DDK Italia

IVD dispositivo medico-diagnostico in vitro

CE

Sperm dilution fluid technical information
Technical card code 13-108
Product code 13-108
Pack 6x250 ml or on request
Stability of product properly conserved at 15-25°C 24 months

Made in Italy by
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in case of emergency UE number	☎	112
in case of emergency UK number	☎	999
en cas d'urgence Suisse	☎	145

Principle

The importance of semen analysis as an evaluation tool for male infertility has brought to the forefront the importance of standardization of current analytical procedures. Semen, which is ejaculated during the male sexual act, is composed of the fluid part (seminal plasma) and cellular part (sperms). Seminal plasma produced mainly from the seminal vesicles (about 60 %), and prostate (10-30%) & small amount from the mucous glands, especially the bulbourethral glands. Thus, the bulk of the semen is seminal vesicle fluid, which is the last to be ejaculated and serves to wash the sperm out of the ejaculatory duct and urethra.

The average pH of the combined semen is about 7.5, the alkaline prostatic fluid having neutralized the mild acidity of the other portions of the semen. The prostatic fluid gives the semen a milky appearance, and fluid from the seminal vesicles and the mucous glands gives the semen a mucoid consistency. Also, a clotting enzyme of the prostatic fluid causes the fibrinogen of the seminal fluid to form a weak coagulum that holds the semen in the deeper regions of the vagina where the uterine cervix lies. Since human semen is ejaculated as a viscous, gray-yellow fluid which forms a fairly solid gel-like clot immediately after ejaculation. This clot usually liquefies spontaneously and completely within 5 to 60 minutes either in vitro and somewhat more rapidly in vivo (5 to 10 minutes).

Method

Collection techniques: before collection of a semen, the patient should be given clear instruction for proper specimen collection, which are the followings:
1- A period of sexual abstinence from two to five days is ideal before the collection of semen sample
2- It is best if these samples are produced in a suitably private room at the laboratory. If the specimen is produced outside the lab. The specimen should be protected from temperature extremes and transported to the lab within one hour.

Counting of spermatozoa is made in the same manner as white blood cells count, using pipette except diluting fluid and the expression of result per cubic centimeter instead of Cu-mm.
Materials - Micrpipette.
Haemocytometer chamber with cover glass.

Semen diluting fluid.

1- dilute semen 1:20 (10 µl of semen+190 µl of Sperm dilution fluid)
2- Cover Neubaur with coverslip
3-Take 10 µl of diluted semen with micropipette and touch the edge of coverslip to load the chamber
4- Calculation in the central area of RBCs counting (25 secondary square and each contain 16 tertiary squares) using the following equation:
Total spermatozoa (sperm) Count/Cu. mm =
Numbers of sperm counted X dilution X depth factor / Area counted
= No. of sperm counted X 20 X 10/ 5 (area =5 (5/25)if we calculated 5 secondary squares)
= No. of sperm counted X 1000

Note:

The result must be expressed by the number of spermatozoa per cubic centimeter, so multiply the result by 1000.

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Motility of spermatozoa:

Estimate of the percent of spermatozoa which motile in an ejaculate (motility or percent motility) may be made subjectively by placing a drop of semen on to a pre-warmed (37°C) microscope slide and observing the specimen at 400 X. Using this approach, it is essential to ensure That a sufficient number of microscopic fields are examined to avoid non-representative sampling errors. Additionally, it is equally important to observe sufficient total number spermatozoa, usually a minimum of 200

References

WHO laboratory manual for the examination and processing of human semen, 5th edition, WHO, 2010