The depilatory fractions of chloroprene polymers open new possibilities in the treatment of fungous infections of the scalp, in studies of hair growth and epidermal carcinogenesis (*8, 9*). The reversible transformation of the thin hairy animal epidermis into the thick hairless epidermis resembling human skin facilitates separation of the epidermis and its use for experimental purposes. Studies along these lines are in progress. Detailed data will be published elsewhere.

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Decomposition of Streptomycin[1]

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Some antibiotics are susceptible to decomposition (*1*). This is particularly the case with penicillin that is inactivated by many microorganisms through the enzyme penicillinase. Streptomycin is very resistant to decomposition, so much so that there is a prevailing opinion that it cannot be decomposed by microorganisms, although it is inactivated by such substances as H_2S, cysteine and certain other sulfhydryl compounds, and hydroxylamine (*2*). Nevertheless, the fact that it is a natural product gives reason to believe that it can be destroyed by microorganisms. The following studies with soils indicate that this is the case.

A method devised whereby streptomycin can be quantitatively determined in soil (*3, 4*) was used to trace the course of disappearance of the antibiotic. Streptomycin added to heat-sterilized soil at the rate of 1,000 μg/g of soil lost no activity in a period of three weeks, which was the extent of the test period. In unsterile soil more than half of the streptomycin activity had disappeared in one week and the loss was complete in two weeks. In soils receiving additions of glucose or glutamic acid, initial attack of the streptomycin was somewhat delayed. A second and third addition of streptomycin disappeared somewhat more rapidly than the first.

Soils that had been treated with streptomycin and also slime from a disposal system where waste from a streptomycin plant was treated, were inoculated into a mineral salts medium containing streptomycin as the only organic constituent. Bacteria developed in the medium and continued to grow in the same medium through serial transfers. Development was enhanced by continuous shaking during the incubation period. The crude cultures were plated on a nutrient agar medium containing 1,000 μg of streptomycin per ml. Various colonies were isolated from the plates and inoculated into the specific streptomycin medium. Several of the cultures grew and inactivated the streptomycin. The fact that the cultures were able to grow in the medium where streptomycin was the only organic constituent indicates that the streptomycin molecule must have been decomposed and that the inactivation was not due to some product of growth such as those mentioned above.

There was little or no loss of streptomycin from the solution medium supporting growth of crude and pure cultures for the first few days. In one week a significant amount of the activity was lost, and after 10–14 days all streptomycin activity had disappeared.

All the active bacterial cultures were alike according to the limited tests that have been made. The bacterium is a motile, nonsporulating, gram-negative rod producing a greenish-yellow pigment on nutrient agar. Litmus milk remained unaltered, and nitrate was not reduced. Gelatin was liquefied, but neither acid nor gas was produced from glucose, sucrose, or lactose. Although incompletely characterized, the bacterium is probably a member of the genus *Pseudomonas.*

It was characteristic of all substrates (soil, various solution media) and all cultures (soil, crude and pure cultures in solution media) that during decomposition of the streptomycin, volatile material having a characteristic pungent odor suggestive of malt and pyridine was liberated.

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