甲苯胺蓝染色实验报告

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	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
二甲苯	国药集团化学试剂有限公司	10023418
甲苯胺蓝染液	Wanwu	G1032
冰醋酸	Wanwu	G10000218
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、甲苯胺蓝染色：

①植物组织切片入染液约 2-5min 后水洗，镜检，根据组织着色深浅进行适当的分化或者不分化，自来水洗后，将切片置于烤箱内烤干。

②动物组织切片入染液 2-5min，水洗，0.1%的冰醋酸稍分化，自来水洗终止反应，显微镜下控制分化程度，自来水洗后，将切片置于烤箱烤干。

3、透明封片：切片入干净的二甲苯透明10min，中性树胶封片。

4、显微镜镜检，图像采集分析。

三、结果判读：

①植物组织：木质化细胞壁呈蓝绿色，纤维素细胞壁呈紫蓝色；

②动物组织：脑组织尼氏体呈深蓝色，背景淡蓝色；骨组织软骨呈紫蓝色，背景浅蓝色；肠组织肥大细胞呈紫红色，细胞核呈浅蓝色，背景浅蓝色。

四、注意事项：

1、染完后的切片不能长时间放在水里，会褪色。

2、组织一定要完全烤干后再封片，避免组织残留小水珠。

Toluidine Blue 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	Wanwu	
Upright optical microscope	Nikon	NIKON ECLIPSE E100
Imaging system	Nikon	NIKON DS-U3

1.2 Major reagents

Name	Producer	Code
Xylene	SCRC	10023418
Toluidine Blue	Wanwu	G1032
Glacial acetic acid	Wanwu	G10000218
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 About plant: Treat the plant tissue slices with Toluidine Blue for 2-5 minutes,rinse with tap water.Then microscopically inspected it ,and according to the color of the tissues, whether they are needed differentiation. Wash it with tap water, then dry it in the oven.

2.3 About animal:Treat the animal tissue slices with Toluidine Blue for 2-5 minutes, rinse with tap water. Treat it with 1% Glacial acetic acid. And you can use tap water to stop the

differentiation. Control the degree of differentiation under a microscope. Wash it with tap water, then dry it in the oven.

2.4 Xylene for 10 min, and seal with neutral gum. Please do not use xylene used in other experiments.

2.5 Observe with microscope inspection, image acquisition and analysis.

3 Results

Project		Color	Result
Plant		Blue-green	Lignified cell wall
		Purple-blue	Cellulose cell wall
Animal	Brain	Navy blue	Nissl
		Light blue	Background
	Bone	Purple blue	Cartilage
		Light blue	Background
	Intestinal	Fuchsia	Mast cells
		Light blue	Nucleus
		Light blue	Background

4 Precautions

4.1 After dyeing, the slices cannot be left in water for a long time, otherwise they will fade.

4.2 The tissue must be completely dried before sealing, to avoid produces water vapor.