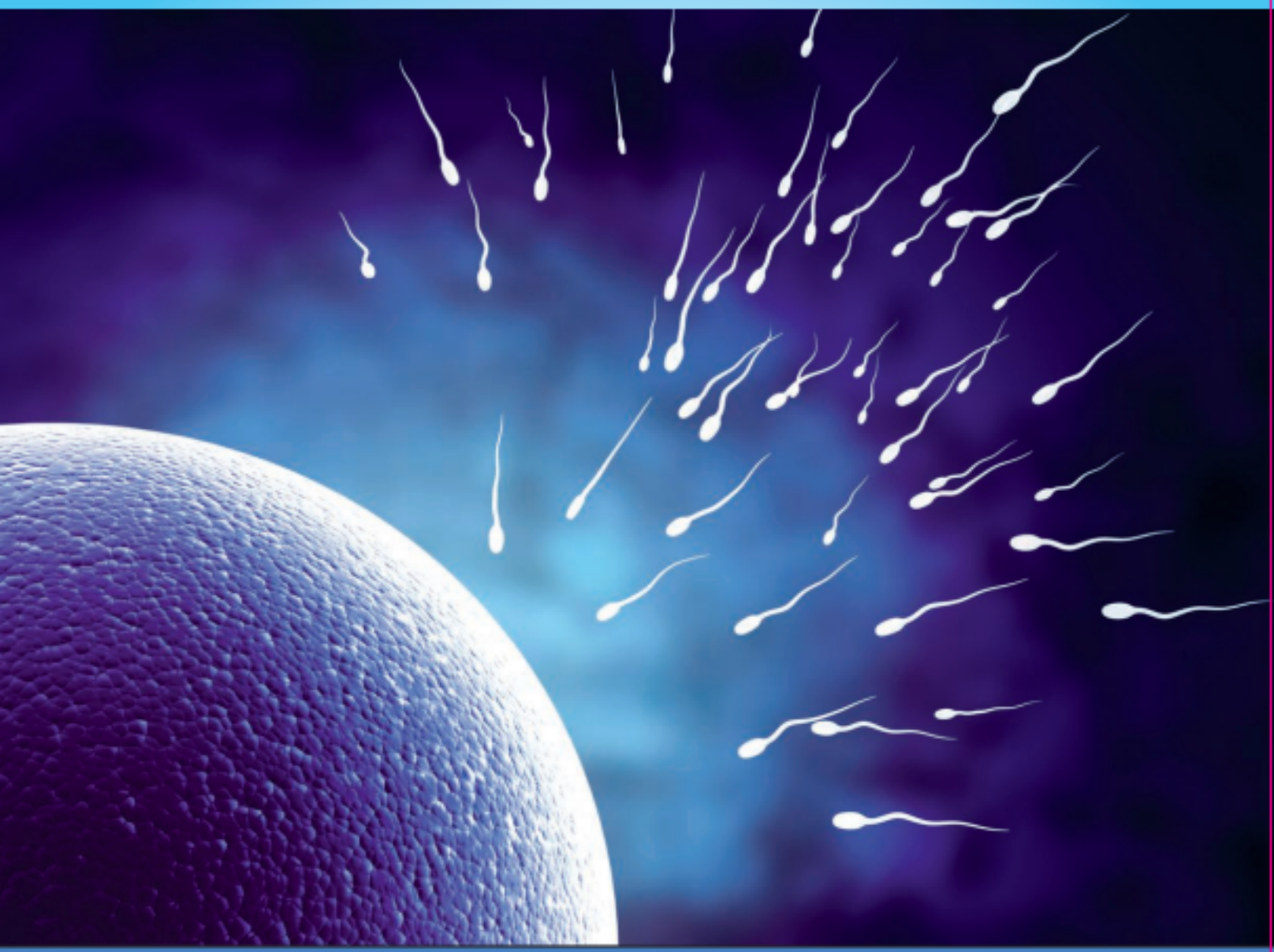
Cry LAB INTERNATIONAL



IMPROVE YOUR IUI SUCCESS RATE

A comprehensive semen analysis is one among the non-invasive first steps that provides essential information on the clinical status of a male. The purpose of male evaluation with respect to semen analysis in infertility treatment is to maximize the sperm quality. Cryo lab International provides wide range of kits to evaluate the Semen quality with much precision and reliability.

