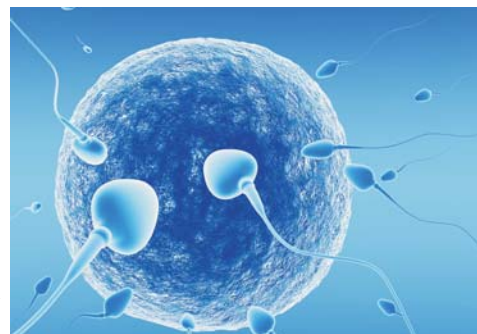




Automated Seminal Fluid Examination

SQA-QWIKCheck GOLD Semen Quality Analyzer

At North Delhi Pathology Clinic, we use SQA-QWIKCheck GOLD, a high performance, state of the art, a menu-driven analytical medical device for assessing Human Seminal Fluid. SQA-QWIKCheck GOLD uses a combination of electro-optics and computer algorithms to generate accurate, precise, objective and reproducible semen analysis results based on the *WHO Laboratory Manual for the Examination and Processing of Human Semen: Fifth edition (2010)*.



About WHO 2010 5th Guidelines & Reference Values After Standardizing Procedures For Assessing Human Semen

Semen analysis is the initial but most crucial laboratory test conducted to evaluate male factors in all infertile couples. However, it is challenging to establish values that express fertility because many factors may affect the test, and finally, fertility depends on both partners. In 2010 World Health Organization (WHO) published its 5th guidelines and reference values after standardizing procedures for assessing human semen. Identification of healthy individuals, i.e., fertile individuals, is now based on the definition of infertility, i.e. Inability to conceive after having 12 months of unprotected intercourse (Time to Progeny-TTP). WHO guidelines 2010 and reference values are based on extensive analysis of a large number of specimens from 8 countries and three continents.

ABOUT VARIOUS SEMINAL FLUID PARAMETERS

Based on WHO Guidelines with Lower Reference Range-LRR in Bracket

SPERM CONCENTRATION (More than 15 mill/mL): Number of spermatozoa per unit volume of Semen.

TOTAL MOTILITY (More than 40%): % of the Sperms that are moving.

PROGRESSIVE MOTILITY (More than 32%): Spermatozoa moving actively, either linearly or in a large circle, regardless of speed.

NON PROGRESSIVE MOTILITY: All other patterns of motility with an absence of progression, e.g. swimming in small circles, the flagellar force hardly displacing the head, or when only a flagellar beat can be observed.

IMMOTILITY: No movement.

MORPHOLOGY (% of Normal Forms- More than 4 %): % of Normal shape/sized sperms in the sample.

MOTILE SPERM CONCENTRATION (More than 6 mill/mL): Total number of motile cells per mL of sample.

PROGRESSIVE MOTILE SPERM CONCENTRATION (More than 5 mill/mL): Total number of progressively moving motile cells per mL of sample.

FUNCTIONAL SPERM CONCENTRATION: Sperms that are progressively motile and have normal morphology.

AVERAGE PATH VELOCITY (More than 5 microns/sec): Time-averaged velocity of a sperm head along its average path. This path is computed by smoothing the curvilinear trajectory according to algorithms in the instrument.

SPERM MOTILITY INDEX (More than 80): A quick reference parameter developed by MES. Anything over 80 equals a good sample.

TOTAL SPERM NUMBER (More than 39 million): Total numbers of spermatozoa in the entire ejaculate.

SEMEN FRUCTOSE LEVEL: Normo-spermic Semen Fructose level 30 minutes after ejaculation is 200-300 mg/dL. Semen Fructose level after about 4 hours of ejaculation is about 100 mg/dL

IMPORTANT:

WHO 2010 5th Guideline uses the term Lower reference limit /range instead of Biological Reference Interval. The new reference values have a clinical impact because they now classify men previously considered infertile as normal. The laboratory report should only be interpreted by a physician who can integrate other test results with the couple's assessment to determine overall status. Self-interpretation and self-medication are strongly discouraged.