

苏木素伊红(HE)染色液(醇溶)

产品简介:

苏木素(Hematoxylin)和伊红(Eosin)联合染色简称 HE 染色, 是病理学常规制片中最基本的染色方法, 应用极其广泛, 苏木精是从原产于中南美州的洋苏木中提取出来的浅黄褐色的结晶, 是一种碱性染色剂, 它在被氧化后生成苏木素, 同媒染剂(常用的是三价的铝或盐铁)一起使用, 能够使细胞核染色。在病理诊断、教学和科研工作中, 常用 HE 染色对正常组织和病变组织进行形态结构观察, 可确定或鉴别病变组织、细胞中出现的某些异常物质与特殊成分, 而需要采用的特殊染色方法、酶组织化学方法、免疫组织化学方法等也均是在观察 HE 染色组织切片的基础上进行的, 在 HE 染色的组织切片中细胞核呈蓝色, 细胞浆呈红色, 二者形成鲜明的对比, 易于观察分析。

苏木素伊红染色液中苏木素染色液采用 Leagene 自主研发的配方, 由进口的高纯度苏木精、氧化剂等组成, 不含氧化汞、甲醇等有害物质, 对细胞核染色效果好, 其特点是不易产生沉淀和金属膜; 应用范围广, 可以用于人、动物、畜牧、水产等领域, 可以用于组织石蜡切片、冰冻切片和组织细胞的染色等, 苏木素染色液和伊红染色液均可重复使用。

染色原理:

- 1、细胞核染色原理:** 苏木素为碱性天然染料, 可使细胞核着色, 细胞核内染色质的成分主要是 DNA, 在 DNA 双螺旋结构中两条核苷酸链上的磷酸基向外, 使 DNA 双螺旋的外侧带负电荷, 呈酸性, 很容易与带正电荷的苏木素碱性染料以离子键或氢键结合而被染色。苏木素在碱性溶液中呈蓝色, 所以细胞核被染成蓝色。
- 2、细胞浆染色原理:** 伊红是一种化学合成的酸性染料, 在一定条件下可使细胞浆着色, 细胞浆的主要成分是蛋白质, 为两性化合物, 细胞浆的染色与染液的 pH 值密切相关, 当染色液 pH 值在胞浆蛋白质等电点(4.7 ~ 5.0)以下时, 胞浆蛋白质以碱式电离, 则细胞浆带正电荷, 就可被带负电荷的酸性染料染色。伊红在水中离解成带负电荷的阴离子, 与胞浆蛋白质带正电荷的阳离子结合, 使细胞浆着色, 呈现红色。
- 3、分化作用:** 染色后, 用某些特定的溶液将组织过多结合的染色剂脱去, 这个过程称为分化作用, 所用的溶液称为分化液。在 HE 染色中常用 0.5—1%盐酸乙醇作为分化液, 因酸能破坏苏木素的醌型结构, 使组织与色素分离而退色。大多数组织经苏木素染色后, 必须用盐酸乙醇分化, 使细胞核过多结合的苏木素染料和细胞浆吸附的苏木素染料脱去, 再进行伊红染色, 才能保证细胞核与细胞浆染色的分明。
- 4、返蓝作用:** 分化之后, 苏木素在酸性条件下处于红色离子状态, 呈红色; 在碱性条件下处于蓝色离子状态, 呈蓝色。组织切片经酸性乙醇分化后呈红色或粉红色, 立即用水除去组织切片上的酸而中止分化, 再用弱碱性水使苏木素染上的细胞核呈现蓝色, 这个过程称为返蓝作用或蓝化作用, 另外用自来水(尤其是温水)浸洗也可使细胞核返蓝, 但所需时间较长。

产品组成:

名称 \ 编号	DH0006 2×100ml	DH0006 2×500ml	Storage
试剂(A): Leagene 苏木素染色液	100ml	500ml	RT
试剂(B): 伊红染色液(醇溶)	100ml	500ml	RT
使用说明书	1 份		

自备材料:

- 1、自来水或蒸馏水、二甲苯或浸蜡脱蜡透明液、盐酸乙醇分化液、系列乙醇、中性树胶
- 2、蓝化液（稀氨水、碳酸锂溶液等）、乙醚-乙醇混合固定液、4%多聚甲醛

操作步骤(仅供参考):

