Dammar resin as an inclusion agent- a simple guide

Dammar resin dissolved in xylene can be filtered hot and diluted reasonably well. Therefore, here is described a simple procedure where a ready-to-use resin solution with the right viscosity can be obtained. For a cellar temperature of 15-17°C, a mixture of 60-65% w/w dammar resin in xylene has proven to be optimal. If you prefer it a little thinner, you can dilute it further with xylene.

Execution:

280 g of dammar resin are dissolved in the hood with 175 g of xylene at 80-90°C for 1-2 hours while stirring. Then stirred at about 120°C for 15-20 minutes to remove traces of water. After cooling down to 80-90°C, filter through a G3 glass frit using vacuum (glassware preheated to 100°C in the oven). When using a water jet pump, an intermediate calcium chloride $CaCl_2$ drying tower is recommended.

The ready-to-use resin obtained in this way can be filled into storage bottles while it is still warm.

Comment: (I've never seen a substance that sticks so tightly on glass surfaces...)

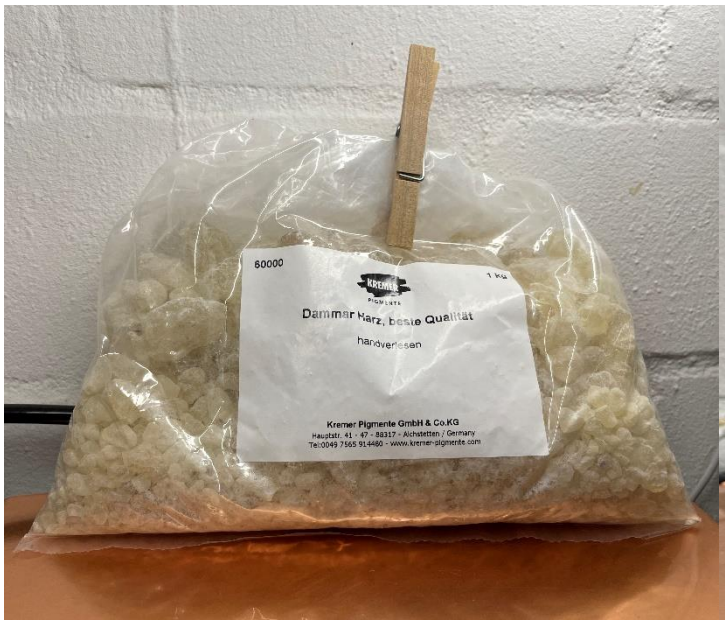
The glass frit can easily be cleaned with potassium permanganate KMnO4 and then with sodium disulfite $Na_2S_2O_5$ to dissolve the manganese dioxide MnO_2 that has formed during the oxidation.

According to Göke[1], dammar resin has a refractive index of 1,533, according to the data sheet at Kremer Pigmente[2] it has an acid number about half that of Euparal: 25-35 mg/g.

Yield: approx. 400 ml ready-to-use yellowish resin.

Literature:

1) Göke, G., Mikrokosmos 89, Natürliche und künstliche Harze als Einschlussmittel für die Mikroskopie, S. 373 ff
2) https://www.kremer-pigmente.com/elements/resources/products/files/60000-60001_Specification.pdf
3) https://mikroskopie-forum.at/forum/index.php?thread/1840-damar-balsam-selbst-herstellen/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1 kg
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Euparal


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