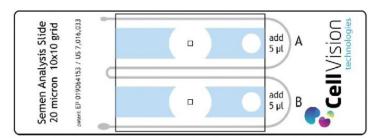CellVision technologies

Semen Analysis Slide
CV 1020-102
20 micron, Sperm Counting Grid

General Information:

The CellVision Semen Analysis Slide, 20 Micron with Sperm Counting Fred (SCG) is specifically designed for the manual assessment of sperm parameters. The Semen Analysis Slide consists of 2 identical chambers both holding a SCG (total of 100 boxes, each box 100x100 µm) and a motility-window close to the entrance.

Note: *The CellVision grid is made by laser into the microscope slide. The laser lines are much thinner than your standard ink print found on other counting chambers grids. The advantage is the grid lines do not block the sight of sperm cells. Additionally, the dimensions are more accurate and repeatable. The ideal microscope setting is for the diaphragm to be almost completely shut. This setting also offers the best visibility of the sperm cells*

Protocol:

1. Add 5µl of fully liquefied and homogenized semen to entrance area A or B.
2. The chamber will fill itself by capillary action for 80-90% resulting in an immediate steady view.
3. After the chamber has filled, wipe away any surplus- if present – from the entrance area.
4. Count all sells in (at least) 10 random boxes. (*)
5. Determine the motility in the motility-window according to the WHO[1]

Concentration Result:

The sperm count is the total number of cells counted in 10 boxes multiplied by 1 million per ml.
Total analysis volume=10 x 0.1 x 0.01=0.000.001mm^2
(*) WHO recommendation count at least 200 cells to obtain reliable results:
   Protocol based on WHO recommendation:
   Analyze as many boxes until more than 200 cells are counted. Divide the number of cells counted by the number of boxes analyzed. Multiply this result by 10 to obtain the sperm count in millions per ml.

Motility Result:

Standard protocol to determine the motility percentages according to the WHO manual.

Class PR: moving actively, either linearly or in large circles, regardless of speed
Class NP: all other patterns of motility with an absence of progression, e.g. swimming in small circles, the flagellar force hardly displacing the head or when only the flagellar beat can be observed
Class IM: no movement

[1] World Health Organization, Laboratory Manual for the Examination and Processing of Human Sperm, Fifth Edition, 2010, ISBN 978 92 4 154778 9