

Quantification of the Particle Method for Chemotactic Bioassay Using Peronosporomycete Zoospores

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We estimated the amount of test solution absorbed by each Chromosorb W AW particle (60–80 mesh) using an isotopic technique to quantitate the particle method. ^{14}C -Labeled standard compounds like carbendazim (MBC), 5-*O*-methylcochliophilin A, sucrose and proline were dissolved in several solvents, and Chromosorb carrier particles were treated with the solution to coat the particle with these test compounds. The ratios of the radioactivity of 5 μl of the test solution to that of 2 mg of carrier particles treated with the solution at some different concentrations were measured. It was found that each carrier particle holds approx. 3.8 nl of the test solution within a range of 2×10^{-3} to 1×10^{-7} M concentrations. Accordingly, it is now possible to widely use the particle method as a quantitative procedure to assay chemotaxis of Peronosporomycete zoospores.

Key words: Peronosporomycete Zoospore, Chemotaxis, Particle Method