

## 髓鞘 LFB 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
脱水机	DIAPATH	Donatello
包埋机	武汉俊杰电子有限公司	JB-P5
病理切片机	上海徠卡仪器有限公司	RM2016
冻台	武汉俊杰电子有限公司	JB-L5
组织摊片机	浙江省金华市科迪仪器设备有限公司	KD-P
烤箱	天津市莱玻璃仪器设备有限公司	GFL-230
载玻片	Wanwu	
正置光学显微镜	日本尼康	NIKON ECLIPSE E100
成像系统	日本尼康	NIKON DS-U3

#### 2、 主要实验试剂

试剂名称	厂家	货号
无水乙醇	国药集团化学试剂有限公司	100092683
二甲苯	国药集团化学试剂有限公司	10023418
髓鞘染液套装	Wanwu	G1030
伊红染液	Wanwu	G1002
中性树脂	国药集团化学试剂有限公司	10004160

### 二、实验步骤

**1、石蜡切片脱蜡至水：**依次将切片放入二甲苯I 20min-二甲苯II 20min-无水乙醇I 5min-无水乙醇II 5min-75%酒精 5min，自来水洗。

**2、髓鞘染色：**髓鞘染液 A 置于 60°C 烤箱预热 30min，切片入髓鞘染液 A 加膜加盖浸染 1h，取出切片快速自来水洗。

**3、背景分化：**切片浸入髓鞘染液 B 中稍分化 2s（趁热），直接浸入髓鞘染液 C 分化 15s，水洗终止分化，镜检，反复分化水洗和镜检，至髓鞘呈蓝色背景近无色即可；

4、**复染伊红**：切片入 65 度烤箱烤干（约 30min 至玻片干燥）拿出，冷却后进入 95%乙醇后复染伊红。

5、**脱水封片**：切片依次放入无水乙醇I 5min -无水乙醇II 5min-无水乙醇III5min -二甲苯I 5min -二甲苯II 5min透明，中性树胶封片。

6、显微镜镜检，图像采集分析。

### 三、结果判读：

神经髓鞘呈蓝色，其他成分呈近乎无色。

### 四、注意事项：

- 1、将切片染完后，不能长时间放在水中清洗，颜色会褪掉。
- 2、注意交替分化时程度的把握，分过过度，髓鞘的颜色会褪掉，分化不足，则界限不清楚；
- 3、若分化过度，可以将切片至于染液中重染。

## Luxol Fast Blue(LFB) staining experimental report

### 1. Lab equipment and reagents

#### A. Lab equipment

Items	Manufacturer	Model
Dehydrator	DIAPATH	Donatello
embedding machine	Wuhan Junjie Electronics Co., Ltd.	JB-P5
Pathology microtome	Shanghai Leica Instruments Co., Ltd.	RM2016
Frozen platform	Wuhan Junjie Electronics Co., Ltd.	JB-L5
Water Bath-Slide Drier	Zhejiang Jinhua Kedi Instrumental Equipment CO.,LTD	KD-P
Laboratory oven	Tianjin Labotery Instrument Equipment Co., Ltd.	GFL-230
Microscope slide	Wanwu	
Upright optical microscope	Nikon Japan	Nikon Eclipse E100
Imaging system	Nikon Japan	NIKON DS-U3

#### B. Chemical Reagents

Items	Manufacturer	Model
Absolute alcohol	Sinopharm Chemical Reagent Co., Ltd.	100092683
Xylene	Sinopharm Chemical Reagent Co., Ltd.	10023418
Luxol fast blue staining kit	Wanwu	G1030
Hematoxylin-Eosin solution	Wanwu	G1002
Neutral balsam	Sinopharm Chemical Reagent Co., Ltd.	10004160

### 2. Experimental steps

(1) Paraffin section deparaffinization and rehydration: put the slides into xylene I 20 minutes-xylene II 20 minutes-absolute ethanol I 5 min-absolute ethanol II 5 min-75% alcohol for 5 min, tap water washing.

(2) Luxol fast bluestaining: placed luxol fast blue staining A is in a 60°C oven and preheated for 30 minutes. Put he slides intoluxol fast blue staining A and cover with membrane for 1 hour, then take out the slides quickly wash with tap water.

(3) Background differentiation: put the slides into luxol fast blue staining B for 2s and directly immerse in luxol fast blue staining C for differentiation 15s, washing to terminate differentiation, microscope examination, repeated differentiation, washing and microscopic examination, until the myelin sheath is blue, the background is almost colorless;

(4) Eosin counterstaining: put the slides in the oven at 65 degrees to dry it (about 30mins until the slides are dry) and take out and cool it, put into 95% ethanol and Eosin counterstaining.

(5) Dehydration and sealing: put the slides into absolute ethanol I 5min-anhydrous ethanol II 5min-anhydrous ethanol III 5min-xylene I 5min-xylene II 5min -transparent, neutral balsam sealing.

(6) Microscope examination, images collection and analysis.

### 3. Results

Nerve myelin sheath is blue, and other components are almost colorless.

### 4. Note

1. After stained, do not wash them in water for a long time due to the color will be fade.
2. Pay attention to the degree of alternating differentiation, if over-differentiation, the color of the myelin sheath will be fade, insufficient differentiation, the boundaries are unclear.
3. If over-differentiation, you can re-stain the slides in the staining solution.