V02

苏丹IV染色试剂盒

货号： G1520
规格： 3×50mL
保存： 室温，避光保存，有效期 1 年。

产品组成：

名称	3×50mL	保存
试剂(A)：苏丹IV染色液	50mL	室温，避光
试剂(B)：苏木素染色液	50mL	室温，避光
试剂(C)：酸性分化液	50mL	室温

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IV染色试剂盒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(如需要固定可采用 10%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：

载玻片、显微镜、70%乙醇、蒸馏水、S2150-甘油明胶封片剂或 S2155-水性封片剂（PVP）

操作步骤：*(仅供参考)*

1. 新鲜组织低温切片。如样本为脂肪瘤，应调节温度，应调节至-30℃。
2. 冰冻切片 6-15μm(6-8μm 为佳)，贴于载玻片上。70%乙醇稍微浸洗一下。
3. 苏丹IV染色液浸染 10min。70%乙醇洗去多余染液。蒸馏水浸洗 1min。
4. 滴加苏木素染色液，淡染细胞核 1-2min。
5. （*可选*）镜下观察如染色过深，可用酸性分化液分化数秒。自来水洗 5-10min 返蓝。
6. 用滤纸将切片及周围的水分吸去，让其稍微干燥。
7. 甘油明胶或 S2155-水性封片剂（PVP）封固。

染色结果：

中性脂肪	橘红色至红色
细胞核	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。
2. 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。苏丹染料容易褪色，应密闭保存。
3. 冰冻切片较易着色，Mayer 苏木素复染时应避免过染。
4. 甘油明胶封固的保存时间不长。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。
5. 为了您的安全和健康，请穿实验服并戴一次性手套操作。

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Sudan IV Stain Kit

Cat: G1520
Size: 3×50mL
Storage: RT, avoid light, valid for 1 year.

Kit Components

Reagent	3×50mL	Storage
Reagent(A): Sudan IV Solution	50mL	RT, avoid light
Reagent(B): Hematoxylin Stain Solution	50mL	RT, avoid light
Reagent(C): Acid Differentiation	50mL	RT

Introduction

Neutral fat is a lipid composed of three molecules of fatty acids and one molecule of glycerol, which is neutral. Neutral fats are one of the ways to store energy, releasing energy during oxidation. Under normal circumstances, except for adipocytes, other cells can hardly see lipid droplets under an optical microscope. If a large number of lipid droplets appear in the cytoplasm, it is considered steatosis, commonly seen in liver cells, myocardial cells, renal tubular epithelial cells, etc. Neutral fat staining often uses methods such as Sudan II, Sudan III, Sudan IV, Sudan Black B, and Oil Red O. The mechanism of Sudan dye lipid staining is generally believed to be purely physical, involving lipid solubility and adsorption. Sudan dyes, due to their higher solubility in lipids than in organic solvents, transfer the dye from the dye solution to the dyed lipids during dyeing, resulting in the lipids presenting the color of the dye solution.

Sudan IV Stain Kit 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.

Self Provided Materials

Slide,Microscope,70% alcohol, Distilled Water, S2150-Glycerol Gelatin or S2155-Aqueous Mounting Medium(PVP)

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 6-15um (6-8 um is preferable) and attach to the slide.Wash with 70% alcohol.
3. Soak the section in Sudan IV Solution for 10min. Wash with 70% alcohol to remove excess solution.Wash with distilled water for 1 min.
4. Re-dyeing slightly with Hematoxylin Stain Solution for 1-2min.
5. (*optional*)Under the view of microscope, if the staining is too deep, can differentiate by Acid Differentiation for several seconds.Rinse with tap water for 5-10 min to bluing.
6. Use filter paper to absorb the slices and surrounding water and let them dry slightly.
7. Glycerol gelatin or S2155-Aqueous Mounting Medium(PVP) sealing.

Result

Neutral fat	Orange Red to Red
Nucleus	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 over dyeing should be avoided when re-dyeing with Mayer hematoxylin.
4. 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.
5. For your safety and health, please wear lab clothes and disposable gloves.