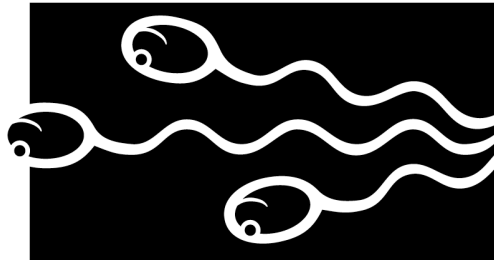


Sperm Wizard Spermocytometer™

THE SEMEN ANALYSIS EXPERTS™

# FERTILITY SOLUTIONS



Fertility Solutions Inc.  
11811 Shaker Blvd., STE 330 \* Cleveland OH 44120  
phone: (216) 491-0030 \* fax: (216) 491-0032  
www.fertilitiesolutions.com

For compliance and confidence, use these quality control products with your Spermocytometer™.

**AQC103 Sperm Count QC—2 levels**  
**AQC111 Post-Vasectomy QC—positive, negative**  
Human sperm in a stabilized matrix to replicate clinical specimens and proficiency tests, packaged in two concentrations. Shelf life, convenience and documentation tools make these products the choice for semen analysis quality control.

See our website for the complete line of semen analysis quality control and training products.

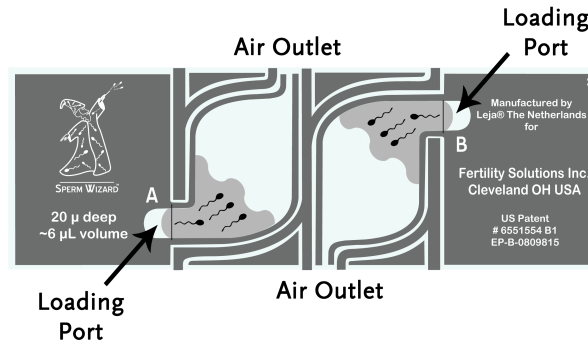
### Requirements:

**Microscope** (phase contrast with 20X objective recommended) fitted with KR406B 10x10 eyepiece reticle (reticles.com)

**Scaling Factor** for objective and microscope (FSI Technical Bulletin “Scaling Factor Determination” available on our website)

**Micropipetor** with 6µL capacity and tips

**Semen sample or QC** (e.g. FSI AQC103)



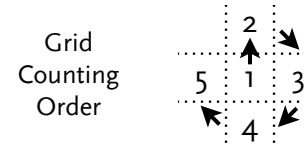
### Loading the Spermocytometer™:

- Mix semen well using vortex mixer, 2-3 pulses of 3-5 seconds each. If using AQC product, follow its package insert.
- Slowly dispense 6µL of sample into a chamber loading port (A or B) and observe filling. The chamber is filled when the sample reaches the air outlet. A small amount of seminal fluid volume may remain in loading area.
- Position the Spermocytometer™ on the microscope stage so chamber is under the objective. Wait 1-2 minutes for the sample to settle until no drifting is observed.
- Scan the chamber to verify the absence of clumping and air bubbles.

ver. 2.2 © 7/25/11

### Counting Sperm:

- Position the center of the chamber under the microscope objective.
- Count the sperm in **all** 100 squares of the reticle grid using Sperm Counting Rules. Do not count partial grids.
- Record the number of sperm in the grid.
- Repeat steps 2 & 3 in four adjacent fields.



### Calculate Sperm Concentration:

$$\text{Grid 1} + \text{Grid 2} + \text{Grid 3} + \text{Grid 4} + \text{Grid 5} = \text{Total Sperm}$$

$$\frac{\text{Total Sperm}}{500} = \text{Average \# of sperm per square}$$

(squares counted)

$$\text{Average \# of sperm per square} \times \text{Scaling Factor} = \text{Sample Concentration in million/mL}$$

### Additional Notes:

- For calculation examples, visit our website.
- Round cells and aggregation/agglutination also can be evaluated using this chamber.
- For semen analysis procedure including motility, call Technical Service: (800) 959-7656
- Mark each chamber after use with permanent marker to indicate it was used.

### Sperm Counting Rules

- Analyze each square of the grid individually.
- Analyze all 100 squares in the grid and a minimum of 5 grids.
- Count only intact sperm with head and tail.
- Count sperm whose heads lie completely within the square and any heads that lie on the upper and left lines. Do not count tail-less heads, head-less tails or sperm whose heads lie on the lower and right lines.
- If the total number of sperm in 5 grids is less than 200, consider counting another aliquot to confirm.
- If a high sperm concentration makes counting difficult, dilute the semen and reload a new chamber.
- For post-vasectomy samples, examine entire chamber using your laboratory's procedure.

### Troubleshooting:

#### Incomplete Chamber Load

*Sample volume may be insufficient*  
Solution: check pipetor settings & calibration

*Semen may have high viscosity or incomplete liquefaction*  
Solution: add chymotrypsin to semen, incubate and load new chamber

#### Clumping

*Can result from incomplete mixing*  
Solution: mix thoroughly before loading

*Sperm aggregation or agglutination may indicate an abnormal pathology.*

#### Field suddenly shifts

*Air may have been introduced in loading*  
Solution: load new chamber