

Sperm LEUKO

Kit to assess leukocytes in semen



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A. USAGE:

- To assess peroxidase – positive white blood cells (polymorphonuclear cells) in raw semen using bright field microscopy, other types of white blood cells (lymphocytes and monocytes) cannot be detected.

B. CONTENTS:

1. Reagent (1) – Sperm LEUKO solution.
2. Reagent (2) – Hydrogen peroxide solution.
3. Product insert.

C. PRECAUTIONS:

1. All patient samples should be considered potentially infectious and the user must wear protective gloves, eye protection, face mask and laboratory coats when performing the test and take off contaminated parts immediately.
2. After contact with skin wash immediately with water and soap.
3. The test should be discarded properly after use (**biohazard**).
4. Do not use after expiration date, which appears on the package label.
5. Working solution can be stored up to **24 hours** in the dark at room temperature.

D. WARNINGS:

1. Care should be taken to avoid contact with skin or eyes, and to prevent inhalation or swallowing.
2. Work under air removal environment.
3. Do not release the products used into the environment.
4. Reagent (1) is very poisonous by inhalation, skin contact or swallowing.
5. Reagent (2) is corrosive and causes burns.

E. STORAGE:

1. The kit keeps dry at **2 – 8 °C**.
2. Do not Freeze.

F. PREPARATION WORKING SOLUTION:

1. Add **20 µl** of **Reagent (2)** to **1 ml** of **Reagent (1)** and well mix thoroughly.
2. This work solution remains stable for **1 day**.

G. PROCEDURES:

1. Count the number of round cells whilst determining the sperm concentration during routine semen analysis.
2. Calculate and write down the total concentration of round cells in million/ml, as this can be used for the calculation of the concentration of peroxidase – positive round cells.
3. Mix **5 µl** of semen with **5 µl** of working solution, using the edge of the cover slip.
4. Place the cover slip on top of the mixture, avoid air bubbles.
5. Formation of small air bubbles is normal and due to peroxidase reaction.
6. The higher the concentration of peroxidase positive cells, the more bubbles will form.
7. Read immediately under the microscope with magnification 400 X

H. CALCULATIONS:

1. Calculate the proportion of peroxidase – positive round cells as follows:

Proportion of peroxidase – positive round cells =

$$\text{Number of positive round cells} / (\text{Number of positive round cells} + \text{Number of negative round cells})$$

2. Calculate the concentration of peroxidase – positive round cells in the semen sample as follows:

Concentration of peroxidase – positive round cells (million/ml) =

$$\text{Proportion positive round cells} \times \text{Total concentration of round cells}$$

- **Peroxidase – positive round cells** = Round cells are stained yellow to brown or brown – reddish completely or partially stained, sometimes only visible as brown spots, these are polymorphonuclear white blood cells.
- **Peroxidase – negative round cells** = Round cells are stained pink, these are other round cells (e.g. spermatids, peroxidase – negative white blood cells).

