

Makler chamber

IMPORTANT: REMEMBER TO HEAT THE MAKLER AT 37°C BEFORE USING IT (10 MINUTES IN THE INCUBATOR OR ON HEATING STAGE).

1. Homogenize the sample moving gently the container.
2. Take 5 µl of sample and put it in the center of the makler chamber (in the center of the circle) then cover with the cover round slide of the chamber pressing gently to homogenize the volume of sample on the surface (must have no air bubbles in the chamber).
3. With a 20x-40x objective count the spermatozoa in ten squares (random or on the diagonal).

Organize the counting in:

- motile progressive sperms
- motile no progressive sperms
- motile in situ sperms
- static sperms

The total number of counted sperms represents the total concentration (to obtain the total concentration multiply by 1×10^6).

To obtain the percentage of the four categories of sperms divide the total number for the number of each category and multiply by 100.

$$\frac{\text{Total number of sperms}}{\text{N}^\circ \text{ rapid progressive}} \times 100 = \% \text{ of rapid progressive sperms}$$

$$\frac{\text{Total number of sperms}}{\text{N}^\circ \text{ motile no progressive}} \times 100 = \% \text{ of motile no progressive sperms}$$

$$\frac{\text{Total number of sperms}}{\text{N}^\circ \text{ motile in situ}} \times 100 = \% \text{ of motile in situ sperms}$$

$$\frac{\text{Total number of sperms}}{\text{N}^\circ \text{ static sperms}} \times 100 = \% \text{ of static sperms}$$

If the number of sperms is very low, count the sperms in all the grid and then divide the number obtained for 10.

$$\frac{\text{Total sperm number counted in all makler}}{10} \times 10^6 = \text{total sperm concentration}$$

Attention: count only the head of the sperms inside the squares and the heads on two of the square's sides chosen before by the user.

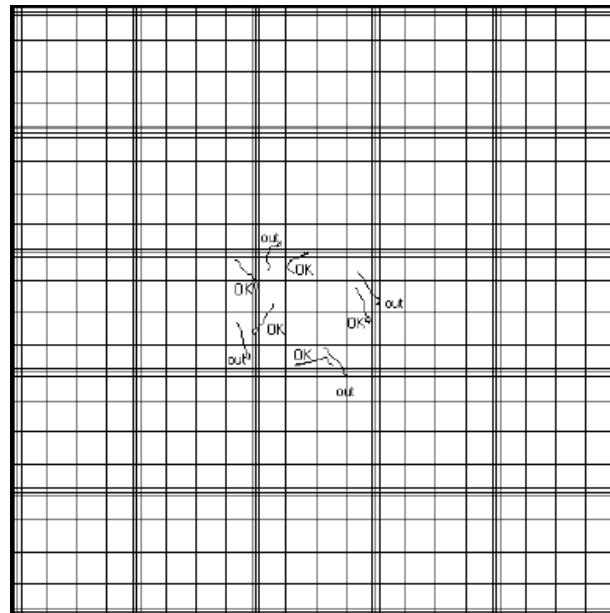


Fig.1

“Pin heads” should be counted separately and commented in the report form. Immature germ cells should not be counted (these will be assessed in differential morphology count), but round cells and inflammatory cells should be counted in the same way as the sperms and their number added in the final report.

”Borderline cases”: only spermatozoa whose head is located on the upper or left limiting lines (marked “OK” in Fig. 1) should be counted as ”belonging” to that square. Thus, do **not** count spermatozoa located on the lower or right limiting lines (marked “out” in Fig. 1).

→ Clear the Makler chamber with tap water and dry very well (if the Makler chamber is very damaged and scratched, must be changed with a new one).