Phosphotungstic Acid Negative Staining Solution (2%)

Cat #: A-CSH380

Size: 100mL

Storage: Room temperature, avoid light (12 months)

Product Composition

Component	Size	Store at
Phosphotungstic acid negative stain solution (2%)	100ml	10~30°C, and were protected from light

Product Description

Negative staining, also known as indirect staining, is a staining technique discovered by Hall that differs from conventional staining (positive staining). Its principle involves using heavy metal salts to surround samples with low electron density, enhancing the electron density around the sample, creating differences in mass-thickness between fine structures, increasing scattering and absorption contrast, and allowing the sample to appear bright against a dark background. Negative staining solutions include phosphotungstic acid, ammonium molybdate, and Indian ink, with 1-3% phosphotungstic acid being the most commonly used.

A 2% phosphotungstic acid negative staining solution is suitable for displaying large molecules, bacteria, viruses, protozoa, bacteriophages, organelles, nucleic acids, protein crystals, and other macromolecular materials. The stained sample appears as a transparent bright structure against a black background.

Usage

(I) Drop Method

1. Centrifuge the sample at low speed (2000g, 10 min) or use other methods to concentrate the sample, creating a suspension with a certain concentration and purity.

2. Directly drop the sample suspension onto a support film on a grid and let it stand for 3-5 minutes.

3. Use filter paper to absorb excess liquid from the edge of the droplet and let it partially dry.

4. Add the negative staining solution and let it stand for 2-3 minutes.

5. Remove excess staining solution, let it air dry, and observe under a microscope.

(II) Floatation Method

1. Centrifuge the sample at low speed (2000g, 10 min) or use other methods to concentrate the sample, creating a suspension with a certain concentration and purity.

2. Place the grid with a support film on top of the sample droplet to allow the sample to adhere.

3. Float the grid on the negative staining solution for 1-2 minutes.

4. Remove excess staining solution, let it air dry, and observe under a microscope.

Staining Results

sample	Transparent light
background	black

Notes

1. Use fresh samples whenever possible.

2. The sample should be a uniform suspension with appropriate purity and concentration to ensure specific and clear binding reactions with the staining agent.

3. For your safety and health, please wear lab attire and disposable gloves while performing the procedure.

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.