1. **Makler and Hawksley counting chambers** are reusable sperm counting chambers and relatively simple to use. The sperm concentration and motility can be assessed directly from the undiluted semen. No additional factors required for calculation. Chambers are only 10 microns deep. The counting grid is 1mm^2 and subdivided into 100 squares of 0.1 x 0.1 mm each.

2. The **improved Neubauer haemocytometer** is 100 microns deep and has the advantage of having two separate counting chambers. With specific dilution factors the counting can be achieved in replicates for accurate determination of sperm concentration.

3. **Semen diluting fluid** is the fixative for diluting semen for assessing sperm concentration using improved Neubauer haemocytometer

4. **Sperm Morphology**

Spermatozoon is an intricate motile cell with a well defined head, neck and tail. The shape of the normal sperm is a reflection of proper spermatogenesis in the testicles. Recent studies have highlighted the importance of sperm morphology assessment. It suggests that there is a definite association between poor sperm morphology and decreased pregnancy rates. Thus Sperm morphology evaluation is considered to be the best predictive factor in natural conception, IUI and an IVF procedure. Sperm morphology assessment by simple and inexpensive techniques can provide essential information similar to that obtained from some of the more complicated sperm function tests.

Diff -Quik staining is a relatively simple and a rapid staining method recommended by World Health organization(2010)

The staining kit consists of three solutions
1. Fixative 1X 50ml
2. Stain-I 1X 50ml
3. Stain-II 1X 50ml

Easy Morpho Slides (Prestained Slides for Sperm Morphology assessment) is reliable, simple and inexpensive and can provide essential information similar to the results obtained from complicated staining protocols.

The package contains
1. 10 Prestained ready-to-use slides
2. 10 Easy Morpho cover glass

5. **Sperm Vitality**

Sperm vitality, as estimated by assessing the membrane integrity of the cells, may be determined routinely on all samples, but is especially important for samples with less than about 40% progressively motile spermatozoa. This test can provide a check on the motility evaluation, since the percentage of dead cells should not exceed (within sampling error) the percentage of immotile spermatozoa. The percentage of viable cells normally exceeds that of motile cells. The percentage of live spermatozoa is assessed by identifying those with an intact cell membrane, from dye exclusion or by hypotonic swelling. The dye exclusion method is based on the principle that damaged plasma membranes, such as those found in non-vital (dead) cells, allow entry of membrane impermeant stains. The hypo-osmotic swelling test presumes that only cells with intact membranes (live cells) will swell in hypotonic solutions. Examples of each test are described below. Sperm vitality should be assessed as soon as possible after liquefaction of the semen sample, preferably at 30 minutes, but in any case within 1 hour of ejaculation, to prevent observation of deleterious effects of dehydration or of changes in temperature on vitality

Vitality test using Eosin–nigrosin. The staining kit consists of 2X 5 ml stain solutions

Vitality test using Hypo-osmotic swelling test. The kit consists of 1X 50 ml HOS solution

6. **Semen fructose kit** (Qualitative)
Fructose is marker of the secretory activity of the seminal vesicles. Fructose acts as an energy source for sperm metabolism and motility. Absence of fructose may indicate the absence of the vas deferens or seminal vesicles or obstruction of the ejaculatory duct. Qualitative analysis of fructose in semen is a quick and inexpensive way to screen for obstruction or absence of the seminal vesicle.

