



硫酸铁铵染色实验报告

一、实验器材及试剂

1、实验器材

名称	厂家	型号
冰冻切片机	Thermo	CRYOSTAR NX50
切片刀	上海徕卡仪器有限公司	LEICA 819
载玻片	Servicebio	

2、主要实验试剂

试剂名称	厂家	货号
硫酸铁铵	国药集团化学试剂有限公司	10001818
冰醋酸	国药集团化学试剂有限公司	10000218
浓硫酸		

二、试剂配制

1、2.5%的硫酸铁铵：硫酸铁铵 2.5g+蒸馏水 100ml。

2、冰醋酸硫酸混合液：冰醋酸：浓硫酸=1:1 混合。

三、实验步骤

1、硫酸铁铵染色：冰冻切片自然晾干，切片浸入 2.5%的硫酸铁铵液中于 37℃水浴锅中避光处理 3 天，取出切片，蒸馏水洗 3 次。用滤纸吸干组织周边的水分，自然晾干组织，把冰醋酸硫酸混合液滴在组织上，加上盖玻片，擦去多余液体，即可在镜下观察染色程度。

2、显微镜下成像，保存结果并分析。

四、结果判读

1、滴入冰醋酸硫酸混合液后，开始呈现红色或者蓝色是无意的，约 1-5min 后，组织逐渐出现绿色，即表明有胆固醇和胆固醇酯存在，以后颜色逐渐加深，约半小时后，绿色逐渐消退变为污褐色。

五、注意事项

1、冰醋酸硫酸混合液易吸潮，应密封置于冰箱保存。



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Wuhan Servicebio Technology Co., Ltd.

- 2、在操作中不能用手接触切片，因汗液含有胆固醇，可导致阳性反应。
- 3、染色过程中，时刻注意切片上组织颜色的变化，切片不能保存，需要在半小时内拍完照。

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Ammonium Ferric Sulfate Dyeing Experimental Report

1. Experimental equipment and reagents

1.1 Experimental equipment

Name	Manufacturer	Model
Frozen section machine	Thermo	CRYOSTAR NX50
Slicers	Shanghai Leica Instrument Co., Ltd	LEICA 819
Adhesion microscope slide	Servicebio	

2. Main experimental reagents

Reagent name	Manufacturer	Article number
Ammonium ferric sulfate	Sinopharm Group Chemical Reagent Co., Ltd	10001818
Glacial acetic acid	Sinopharm Group Chemical Reagent Co., Ltd	10000218
Concentrated sulfuric acid		

2. Reagent preparation

2.1 0.5% ammonium ferric sulfate: 2.5 g ammonium ferric sulfate dissolved in 100mL distilled water.

2.2 Glacial acetic acid and concentrated sulfuric acid mixture: glacial acetic acid: concentrated sulfuric acid = 1:1 .

3. Experimental steps

3.1 Ammonium ferric sulfate staining: the frozen sections were naturally dried, immersed in 2.5% ammonium ferric sulfate solution, and treated in a 37 °C water bath for 3 days. The slides were taken out and washed with distilled water for 3 times. The water around the tissues was dried with filter paper, and the tissues were naturally dried. The mixture of glacial acetic acid and concentrated sulfuric acid was dropped on the tissues, covered slides , and the excess liquid was wiped off.

3.2 Observed under microscope and took images.

4. The results were as follows



4.1 It is start to appear red or blue after dropping the mixture of glacial acetic acid and sulfuric acid. After about 1-5 minutes, the tissue gradually appears green, which indicates the presence of cholesterol and cholesterol ester. After about half an hour, the green gradually fades to brown.

5. Precautions

5.1 The mixture of acetic acid and sulfuric acid should be stored in refrigerator.

5.2 Do not Touch by hand in dyeing process.

5.3 During the dyeing process, pay attention to the change of tissue color on the slides.