ml.
- Thoroughly resuspend the cell pellet with a pipette.
- Check visually if there are any cell clumps or agglomerates.
- Load 10 µl of sample into the sample injection area in Fig. 2. (Please be careful not to make air bubbles.)
- Count the cells in 5 large squares.

$$\text{Cells per ml} = \frac{\text{cells in 5 large squares}}{5} \times \text{dilution factor} \times 10^4 (\text{volume factor})$$

C. Erythrocyte counting (1:200 dilution)

- Dilute blood using accepted laboratory methods.
- Load 10 µl of diluted sample into the sample injection area in Fig. 2. (Please be careful not to make air bubbles.)
- Count the erythrocytes in the 5 small squares (four small corner squares and one small middle square) of the large center square.

$$\text{RBCs per ml} = \text{cells in 5 small squares} \times 5 \times 200 (\text{dilution factor}) \times 10^4 (\text{volume factor})$$

D. Leukocyte counting (1:20 dilution)

- Dilute blood using accepted laboratory methods.
- Load 10 µl of diluted sample into the sample injection area in Fig. 2. (Please be careful not to make air bubbles.)
- Count the leukocytes in the 4 large corner squares.

$$\text{WBCs per ml} = \frac{\text{cells in 4 corner squares}}{4} \times 20 (\text{dilution factor}) \times 10^4 (\text{volume factor})$$

4. Trouble shooting

In case of poor visible results.

- Carefully load samples into the C-Chip to make sure to prevent the introduction of air bubbles.
- Be careful not to enter the dust into each chamber, the C-Chip should be used immediately after unsealing.
- Avoid the aggregated sample.
- Adjust focus of the microscope.