

NESMU-DCS-001E (V.0.4)



# S-Chip

INSTRUCTIONS

Disposable chamber

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for sperm counting

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DCS-S01



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## Safety Precautions

For analyzing hazardous or potential infectious materials:

- Take necessary precautions
- Handle with care
- Dispose in an appropriate way

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.

## Safety Symbols

The safety symbols on the S-chip (DCS-S01) are intended to inform you of potential danger or a particular caution. Before using, please read and follow the guide for the symbols and their meanings.

 Catalogue number/Reference number

 Batch code (Lot Number)



Use by



CE marking



Do not reuse



*In vitro* diagnostic medical device



Consult instructions for use



Manufacturer



US Corporation



European Corporation



Authorized representative in the European Community



Authorized representative in United Kingdom



Temperature limitation

**NOTE :** The S-chip (DCS-S01) is for **single use** only. **Do not reuse.** It should be used immediately after unsealing.

## Introduction

The S-chip(DCS-S01) is a disposable chamber for sperm counting. It consists of surface-patterned two enclosed chambers with two ports for sample injection.

Each chamber has 100 small squares, each measuring  $0.1 \times 0.1 \times 0.02 \text{ mm} = 0.0002 \text{ mm}^3$ . Each square has a total volume of  $0.02 \text{ }\mu\text{L}$  ( $\text{mm}^3$ ).

Figure 1. Grid pattern

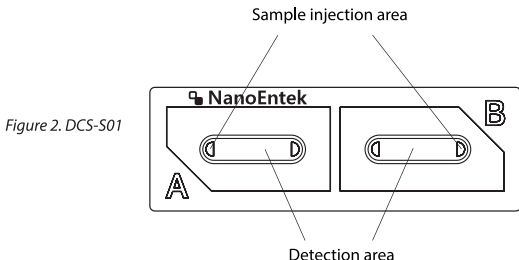
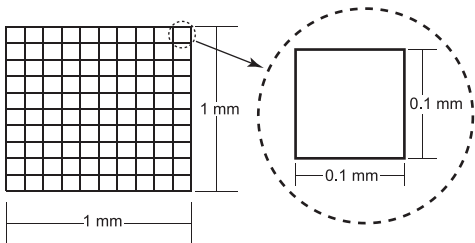


Figure 2. DCS-S01

## Counting with S-chip

### A. Method

- 1) Mix the specimen thoroughly.
- 2) Load the sample (2  $\mu\text{L}$ ) to the one chamber of S-chip using proper pipette and tip.
- 3) Count the sperms in all 10 squares under the microscope.

### B. Calculation

Each chamber of the S-chip has a total of 100 small squares.

Each small square measures 0.1 x 0.1 mm with a chamber depth of 0.02 mm, resulting in a total volume of  $2.0 \times 10^{-4} \text{ mm}^3$ . Therefore, a total volume of 10 squares is  $2.0 \times 10^{-3} \text{ mm}^3$ .

Since  $1000 \text{ mm}^3$  equals 1 mL, a total volume of 10 small squares becomes  $2.0 \times 10^{-6} \text{ mL}$ .

As the calculated value is in per mL, the volume should be reciprocated, which becomes 500,000.

Thus, the equation is as follows.

$$\text{Sperm per mL} = \text{Number of cells in 10 small squares} \times \text{dilution factor} \times 500,000$$

## **Storage and Handling**

All unopened/opened materials are stable until the expiration date on the label when stored at the room temperature (15-30°C). Reagent stability has been demonstrated for 24 months from the date of manufacture. The expiration date is indicated on the front side of outer box.