

Materials List for:

Extraction of Ramie Fiber in Alkali Hydrogen Peroxide System Supported by Controlled-release Alkali Source

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Materials

Name	Company	Catalog Number	Comments
Hydrogen peroxide, 30%	Fisher Scientific	H325-100	Chemical for degumming
Magnesium hydroxide, 99%	Fisher Scientific	AA1236722	Chemical for degumming
Sodium hydroxide	Fisher Scientific	S318-1	Chemical for degumming
Sodium bisulfite	Fisher Scientific	S654-500	Chemical for degumming
Sodium tripolyphosphate	Fisher Scientific	AC218675000	Chemical for degumming
Anthraquinone, >98%	Fisher Scientific	AC104930500	Chemical for degumming
1-Hydroxy Ethylidene-1,1-Diphosphonic Acid	Fisher Scientific	50-901-10243	Chemical for degumming
Degumming oil	Minglong auxiliaries limited liability company, Yiyang, Hunan, China	—	Chemical for degumming
Ethyl alcohol	Fisher Scientific	A962-4	Chemical for testing
Benzene	Fisher Scientific	AA43817AE	Chemical for testing
Copper wire, 0.5mm (0.02in) dia	Fisher Scientific	AA10783H4	Chemical for testing
Cupriethylenediamine solution 1mol/L	Fisher Scientific	24991	Chemical for testing, caution toxic
Nitric acid (65% ~68%)	Fisher Scientific	A200-612GAL	Chemical for testing, caution
Ethylenediamine	Fisher Scientific	AC118420100	Chemical for testing
Potassium permanganate	Fisher Scientific	P279-500	Chemical for testing
Sulphuric acid	Fisher Scientific	A300C-212	Chemical for testing
Silver sulfate	Fisher Scientific	S190-25	Chemical for testing
Raw ramie	Guangyuan limited liability company, Changde, Hunan, China	—	Raw materials
Electric-heated thermostatic water bath	Senxin Experiment equipment limited liability company, Shanghai, China	DK-S28	Equipments for degumming
High temperature laboratory dyeing machine	Shanghai Longda chemicals Crop.	RY-1261	Equipments for degumming
Thermometer	Sichuan Shubo (group)Co.,Ltd	100 °C	Equipments for degumming
Vacuum suction machine	Yukang KNET, Shanghai, China	SHB-IIIA	Equipments for testing Mg(OH) ₂ solubility
Suction flask	Sichuan Shubo (group)Co.,Ltd	1000mL	Equipments for testing Mg(OH) ₂ solubility
Sand-core funnels	Sichuan Shubo (group)Co.,Ltd	35mL	Equipments for testing Mg(OH) ₂ solubility
Oxidation reduction potential meter	Dapu instrument, Shanghai, China	MODEL 421	Equipments for testing ORP value
pH meter	Hanna instruments, Beijing, China	HI 98129	Equipments for testing pH value

Acid burette	Sichuan Shubo (group)Co.,Ltd	50mL	Equipments for testing H ₂ O ₂ content
Flask	Sichuan Shubo (group)Co.,Ltd	250 mL/500 mL	Equipments for testing H ₂ O ₂ content; residual gums content
Electric furnace	Jiangyi Experiment instruments limited liability company,Shanghai,China	800-2000W	Equipments for testing residual gums content
Reflux condensing tube	Sichuan Shubo (group)Co.,Ltd	250mL	Equipments for testing residual gums content; COD value
Fiber cutter (40mm)	Changzhou No.2 Textile Machine Co.,Ltd	Y171A	Equipments for testing fiber density
Ostwald viscometer	Taizhou, jiaojiang, glass instruments company	0.6mm	Equipments for testing fiber PD value
Spherical fat extractor	Sichuan Shubo (group)Co.,Ltd	250mL	Equipments for testing fiber PD value
Soxhlet extractor	Sichuan Shubo (group)Co.,Ltd	250mL	Equipments for testing fiber PD value
Torsion balance	Liangping instrucments Co.,Ltd,Shanghai, China	JN-B	Equipments for testing fiber density
Fiber strength instrument	Xinxian instruments, shanghai,China	XQ-2	Equipments for testing fiber tensile property
Tension clamp	Depu textile technology Co.,Ltd, Changzhou, jiangsu, China	0.3cN/dtex	Equipments for testing fiber tensile property
COD thermostatic heater	Qiangdao Xuyu environment protection technology Lit company	DL-801A	Equipments for testing COD value
FTIR	Thermo Fisher, America	Nicolet	FTIR analysis
XRD	Rigaku, Japan	D/max-2550 PC	XRD analysis
Electronic balance	Shanghai jingtian Electronic instrument Co.,Ltd	FA2004A	Generral equipments
Drying oven	Tonglixinda instruments, Tianjin,China	101-2AS	Generral equipments
Weighing bottle	Sichuan Shubo (group)Co.,Ltd	50x30	Generral equipments
Beaker	Sichuan Shubo (group)Co.,Ltd	500mL	Generral equipments
Sample sieve	Xiaojin hardware instruments Co.,Ltd, Shangyu, Zhejiang	120 mesh	Generral equipments
Glass rod	Sichuan Shubo (group)Co.,Ltd	—	Generral equipments
Cylinder	Sichuan Shubo (group)Co.,Ltd	250mL, 50mL	Generral equipments
Pipette	Sichuan Shubo (group)Co.,Ltd	5mL, 10mL	Generral equipments
Rubber suction bulb	Sichuan Shubo (group)Co.,Ltd	—	Generral equipments
Orign	OriginLab	8.0	Software for figure drawing