

Scharlach Red S Staining Solution (2%, pH 4.2)

Cat #: A-CSH345

Size: 100mL

Storage: Room temperature, avoid light (6 months)

Product Composition

Component	Size	Store at
Alizarin Red S staining solution (2%, pH4.2)	100ml	10~30°C, and were protected from light

Product Description

Calcium is abundant in the human body and constitutes the skeletal framework that supports the body. It also plays a vital role in secretion, transportation, muscle contraction, and nerve conduction. Calcium exists in two forms in the body: ionized calcium, which circulates in the blood and is known as blood calcium, and bound calcium, which combines with proteins, carbonates, or phosphates and deposits in tissues.

Alizarin Red S is a derivative of anthraquinone and is sodium alizarin sulfonate. It can chelate with calcium salts in calcium carbonate or calcium phosphate to form an orange-red complex. Alizarin Red S often provides more reliable results for staining small deposits. It is commonly used in combination with Solid Green or Mayer's hematoxylin staining solution to form an orange-red precipitate, suitable for staining tissues with small amounts of calcium salts. This reagent is intended for research purposes only and is not for clinical diagnosis or treatment.

Usage

1. Fix the tissue in 10% neutral formalin or ethanol and proceed with routine dehydration and embedding.
2. Cut sections to 95% ethanol.
3. Place the slides upright and allow them to air dry completely.

4. Place the sections in a staining dish containing Alizarin Red S staining solution and immerse for 5-20 minutes (see note 1).
5. Rinse quickly with distilled water.
6. (Optional) Perform a second staining with the counterstain solution. Rinse with distilled water three times.
7. Proceed with routine dehydration, clearing, and mount with neutral mounting medium.

Staining Results

Calcium sediment	orange red
background	Depending on the color of the counterdye solution

Notes

1. The staining time with Alizarin Red S staining solution should be determined based on the calcium salt content. It should be observed under a microscope, and the sections should be removed and rinsed when the calcium salt appears as a darker orange-red color. If the staining time is too long, diffusion may occur. Generally, 1-2 minutes is sufficient.
2. After staining with Alizarin Red S staining solution, calcium deposits exhibit birefringence.
3. When using Solid Green as the counterstain, the background appears green. When using Mayer's hematoxylin, the cell nuclei appear blue.
4. This method is particularly useful for identifying and detecting small amounts of calcium, such as abnormal calcification in the kidneys (excessive urinary calcium).
5. For your safety and health, please wear a lab coat 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.