

Short Communication

An Antibiotic Agent from
Marasmius graminum

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It has earlier been reported that species of the genus *Marasmius* produce substances inhibiting the growth of *Staphylococcus aureus*¹. A chemical investigation of the culture medium from *Marasmius graminum*, obtained from the Institute of Physiological Botany, University of Uppsala, has shown that this substrate contains at least two different agents active against *Staphylococcus aureus*; one of these is volatile with steam *in vacuo* and has been obtained in a crystalline form. By distilling 8 litres of culture medium *in vacuo*, with a bath temperature of 25° C, a yellow aqueous distillate showing activity was collected in the receiver. The distillation

was continued while maintaining the volume in the distillation flask constant by the addition of water, until the distillate was colourless and did not show any activity. The active principle was then extracted from this distillate with small portions of ether or chloroform; the solvent was dried over anhydrous sodium sulphate and removed under reduced pressure, leaving a red residue of 0.1 g of crude material melting at 70—74° C. This substance, which can be recrystallized from water or ligroin giving red crystals with a sharp melting point of 84.5° C, is sparingly soluble in water yielding a yellow solution, which turns violet if alkali is added. The solution inhibits the growth of *Staphylococcus aureus* and certain other pathogenic bacteria *in vitro*.

A detailed report will appear later.

1. Melin, E., Wikén, T., and Öblom, K. *Nature* 159 (1947) 840.

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