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Synthesis, antifungal activity and SAR of *N*-substituted and *N*,*N*-disubstituted 2,4-dihydroxythiobenzamides

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Abstract:
N-Substituted and *N*,*N*-disubstituted 2,4-dihydroxythiobenzamides were synthesized and their fungistatic properties were examined. The compounds were prepared by reacting sulfinyl-bis-(2,4-dihydroxythiobenzoyl) with primary or secondary amines. The activities of the derivatives against five phytopathogenic fungi were measured *in vitro*. The growth-inhibitory activity of these compounds depends mainly on their lipophilicity. Parabolic relationships between growth-inhibitory activity and lipophilicity (calculated *n*-octanol-water partition coefficient and log k_w from reversed phase chromatography) were found. The influence of the type of *N*-substitution on the character of the thioamide bond was analyzed based on ^{1}H NMR, MS and IR spectra. © Pesticide Science Society of Japan

Keywords:
2,4-dihydroxythiobenzamides, growth-inhibitory activity, phytopathogenic fungi, lipophilicity, structure-activity

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