



Disposable chamber

for sperm counting

DCS-S01

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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

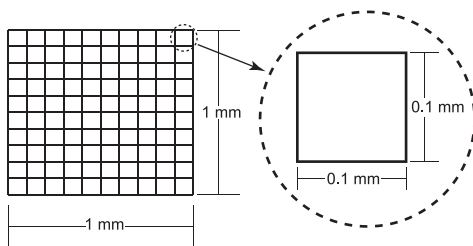
**NOTE :** The S-chip (DCS-S01) is for **single use only**. **Do not reuse**. It should be used immediately after unsealing. The warranty on the S-chip included in the conditions of supply is valid for 24months from the date of manufacture. The **expiration date** is indicated on the front side of outer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

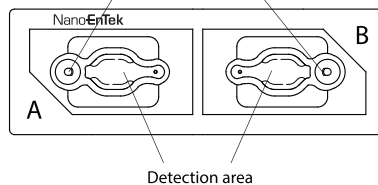
Each chamber has 100 small squares, each measuring 0.1 x 0.1 x 0.02 mm = 0.0002mm<sup>3</sup>. Each square has a total volume of 0.02 μL (mm<sup>3</sup>).

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  $2.0 \times 10^{-4}$  mm<sup>3</sup>. Count all the sperm in the 10 small squares. The large square has a surface area of 1.0 mm<sup>2</sup> and chamber depth of 0.02 mm. The large square has 0.02 mm<sup>3</sup>. As there are 1000 mm<sup>3</sup> 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