

# NucleoCounter<sup>®</sup> SP-100<sup>™</sup>

– for total count of sperm cells and viability

## NucleoCounter SP-100 concept

The NucleoCounter SP-100 offers unique ease of use and effective determination of total cell concentration and cell viability in a sperm sample from ejaculates or extended doses.

The compact instrument fits perfectly in any research, quality control or production site.

As the NucleoCounter SP-100 is very simple to operate the measurements can be performed by operators with only limited training in laboratory work.

The measurement range of the NucleoCounter SP-100 is virtually unlimited due to dilution prior to the analysis.



## Key benefits

- Easy operation
- 30 sec. analysis time
- Excellent reproducibility
- No interference from gel particles in semen
- No cleaning
- Maintenance free
- No calibration
- No interference from egg yolk or milk in extender

## As simple as 1-2-3



### 1 Sample Preparation

A representative sperm sample is mixed with Reagent S100 for determination of total concentration. The reagent dilutes the sample and renders the cells permeable to the DNA stain. For determination of non-viable concentration PBS is used for dilution.



### 2 Sampling

Load the SP1-Cassette with the lysate solution by immersing the tip of the cassette into the solution and pressing the piston.



### 3 Analysis

Place the SP1-Cassette in the instrument. Close the lid and press the "Run" key. After 30 sec. the Total Cell count is presented on the instrument display. Optionally data is transferred to an external PC using USB connection or printed on an external printer.

## SP1-Cassette

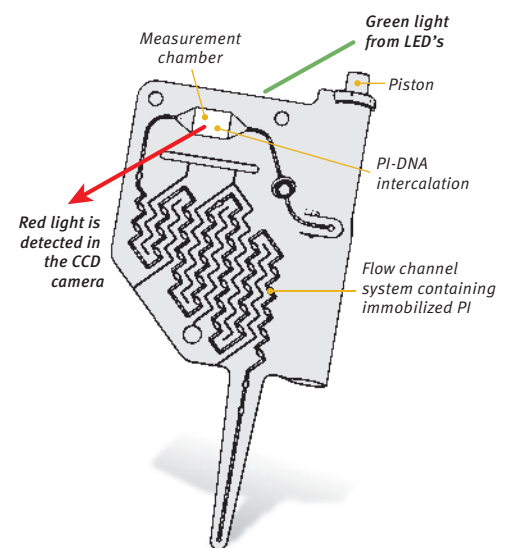
PI is immobilized in the interior of the disposable SP1-Cassette. When the cassette has been loaded with the cell lysate the PI is dissolved and the cellular DNA is stained.

After placement in the NucleoCounter the stained mixture is automatically transferred to the measurement chamber. Green light excites the PI-DNA intercalation and the red light emitted is registered in the CCD camera for correlation into a cell count.

After analysis the sample and the PI is contained inside the SP1-Cassette, which can be safely discarded. This offers a safe sample disposal.

The thickness of the measurement chamber of each SP1-Cassette is measured during production, accurately determining the analysed volume in each measurement. This, together with durable optical components, makes the NucleoCounter calibration free.

As the SP1-Cassette contains the entire flow system as well as the measurement chamber, neither cleaning nor maintenance of the NucleoCounter instrument is needed.



## NucleoCounter SP-100 Specifications

|                            |   |
|----------------------------|---|
| <b>Loading volume:</b>     | 60 µl is loaded into the SP1-Cassette                                     |
| <b>Measurement volume:</b> | 1 µl in the measurement chamber of the SP1-Cassette                       |
| <b>Analysis time:</b>      | Total count: 30 seconds. Non Viable count 80 seconds                      |
| <b>Measurement range:</b>  | Higher than 1 mill. cells/ml  |
| <b>Size:</b>               | 38 x 26 x 22 cm (W x H x D), weight 3 kg                                  |
| <b>Software:</b>           | SemenView computer software for documentation and presentation - included |
| <b>Printer:</b>            | External printer for documentation - optional                             |



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