**Figure S1.** Schematic diagram of the workflow. Starting at the left upper panel, fungal cultures with mature conidia are required, and are harvested by lifting the cells into 0.05% Tween® 20 solution. For each dilution, absorbance and cell count should be determined and the absorbance plotted against the number of cells per unit. The calibration curves can then be used to determine the cell count of other inocula of the same species by simply measuring the absorbance.

**Figure S2.** Without the effect of multiple scattering, the optical cross section for scattering per cell, σS, is the ratio of absorbance (Abs) and cell count (Spores) as follows: σ\_S=Abs/Spores. To eliminate the effect of multiple scattering and to obtain σS [17], the empirical equation:

Spores/Abs=α+β\*Spores,

with α and β as coefficients for a linear regression, respectively, is extrapolated to zero cells. When Spores tends to zero, we receive the simpler form Abs=Spores/α, and after rewriting σ\_S=1/α . The intercept on the y-axis α gives the value of σS. In our study, all four Trichoderma strains have similar values of σ\_S=6.9\*10^(-8) 〖cm〗^2,6.7\*10^(-8) 〖cm〗^2,6.6\*10^(-8) 〖cm〗^2 "and" 6.9\*10^(-8) 〖cm〗^2 for Tr QM9414, Tr Δxyr1, Tr Δpks4 and Ta P1, respectively (ANOVA, p > 0.05). Tr and Ta annotate the species names T. reesei and T. atroviride, respectively.