

## 0.2% Alizarin Red S Staining Solution, pH8.3

### Introduction

Calcium is the most abundant mineral in the human body, and is the main component of bones and teeth. Under normal conditions, calcium should not form calcium salt in other tissues except bones or teeth. However, under pathological conditions, calcium forms carbonate or phosphate and is deposited in tissues.

0.2% Alizarin Red S Staining Solution, pH8.3 is widely used for staining calcium deposits for decades. Alizarin Red S can chelate with calcium salts to form a purple-red or orange-red complex. This solution is alkalic, and is suitable for staining tissue with small amounts of calcium salts. Alizarin red S staining solution is often used in conjunction with hematoxylin or fast green.

### Components and Storage

Components	K1186-100 mL	K1186-500 mL
0.2% Alizarin Red S Staining Solution, pH8.3	100 mL	500 mL

Store the solution at room temperature away from light. Stable for at least 1 year.

### Protocol

#### 1. Sample pretreatment

##### 1) Paraffin section

- ① Soak the sections in the xylene 2 times (5-10 min/per time) to remove the wax
- ② Absolute ethanol treatment for 5 min
- ③ 90% ethanol treatment for 2 min
- ④ 80% ethanol treatment for 2 min
- ⑤ 70% ethanol treatment for 2 min
- ⑥ Rinse with distilled water for 2 min

##### 2) Culture cell

- ① Rinse with PBS 3 times

- ② 95% ethanol fixation for 10 min
- ③ Rinse with PBS 3 times

## 2. Sample Staining

- 1) **Paraffin section:** Alizarin Red S Staining Solution treatment for 5-10 min. Rinse with distilled water and perform dehydration, clearing and sealing as usual. Finally, examine directly under the microscope.

**\*Note:** The time of staining depends on the content of calcium deposits. During the staining, observe the calcium salts under the microscope carefully. When the calcium deposits are orange-red, stop staining immediately.

- 2) **Culture cell:** Alizarin Red S Staining Solution treatment for 30 min in a 37°C drying oven. Rinse with distilled water and examine directly under the microscope

## 3. Staining result

Calcium deposits	Purple-red or orange-red
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### Note

1. Counterstain can choose hematoxylin or fast green. The background is blue if using hematoxylin; and the background is green if using fast green.
2. After Alizarin Red S Staining, the calcium deposits are birefringent.
3. This solution is suitable for staining tissue with small amounts of calcium salts.
4. For your safety and health, please wear lab coats and gloves during the experiment.
5. For research use only. Not to be used in clinical diagnostic or clinical trials.

**APExBIO Technology**

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