

VitalScreen™

Staining method for human spermatozoa
For *in vitro* diagnostic use only

Intended Use

Sperm vitality by dye exclusion. The eosin-nigrosin staining technique is based on the principle that dead cells will take up the eosin and as a result stain red. The nigrosin provides a dark background, which makes it easier to assess the slides.

General information

Sperm vitality is reflected in the proportion of spermatozoa that are "alive". Sperm vitality should be determined in semen samples with 50% or more immotile spermatozoa. VitalScreen uses the eosin-nigrosin staining technique to establish the percentage of live spermatozoa.

The technique is based on the principle that dead cells will take up the eosin, and as a result stain red. The nigrosin provides a dark background, which makes it easier to assess the slides.

VitalScreen provides an accuracy check of the motility evaluation since the percentage dead spermatozoa should not exceed the percentage immotile spermatozoa.

Material included in the kit

Stain A - 20ml of 1% Eosin Y in water
Stain B - 30ml of 10% Nigrosin in water

Material not included in the kit

Light microscope (1000x magnification)
Microscope glasses
Cover glasses
Pipettes
Test tubes (sterile)

Method

1. Mix 50 µL of semen with 2 drops of stain A in a sterile test-tube.
2. After 30 seconds, add three drops of stain B and mix thoroughly.
3. Within 30 seconds of adding stain B, place a drop of semen-stain mixture on a microscope slide and make a thin smear using a cover glass.
4. Allow to air-dry and examine under oil immersion (1000x magnification) under bright field microscope.

Interpretation

- * Colorless spermatozoa: live spermatozoa
- * Red stained spermatozoa: dead spermatozoa

Count 100-200 cells and differentiate the living from the dead spermatozoa.

Limitations of the method

Spermatozoa stained with VitalScreen can't be used for any further procedures. To differentiate live spermatozoa from dead spermatozoa for use in ICSI (low viability samples), the HOS (hypo-osmotic swelling) test should be used. Contact Conception Technologies for further information on this test.

Storage

Store reagents between 4°C and 25°C.

Warnings and precautions

VitalScreen contains 0.05% Na-azide

All human, organic material should be considered potentially infectious. Handle all specimens as if capable of transmitting HIV or hepatitis. Always wear protective clothing when handling specimens.

Bibliography

W.H.O. laboratory manual for the examination of human semen and sperm-cervical mucus interaction - 4th Edition. Cambridge University Press, 1999, pp.128.

VitalScreen is manufactured by: FertiPro N.V.

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