苏丹III染色液

货号： G1510
规格： 100mL
保存： 室温，避光保存，有效期 1 年。

产品介绍：

中性脂肪(Neutral fat)是由三分子脂肪酸和一分子甘油组成的脂类，呈中性。中性脂肪是储存能量的方式之一，在氧化时释放出能量。在正常情况下，除脂肪细胞外，其他细胞在光学显微镜下几乎看不到脂滴，如果细胞质内出现大量脂滴即为脂肪变性，常见于肝细胞、心肌细胞、肾曲管上皮细胞等。中性脂肪染色经常采用苏丹II、苏丹III、苏丹IV、苏丹黑 B、油红 O 法等。苏丹染料脂质染色的机理一般认为纯属物理学的脂溶作用和吸附作用。苏丹类染料由于在脂质中的溶解度大于在有机溶剂的溶解度，所以染色时染料便从染液中转移到被染的脂质中去，使脂质呈现出染液的颜色。

苏丹III染色液主要用于显示组织器官的脂肪变性和类脂质的异常沉着，常发生于肝、肾、心等实质脏器的脂肪变性，细胞内出现多数中性脂肪滴；鉴别和诊断脂肪组织中所发生的肿瘤及其性质。标本不采用含有乙醇的固定液(如需固定可采用 10%中性福尔马林)、也不采用石蜡切片，需用冰冻切片或碳蜡切片。

自备材料：

1. 载玻片、显微镜、蒸馏水、甘油明胶封固液
2. 70%乙醇、分化液、Mayer 苏木素染色液

操作步骤：*(仅供参考)*

1. 新鲜组织低温切片，一般-20℃到-25℃。如样本为脂肪瘤，应调节至-30℃。
2. 冰冻切片 6-15μm(6-8μm 为佳)，贴于载玻片上。蒸馏水稍洗。
3. 入 Mayer 苏木素染色液，复染核 1min。
4. 自来水洗后，苏丹III分化液分化数秒，流水洗至核为蓝色。
5. 蒸馏水冲洗后，70%乙醇稍微浸洗一下。
6. 入苏丹III染色液，浸染 30min。
7. 70%乙醇分化数秒，自来水洗。
8. 用滤纸将切片及周围的水分吸去，让其稍微干燥。
9. 甘油明胶封固。

染色结果：

中性脂肪	橘红色
细胞核	淡蓝色

注意事项：

1. 标本不宜采用含有乙醇的固定液、也不宜用石蜡切片，需用冰冻切片。如需固定应采用 10%中性福尔马林固定液或 10%甲醛-钙液。
2. 本试剂为过饱和溶液，建议临用前过滤使用。
3. 在染色过程中必须防止染料发生沉淀。故切片入染液时应密封，勿与流动空气相接触，避免溶液挥发时发生沉淀。
4. 冰冻切片较易着色，Mayer 苏木素复染时应避免过染。
5. 苏丹染料容易褪色，应密闭保存。
6. 甘油明胶封固的样本，保存时间不长。如需长期保存，可以在盖玻片与载玻片交界的边缘用中性树胶封闭。
7. 为了您的安全和健康，请穿实验服并戴一次性手套操作。

Sudan III Stain Solution

Cat: G1510
Size:100mL
Storage: RT, avoid light, valid for 1year.

Introduction

Neutral fat stains often use Sudan II, Sudan III, Sudan IV, Sudan black B, oil red O and so on. Dyestuff is often used in traditional methods. Recently, azo dye oil red O is more suitable for dyeing fat. Oil red O is a strong lipid solvent and dye. It is easy to bind to triglycerides in droplet shape, but has a slightly poor binding to phospholipids. The dyeing principle is generally regarded as a physical miscibility or adsorption, and the fat is dyed by miscibility. The solubility of dyes in frozen sections is higher than that in the original solvent, so when dyeing, the dyes are transferred from organic solvents to lipids and the fats are dyed.

Sudan III Stain Solution is mainly used to show fatty degeneration of tissues and organs and abnormal lipid-like sedation. It often occurs in fatty degeneration of liver, kidney, heart and other parenchymal organs that most of the neutral fat droplets appear in cells. It can identify and diagnose tumors and their properties in adipose tissue. The sample should not fixed with ethanol (10% formalin if required) or paraffin. Frozen sections or carbon wax sections were needed. The positive staining results of fat were orange to red, but the specific color depended on the concentration of lipid.

Self Provided Materials

1. Slide, Microscope, Distilled Water, Glycerol Gelatin
2. 70% Ethanol, Differentiation Solution, Mayer Hematoxylin Staining Solution

Protocol *(for reference only)*

1. Prepare low-temperature sections of fresh tissue, generally at -20℃ to -25℃. If the sample is lipoma, it should be adjusted to -30 ℃.
2. Slice the frozen section at 6-15 micron (6-8 micron is preferable) and attach to the slide.
3. Wash with distilled water.
4. Re-dyeing with Mayer Hematoxylin Staining Solution for 1 min.
5. After tap water washing, differentiate by acid alcohol for several seconds, and wash with tap water till the nucleus is blue.
6. Rinse with distilled water and soak slightly with 70% ethanol.
7. Stain with Sudan III Solution for 30min.
8. Differentiate with 70% ethanol for several seconds and wash in tap water.
9. Use filter paper to absorb the slices and surrounding water and let them dry slightly.
10. Glycerol gelatin sealing.

Result

Neutral fat	Orange Red
Nucleus	Light Blue

Note

1. Samples should not be fixed with ethanol or embedded with paraffin, and frozen sections should be used. It is recommended to use 10% neutral formalin or 10% formaldehyde-calcium solution to fix.
2. Precipitation of dyes must be prevented during dyeing. Therefore, slices should be covered when they are put into dye solution, so as not to contact with flowing air to avoid precipitation when the solution volatilizes.
3. Frozen sections are easier to be colored, and overdyeing should be avoided when re-dyeing with Mayer hematoxylin.
4. Sudan dyes fade easily and should be kept in airtight condition.
5. Samples sealed with glycerol gelatin did not last long. If long-term preservation is required, the edge of the boundary between the cover slide and the slide can be sealed with neutral gum.
6. For your safety and health, please wear lab clothes and disposable gloves.