Kit Contents

1. Semen fructose qualitative test reagent 1X 50ml
2. Fructose standard solution 1X 50ml

7. **Leukocheck**

Elevated concentrations of leukocytes in semen indicates male accessory gland infections and associated with poor semen quality and reduced fertility. Leukocheck kit, CryoLab International is simple, quick and inexpensive for screening of leucocytes. The test identify leukocytes in semen based on the Cyto-chemical stain for peroxidase activity. Cells (Leukocytes) that contain peroxidase activity stain brown and other cells counter stain pink.

Kit contents
Solution A 25 ml
Solution B 2 ml

8. **Sperm Chroma Kit** for assessing human sperm DNA fragmentation. The integrity of sperm DNA is being recognized as an important factor for successful reproductive outcomes. Sperm DNA fragmentation testing has gained importance as it offers a better diagnostic and prognostic potential than routine semen analysis. Several techniques exist to detect sperm DNA fragmenta
tion, but Sperm chromatin dispersion (SCD) test, is a simple, reliable, and reproducible technique. Using SCD test DNA fragmentation can be accurately measured using conventional bright-field microscopy.

Kit contents

1. Pre coated slide 10 Nos
2 .Agarose 10 Nos
3. Solution A
4. Solution B
5. Solution C
6. Solution D

9. **Dehydrants** are sperm chroma kit accessories and contains superior grade solvents for sample dehydration in Sperm DNA fragmentation test.

10. **Sperm Chroma Warmer** is absolutely designed for sperm chroma kit. This brilliantly crafted warmers ensures absolute melting of Agarose and subsequent incubation at 37°C in Sperm DNA fragmentation test procedures.

SPERMWASH KITS

Cryolab International is happy to introduce PURESPERMGRAD and SPERMWASH KIT ready to use, individual Sperm Processing Kit. Cryo Lab offers a range of media and disposables for different Semen Processing Methods. The decision of which method of semen preparation to use should be based on the parent's history, previous semen analysis, and analysis of the current sample. If the quality of the semen is poor and /or includes large numbers of other cells, use of the density-gradient method (PURESPERMGRADE) is preferred. If the count and motility of sperm are adequate the swim-up technique and wash (SPERMWASH) are acceptable.

PURESPERMGRAD (Single Layer Density Gardient)

PURESPERMGRAD-1 : 1.0 ml 80% Density Gradient Solution
PURESPERMGRAD-2 : 4.0 ml Wash Solution

PURESPERMGRADII (Double Layer Density Gardient)

PURESPERMGRAD-A : 1.0 ml 80% Density Gradient Solution
PURESPERMGRAD-B : 1.0 ml 40% Density Gradient Solution
PURESPERMGRAD-C : 4.0 ml Wash Solution

Colloidal Silica-coated silane density gradients, with 80% and 40% ready-to-use gradient solutions with an HTF medium. Contains Taurine and EDTA, beneficial components for sperm quality. Taurine has a role in sperm capacitation and has demonstrated a protective effect against peroxidative damage and reactive oxygen species. EDTA enhances sperm cell motility and chelates toxic devalent cations. Addition of antioxidants significantly decreases the amount of DNA damage. Unique colour code allows easy visualization of two gradient layers, disruption of two layers has been shown to reduce yield.

SPERMWASH (Swim-up Method)

SPERMWASH-1 : 6.0 ml Wash Solution

Sperm Preperation Media based on Hepes-buffered HTF medium with protein. The presence of protein suppliment maintains the stability of sperm cell membranes and also chelates trace amounts of toxic compounds. The semen processed in this medium does not need to be incubated in a carbon dioxide incubator. Furthermore, presence of EDTA, enhances sperm cell motility and chelates toxic devalent cations.

MATERIALS PROVIDED IN PURESPERMGRADE & SPERMWASH KIT BASED ON MTF MEDIUM

- Conical Centrifuge Tube 15ml
- Transfer Pipette 3ml
- Collection Container
- IUI Catheper 11 cms (Straight)
- IUI Catheper 11 cms (Lateral)
- IUI Catheper 17 cms (Lateral)