(一)石蜡切片染色

1、切片脱蜡至水

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|------------------------------|--------------|
| ①二甲苯或浸蜡脱蜡透明液(Leagene DZ2011) | 5~10min (2次) |
| ②无水乙醇 | 3~5min (2次) |
| ③95%乙醇 | 1~2min |
| ④90%乙醇 | 1min |
| ⑤80%乙醇 | 1min |
| ⑥自来水或蒸馏水(亦可用 30~40℃温水)冲洗 | 1min |

2、染色

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|-------------------|---------|
| ①Leagene 苏木素染色液染色 | 3~8min |
| ②自来水或蒸馏水冲洗 | 5~10s |
| ③盐酸乙醇分化 | 2~5s |
| ④自来水冲洗 | 20~30s |
| ⑤蓝化液或温水返蓝 | 20~40s |
| ⑥80%乙醇脱水 | 30~60s |
| ⑦伊红染色液(醇溶)染色 | 20~120s |

3、脱水、透明、封固

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|------------------------------|-------------|
| ①95%乙醇 | 5~10s |
| ②无水乙醇 | 1~2min (2次) |
| ③二甲苯或浸蜡脱蜡透明液(Leagene DZ2011) | 2~3min (3次) |
| ④中性树胶或环保封片胶封片。 | |

(二)冰冻切片染色

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|--------------------------------|------------------|
| 1、乙醚-95%乙醇混合固定液(1:1) | 5~10s |
| 2、自来水冲洗 | 2~5s |
| 3、Leagene 苏木素染色液滴染 | 1~2min(可加热至 50℃) |
| 4、自来水冲洗 | 2~5s |
| 5、盐酸乙醇分化 | 2~5s |
| 6、自来水冲洗 | 2~5s |
| 7、蓝化液或温水返蓝 | 2~5s |
| 8、80%乙醇脱水 | 5~10s |
| 9、伊红染色液(醇溶)染色 | 2~5s |
| 10、95%乙醇 | 1~2s |
| 11、无水乙醇 | 2~5s (2次) |
| 12、苯酚二甲苯(1:3) | 2~5s |
| 13、二甲苯或浸蜡脱蜡透明液(Leagene DZ2011) | 5~10s (3次) |
| 15、中性树胶或环保封片胶封片。 | |

(三)细胞染色

- 1、4%多聚甲醛固定 10~20min。
- 2、自来水冲洗 2 次，每次 2min。
- 3、蒸馏水冲洗 2 次，每次 2min。
- 4、染色、脱蜡、透明、封固步骤同石蜡切片的染色步骤，作用时间应相应缩短。

染色结果：

细胞核呈蓝色；
细胞质、肌纤维、胶原纤维、甲状腺胶质等呈深浅不一的红色；
角蛋白、红细胞等呈明亮的橙红色。

注意事项：

- 1、切片脱蜡应尽量干净；温度低时，可在恒温箱 60~70℃处理。
- 2、系列乙醇应经常更换新液。
- 3、盐酸乙醇分化时间应根据切片厚薄、组织类别以及新旧而定，另外分化后自来水冲洗时间应该足够，以便彻底清洗酸。
- 4、冷冻切片染色时间尽量要短。
- 5、蓝化液常使用 0.2~1%氨水或 Scott 促蓝液或 0.1~1%碳酸锂溶液。
- 6、为了您的安全和健康，请穿实验服并戴一次性手套操作。

有效期：12 个月有效。常温运输和保存。

相关产品：

产品编号	产品名称
DA1203	精子核蛋白染色液(伊红-苯胺蓝法)
DB0082	改良番红 O-固绿软骨染色液
DC0032	Masson 三色染色液
DC0041	天狼星红染色液
DD0002	EDTA 脱钙液(10%)
DD0210	快速脱钙液(组织病理专用)
DF0135	组织细胞固定液(4% PFA)
DF0220	眼球固定液
DG0005	糖原 PAS 染色液
DG0041	阿利新蓝染色液(pH2.5)
DK0009	Luxol Fast Blue 髓鞘染色液
DL0011	改良油红 O 染色液
DM0016	增强革兰氏染色液
DS0001	钙盐染色液(茜素红 S 法)
DZ2000	OCT 冰冻切片包埋剂
DZ2013	环保脱蜡液
DZ2024	油镜油/浸镜油
IH0270	甘油明胶封固液

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