this solution of methosulfate was injected, no reversal of the pressor effect of epinephrine was detected. It can be presumed then that the unpurified dibenzyl-β-chloroethyl methylammonium methosulfate previously reported to be active (*4*) in reality contained an appreciable amount of tertiary amine.

The effect of quaternization on the reactivity of the β-chloroethyl compounds listed in Table 1 was determined by measuring the increase in halide ion when the compounds were dissolved in 70% aqueous alcohol containing sodium bicarbonate. No appreciable increase in halide ion concentration was noted over a 24-hr period, whereas, under the same conditions, the organic chloride of Dibenamine is 50% converted into chloride ion in 40 min. We feel that this difference between the tertiary amines and the quaternary salts adequately explains the inactivity of the latter and provides further support for the theory that the adrenergic blocking action of Dibenamine is dependent upon ethylenimonium ion formation in the body. Additional details of this work will be reported elsewhere.

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Differentiation of Minimus Type *C. diphtheriae* by Slow Fermentation of Dextrose

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A distinguishing character of the *minimus* type of *C. diphtheriae* is failure to ferment dextrose promptly or at all, *when first isolated.* After repeated transfer upon artificial media, *minimus* type organisms will manifest normal fermenting ability and will attack dextrose as readily as other strains.

Several workers to whom we have sent cultures of *minimus* type *C. diphtheriae* report that, in their hands, these organisms fermented dextrose as readily as the *mitis* type. As a result of correspondence regarding technical details, we now believe it worth while to give explicit information regarding the method requisite to demonstrate this difference.

The medium used is Difco heart-infusion broth with a pH of 7.8 after autoclaving. Brom-cresol-purple is used as indicator. To each 3.0 ml of this medium, in "Wassermann tubes," is added, aseptically, 0.3 ml of a 10% sterile aqueous solution of chemically pure dextrose. This may be sterilized either by filtration or by autoclaving at 10 lb for 10 min.

[1] From Laboratory Services, Chamblee, Ga.

The organisms to be tested are grown in the same heart-infusion broth as above, without the dextrose or indicator, for 48–72 hr. The dextrose medium is inoculated with one or two drops of this culture, using a capillary pipette or a wire loop. No serum is used in any of the media. Incubation is at 37° C. A *mitis* strain will ferment the dextrose in 24–48 hr, whereas a true *minimus* strain, upon primary isolation, will not ferment before 8–10 days, if at all.

The Histochemical Demonstration of Succinic Dehydrogenase[1, 2, 3]

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Succinic dehydrogenase plays a vital role in respiratory processes of most living cells and forms a link in the chain of reactions concerned with the oxidation of lipids, carbohydrates, and proteins (*1*). In view of the relative importance of this enzyme in physiological processes, it was considered worth while to develop a method for the histochemical demonstration of succinic dehydrogenase in tissue sections.

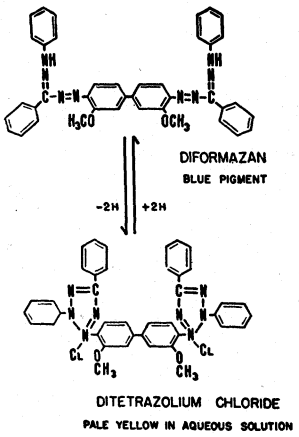

FIG. 1.

The preparation and use of a ditetrazolium chloride[5] (BT, Fig. 1) in the demonstration of specific dehydrogenase activity in extracts of tissue homogenates have been described previously (*2*). In the presence of

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[3] Photomicrographs by Leo Goodman.

[4] Research fellow in surgery.

[5] The reagents for this method may be obtained from Dajac Laboratories, Monomer-Polymer, Inc., 3430 W. Henderson St., Chicago 18, Ill.