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Abstract

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Fankhauser, D. B. Grinding of lyophilized mycelial pads.

The grinding with mortar and pestle of lyophilized mycelial pads grown in 125 ml flasks (containing 50 ml of medium) has proven very difficult and time consuming. A much quicker and more effective method is as follows: The lyophilized pad is placed in an 18 x 150 mm test tube and 'chopped' into small pieces with two stainless steel spatulas (8" long with a flat end 2" x 1/4"). With the spatulas still in the tube, and with the top of the tube held firmly, it is placed inside the cup of a Vortex Jr. Mixer and agitated for 15 to 20 seconds, giving a semi-fine to fine powder according to the length of agitation. A tube will occasionally chip at the top, but this can be minimized by checking for cracked tubes beforehand, and by holding the tube at the top. 20 x 150 mm tubes should not be used because they break too easily. The tube should not be pressed down with any more force than is necessary to hold it in the cup because contact with the screw at the cup base will scratch,and eventually break, the bottom of the tube. In three months, we have never had a tube disintegrate.

This method will grind up to 400 mg of powder, yielding as fine a powder as desired. The enzymes, tryptophan synthetase and indole glycerol phosphate synthetase, are extracted as completely from these powders as from those prepared by use of mortar and pestle. - - - Department of Microbiology, University of Cincinnati, College of Medicine, Cincinnati, Ohio.