SEMEN QUALITY TEST

Colorimetric Method 25 Tests

Resazurin Reduction Test

PRINCIPLE :

The resazurin reduction (RRT) depends on the ability of metabolically active spermatozoa to reduce the resazurin dye (blue) with maximum absorption at 615 nm, to resorufin (pink) with maximum absorption 580 nm. The ratio of the optical densities of reduced to oxidized form (i.e. 580 nm to 615 nm) can be used to evaluate the various grades of semen sample. The highest correlation of RRT ratio was observed with sperm motility, count, morphology and viability. RRT results using spectrophotometric ratio method provide a tool for obtaining a wider range of seminological diagnosis more accurately than the routine semen analysis.

SAMPLE :

Semen analysis is performed after liquefaction.

REAGENTS :

1.	Resazurin Dye	20 mmol / L
2.	Organic Solvent	

STABILITY :

The reagents are stable up to the expiry date specified when stored at +15 to +25 °C

PROCEDURE:

	Sample
Reagent 1	**10 ul**
Semen	**200 ul**
Mix, incubate at 37 °C for one hour then add :	
Reagent 2	**2.0 ml**

Vortex, centrifuge for 10 min. at 3000 r.p.m. the clear colored upper layer of organic solvent is transferred into glass cuvette. Optical densities of the sample is measured at 580 nm and 615 nm against d. water. The color is stable for several days.

CALCULATION :

$$\text{RRT Ratio} = \frac{\text{Absorption at 580 nm}}{\text{Absorption at 615 nm}}$$

QUALITY CONTROL :

For accuracy and reproducibility control:-
Assayed Multi – Sera, Normal and Elevated

REFERENCE VALUE :

$$\text{RRT RATIO: } \frac{A_{580}}{A_{615}}$$

Azoospermic = 0.70 – 1.16
Oligoathenozoospermic = 1.10 – 1.35
Oligospermic = 1.50 – 2.00
Normozoospermic = 2.25 – 6.00

REFERENCE :

Reddy, K.v., Bordekar, A.D., (1999), Indian J. Exp. Biol. 37 (8) : 782 – 786 .

BIODIAGNOSTIC
DIAGNOSTIC AND RESEARCH REAGENTS

SEMEN QUALITY TEST

Colorimetric Method

Resazurin Reduction Test

+15 to +25ºC 25 Tests

In vitro diagnostic use

CAT. NO. SQ 23 11

REAGENTS

R1	Dye	**1 ml**
R2	Organic Solvent	**50 ml**

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