

The antibacterial activities of some organotin compounds.

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Abstract:

Nine derivatives of the organotin compound, tribenzyl tin-phenoxy acetate and an antibiotic standard, ampicillin, were tested for antibacterial potency against seven bacterial species, made up of two Gram-negative and five Gram-positive bacteria. At the screening concentration of 20mg/ml, one of the compounds, TBPA4 (Solid) - tribenzyl tin L-bromophenoxy acetate-showed no activity against any of the test organisms, while compound TBPA3-tribenzyl L-chloro phenoxy acetate-showed activity against only three of the organisms.

The minimum inhibitory concentrations of the active compounds were determined and one of them, compound TBPA7-tribenzyl tin 2-nitro phenoxy acetate-showed considerable inhibitory activity against five of the organisms at a low concentration of 1ug/ml. Of the five active compounds that were subsequently used in the rate of killing experiments, TBPA7 again showed the greatest activity and it compared favourably with the antibiotic standard (ampicillin). The possibility of incorporating some of these compounds into drugs and chemotherapeutic agents, pending further tests, is discussed.

Keywords: Antibacterial/ organisms/ ampicillin/ bacteria/ organotin compound/ chemotherapeutic agents

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