Sperm stains

Stains for the morphological analysis of sperm cells

Morphological deviations can substantially affect the fertility of sperm cells. Abnormalities of the head and acrosome in particular impair the fertilization ability of semen cells.

Compared to the so-called "wet mount" method which allows morphological analysis of sperm cells without staining, the use of specific stains provides a better differentiation of the sperm cell regions.

Morphological abnormalities can be determined more precisely. For this purpose, efficient and simple-to-use sperm stains are available from Minitube.

Spermac stain

Set for diagnostic staining of sperm cells of all domestic mammals, consisting of:

- 50 ml red liquid (Spermac "A")
- 50 ml pale green liquid (Spermac "B")
- 50 ml dark green liquid (Spermac "C")
- 50 ml fixative (clear) liquid

Spermac stain, 4 x 50 ml	15405/0000

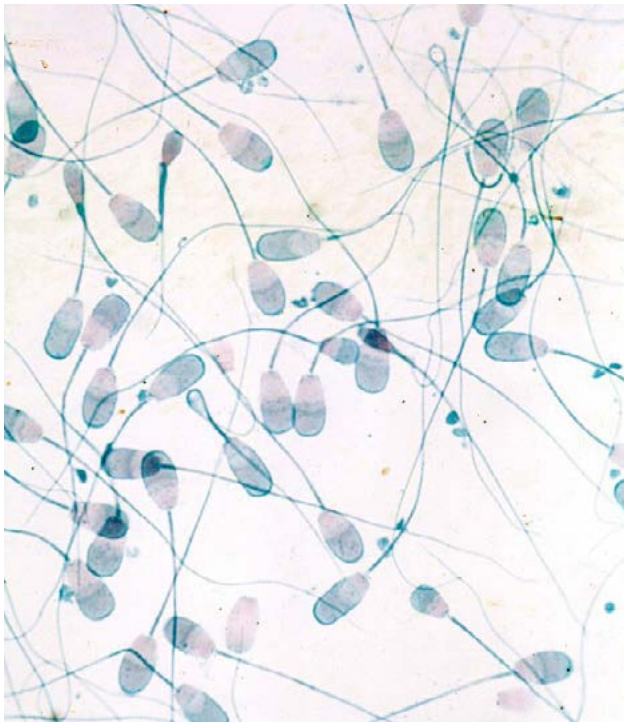
Spermac stain is used to clearly visualize head, acrosome, equatorial region, centerpiece, and tail, so that morphological abnormalities of all regions can be identified.

The head of the sperm cell appears red colored, acrosome, centerpiece and tail are green, and the equatorial zone is pale green.

The identification of damage to head and acrosome as well as tail abnormalities are easily detected. Due to the distinctive staining of the acrosome, Spermac is particularly suitable for the identification of the acrosome of equine spermatozoa. Spermac can be used for staining of frozen thawed sperm containing glycerol.

Instructions for use

1. Prepare a thin smear of diluted semen on a clean slide
2. Fix the smear by dipping it into the fixative for at least 5 minutes
3. Dry on a heating plate at 37°C for 15 minutes or at ambient temperature over night
4. Staining
   - Wash by dipping into tap water
   - Dip in stain A for 1 minute and wash by dipping into tap water
   - Dip in stain B for 1 minute and wash by dipping into tap water
   - Dip in stain C for 1 minute and wash by dipping into tap water
   - Dry the smear for approx. 12 hours
5. Microscope analysis with oil immersion (1000x, phase contrast)



Sperm cells, stained with Spermac. The acrosome is clearly visible.

Morphological evaluation of at least 100, preferably 200 sperm cells. Morphologically intact and abnormal sperm cells are counted. The type of abnormality is determined, and depending on their morphological deviation the abnormal cells are divided into different groups:

- Acrosome deviations (detached, deformation,. . .)
- Head damages (lance form, round, narrow, pear form)
- Neck damages (breaks, plasma droplets)
- Centerpiece and tail deviations (persisting plasma droplets, rolled up, bent, rudimental)

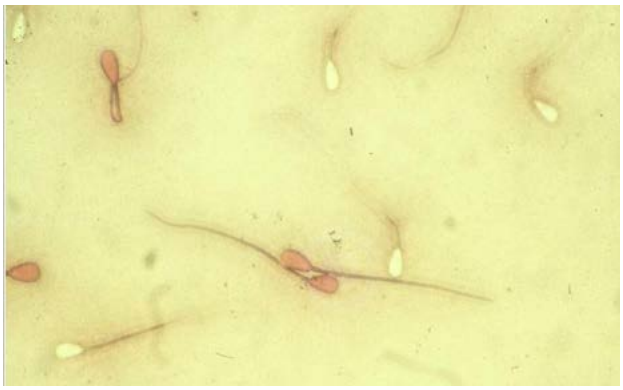
Accessory

Dye-bath „Coplin“	15405/2470

Supravital sperm stain with Eosin

The Eosin stain determines the percentage of living and dead cells in semen samples of all domestic mammals. It is simple, rapid, and effective. Due to the damaged membrane, dead sperm cells absorb the stain, while living cells remain uncolored. The Eosin stain is not suitable for the evaluation of frozen thawed sperm containing glycerol.

Eosin G, 50 ml	15405/0025



Instructions for use

1. Two drops of Eosin are placed on the edge of a clean, preheated slide
2. One drop of semen is placed beside the Eosin on the slide
3. Carefully mix and prepare the smear
4. Dry on warm tray (approx. 20 minutes)
5. Microscope analysis of 200 cells (at 400x magnification) within the next 30 minutes
6. Calculate the percentage of uncolored, living cells

Supravital sperm stain with Eosin-Nigrosin

The combination of Eosin and Nigrosin is used for the supravital stain acc. to Bloom for sperm cells of all domestic mammals.

The staining acc. to Bloom produces a stronger contrast compared to Eosin staining: Dead sperm cells with a damaged plasma membrane are colored by Eosin, while living cells don't absorb the stain. Nigrosin creates a dark background, which simplifies the evaluation. This stain is not suitable for the analysis of frozen thawed sperm containing glycerol.

Eosin G, 50 ml	15405/0025
Nigrosin, 50 ml	15405/0029

Instructions for use

1. One drop of Eosin, two drops of Nigrosin and one drop of semen are placed on the edge of a clean slide
2. Preparation of smear and microscope analysis similar to the Eosin procedure