

## SEMEN / SEMINAL STAINS.

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### II- CHEMICAL EXAMINATION:

#### A- SCREENING TESTS:

(i) FLORENCE TEST:

(ii) BARBERIO'S TEST:

(i) FLORENCE TEST :- Bases  $\rightarrow$  choline is detected.

Procedure:- Take a few drops of water seminal stain extract on a slide and add florence reagent (5% iodine + 8% KI + distilled water). Observation:- Dark brown crystals of choline periodide are formed in few minutes. They are needle shaped. Results:- This test is usually false positive and can't specific. Its value lies in its negativity.

(ii) BARBERIO'S TEST :- Bases  $\rightarrow$  Spermin is detected.

Procedure:- Take a few drops of reagent containing saturated picric acid and add it to the spermatic fluid. Observations:- Yellow precipitate i.e. spermin picrate appear as yellow rhombic crystals under light m/s.



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## I- PHYSICAL EXAMINATION:

### (A) NAKED EYE EXAMINATION:

Semen is a human male fluid. It is mucilaginous with a faint yellow color and characteristic odour. It is actually the suspension of spermatozoa in seminal plasma. Its volume is 3ml/ejaculation and number of spermatozoa are 100 million/ml. Stain of semen may be present in (i) clothes (ii) Bedsheets (iii) pillows (2) Body, genitalia, Thigh, prenum, anus. (3) Seence of urine & floor

### (B) EXAMINATION UNDER ULTRAVIOLET LAMP:

Semen gives a fluorescence of a bluish silver colour but is not characteristic. As contain plant juice and vegetables and even detergents give such fluorescence. Seminal stains appears as opaque or translucent patchy under UV lamp. And stain is darken at periphery when dry. Chemical Examination:-

Logistics:- 1- fabrics having seminal stains  
2- Florence and Barberio's reagent 3- Glass slide  
4- Cover slip 5- Vinyoa's Solution (0.6% HCl or acetic acid)

Preparation of Slide:- fabric bearing suspected stain is soaked in Vinyoa's solution. When stain is soften the fabric is drained and apply it to series of slides which are then subjected to histochemical and M/S Examination.

by endonucleases & identified by electrophoresis test.

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## III- MICROSCOPIC EXAMINATION:

(a) Simple Microscopy.

(b) Florescent Microscopy.

(a) Simple Microscopy:- Slide having seminal smear is dried in air without heating. It is fixed in alcohol and stained in hemotoxylin and eosin. Intact spermatozoa with broken heads are seen.

(b) Florescent Microscopy:- Sperms are stained with Quinacrine dye. Y-chromosomes are fluorescent due to Quinacrine.

## IV- SEROLOGICAL EXAMINATION:

- 1) PRECIPITIN TEST.
- 2) GROUPING.
- 3) DNA PROFILING.

1:- Precipitin Test:- Seminal stains react with anti-human seminal sera and precipitates are formed.

2:- Grouping:- Blood group substances are secreted in other body fluids in addition to blood in some individual. These individual are called secretors. Blood group can be determine from seminal stains in such people.

3:- DNA Profiling:- Every person have diff. packing of different pigments which can be separated

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## A- CONFIRMATORY TESTS:

(i) ACID PHOSPHATASE TEST.

(ii) LDH TEST.

i) ACID PHOSPHATASE TEST:- Bases  $\rightarrow$  Acid phosphatase is found in spermatozoa in higher conc. i.e. more than the double amount, it contains than any other body fluid levels i.e. <sup>over</sup> 400 units are diagnostic of seminal stains. Observations:- Concentration of Acid phosphatase more than 300 units is a strong indication and 500 units is definitive indication that solid stain is seminal.

Other Tests:- 1- Creatine Phosphate Test.

2- Semen specific lipoprotein P<sub>30</sub> Test.

3- Ammonia molybdenate Test.

4- ELISA for seminal specific antigen.