



Disposable chamber

for sperm counting

DCS-S01

NanoEnTek

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EC REP

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Documentation : NESMU-DCS-001E (V.0.1)

Revision history: V.0.0 Date: JUL 2014
V.0.1 Date: MAR 2019

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Unpacking

When you receive the S-Chip (DCS-S01) for the first time, you will find the following components in your package.

Disposable chamber for sperm counting
Instruction manual

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.

Batch code (Lot Number)

Use by

Do not reuse

Manufacturer

Consult instructions for use

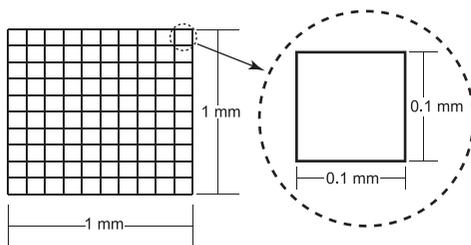
NOTE : The S-chip (DCS-S01) is for **single use only**. **Do not reuse**. It should be used immediately after unsealing. The warranty on the S-chip included in the conditions of supply is valid for 24months from the date of manufacture. The **expiration date** is indicated on the front side of outer box.

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.

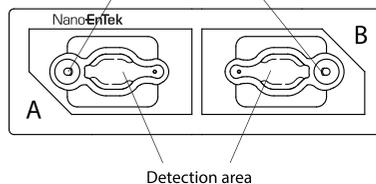
Each chamber has 100 small squares, each measuring 0.1 x 0.1 x 0.02 mm = 0.0002mm³. Each square has a total volume of 0.02 μL (mm³).

Figure 1. Grid pattern



Sample injection area

Figure 2. DCS-S01



Detection area

Counting with S-chip

A. Method

- 1) Mix the specimen thoroughly.
- 2) Load the sample (2 μL) to the one chamber of S-chip using proper pipette and tip.
- 3) Count the sperm in ten squares under the microscope.

B. Counting

The S-chip consists of 100 small squares.
Each small square measure 0.1 x 0.1 mm, with a chamber depth of 0.02 mm.
Each small square has a total volume of 2.0×10^{-4} mm³.
Count all the sperm in the 10 small squares. The large square has a surface area of 1.0 mm² and chamber depth of 0.02 mm. The large square has 0.02 mm³. As there are 1000 mm³ per mL, the total volume of 10 squares is 0.00002 mL, so that equates to 1/0.00002 mL = 50,000

Sperm per mL = Number of cells in 10 small squares x dilution factor x 50,000

NESMU-DCS-001E (V.0.1)



S-Chip

INSTRUCTIONS

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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 $0.02 \text{ }\mu\text{L}$ (mm^3).

Figure 1. Grid pattern

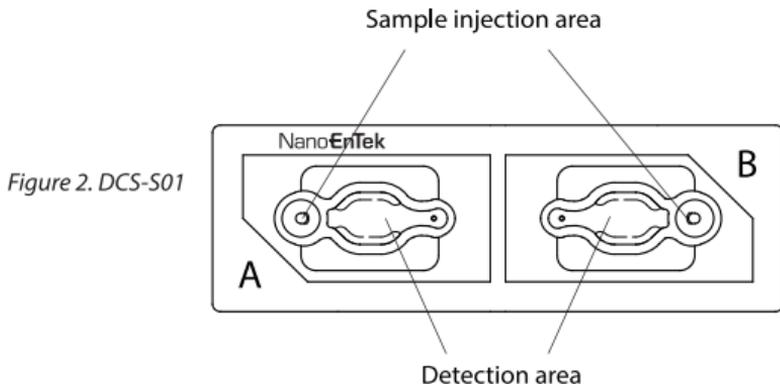
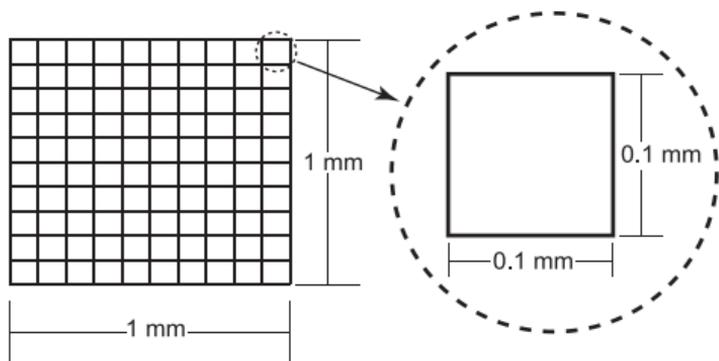


Figure 2. DCS-S01

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$$\text{Sperm per mL} = \text{Number of cells in 10 small squares} \times \text{dilution factor} \times 50,000$$