刚果红染色实验报告

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	上海徕卡仪器有限公司	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	天津市莱玻瑞仪器设备有限公司	GFL-230
载玻片	Servicebio	G6004
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
刚果红染液套装	Servicebio	G1056
分化液	servicebio	G1005-3
返蓝液	servicebio	G1005-4
中性树胶	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I20min-二甲苯II20min-无水乙醇I5min-无水乙醇II5min-75%酒精 5min，自来水洗。

2、刚果红染色：切片入刚果红 A 液浸染一夜，自来水洗 2min。

3、**背景分化：**刚果红 B 液分化 1s，至阳性斑块明显，背景基本无色，自来水洗。

4、**染核：**切片入刚果红C液染1min，自来水洗，分化液分化，自来水洗，返蓝液返蓝，流水冲洗。

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I5min -二甲苯II5min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：

白光下淀粉样蛋白呈红色，细胞核呈浅蓝色

四、注意事项：

1、区分甲状腺胶质、弹力纤维和胶原纤维，可能都会染成红色；

2、分化时要掌握恰当，分化不足，胶原纤维也呈红色，分化过度，淀粉样变蛋白也可脱色。

3、若白光下未见阳性或者阳性很弱，则可在荧光下观察红光，

Congo Red Staining Report

1. Apparatus and Reagents

1.1 Major apparatus

Name	Producer	Model
Dehydrator	DIAPATH	Donatello
Embedding machine	Wuhan Junjie Electronics Co., Ltd	JB-P5
Pathology slicer	Leica	RM2016
Frozen platform	Wuhan Junjie Electronics Co., Ltd	JB-L5
Organizer	KEDEE	KD-P
oven	Labotery	GFL-230
Glass slide	Servicebio	G6004
Upright optical microscope	Nikon	NIKON ECLIPSE E100
Imaging system	Nikon	NIKON DS-U3

1.2 Major reagents

Name	Producer	Code
Ethanol	SCRC	100092683
Xylene	SCRC	10023418
Congo Red dye solution set	Servicebio	G1003
Differentiation solution	servicebio	G1005-3
Scott Tap Bluing	servicebio	G1005-4
Neutral gum	SCRC	10004160

2. Procedure

2.1 Dewaxing as followed:

Xylene I for 20 min;
Xylene II for 20 min;
100% ethanol I for 5 min;
100% ethanol II for 5 min;
75% ethanol for 5 min;
Rinsing with tap water ;

2.2 Soak the slices in Congo Red A overnight, rinse with tap water for 2 min.

2.3 Treat the section with Congo Red B for 1s until the positive plaques were obvious, and the background was basically colorless, then rinse with tap water.

2.4 Stain sections with Congo Red C for 1 min, rinse with tap water.Then treat it with Differentiation solution and Scott Tap Bluing, each step required washing with water.

2.5 Dehydrate as followed:

100% ethanol I for 5 min;

100% ethanol II for 5 min;

100% ethanol III for 5 min;

Xylene I for 5 min;

Xylene II for 5 min;

Finally seal with neutral gum.

2.6 Observe with microscope inspection, image acquisition and analysis.

3. Results

Color	Result
Blue	Nucleus
Red (under white light)	Amyloid

4. Precautions

4.1 Please pay attention to distinguishing thyroid glial, elastic fiber and collagen fiber, which may be dyed red together;

4.2 It is necessary to master proper differentiation, insufficient differentiation, collagen fibers will also become red, over-differentiated, amyloid protein will also be decolorized.

4.3 If there is no positive or positive weakly under the white light, you can observe the red light under fluorescence.