

When the material is ready to imbed, have at hand a bottle of Celloidin 3, a small wide-mouthed bottle of alcohol ether, a specimen jar about 100 mm. high and 75 mm. in diameter one-third full of chloroform, a pipette, and the boxes. Pour enough Celloidin 3 into a box to nearly fill it, dip the flat pointed forceps in alcohol ether, pick a piece of material out of the Celloidin 3, place it in its proper position in the thick celloidin in the box, quickly drop a few drops of chloroform from a pipette on top of the celloidin containing the material, and drop the box into the jar of chloroform. The object of the chloroform is to harden the celloidin, which it does to a very marked degree. Great care should be exercised to see that the material is in its proper position in the box, that is, that it is either truly vertical if cross sections of the material are required, or truly horizontal if longitudinal sections are desired.

The boxes should now be left in the chloroform for 24 hours, then taken out, the tack pulled out and the paper stripped off, the name of the structure and the species written on the block in pencil and the block with the material on placed in a jar of 82% alcohol. The material may be left there until needed. When sections are required, trim away superfluous celloidin from round the material, clamp the block in the microtome, and set the knife so as to make an angle of about 30 degrees with the bed of the microtome, being careful, however, to see that the knife will cut clear across the celloidin matrix. Wet the celloidin block and the knife with 70% alcohol with a camel-hair brush, cut sections as thin as possible without tearing, and transfer them with the brush to a dish of 70% alcohol. The cut surface of the block must be kept constantly flooded with 70% alcohol, as if it becomes dry the material will be ruined, and the knife must also be kept wet with 70% alcohol so that the sections will slide readily up onto it. If the whole block is not cut up, replace it at once in the 82% alcohol.

In cutting material containing spores it will be found that some of the spores will tend to drop out, but this may be prevented entirely by applying a coating of Celloidin 1 with a brush, dropping a drop of chloroform upon this and allowing it to harden for a few moments between the cutting of every two or three sections.

After the sections are cut the procedure depends upon the character of the sections. If they contain no loose parts the celloidin matrix may be dissolved in alcohol-ether, the sections transferred to absolute alcohol, and stained, etc., in the wire-gauze basket as outlined in "The Basket Method."