

Use of spectrophotometry for description of conidia color

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Abstract

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Nagai, S. Use of spectrophotometry for description of conidia color.

Color of conidia is often a useful criterion for the characterization of various strains of *Neurospora*, as well as other molds. The color can be represented either by colored photographs or by spectral absorption curves. The latter are obtained by using spectrophotometry adapted for translucent biological materials, such as cell suspensions and thin, leafy tissues, according to Shibata's opalescent glass technique (Shibata 1959 *Methods of biochemical analysis* 7: 77).

Neurospora crassa or *N. sitophila* is grown on an agar slant, the conidia are washed off with water containing 0.1% Tween 80, mycelial fragments are removed by centrifugation for 2 minutes at less than 1,000 rpm, the conidia remaining in suspension are washed twice in the same Tween-water and are finally suspended at a density of about 10^7 cells/ml. The suspension (about 6 ml in a rectangular cuvette measuring 10 x 25 x 30 mm) is examined in a recording spectrophotometer with an opalescent glass plate inserted between the cuvette and the photomultiplier and a characteristic absorption curve is obtained. The advantage of spectrophotometric color description is that the procedure is simple, easy and reproducible, wherever the facilities are available. Also, the position of the absorption maxima provides a direct indication concerning the nature of the pigments in these conidia. - - - Biological Laboratories, National Women's University, Nara, Japan.