Comparative Studies of Histochemical Usefulness of Tetranitro-BT (TNBT) and nitro-BT (NBT)

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In 1962 Tsou et al reported the usefulness of a new tetrazolium salt, Tetra-nitro-BT (2,2',5,5'-tetra-p-nitrophenyl-3,3'-(3,3'-dimethoxy-4,4'-biphenylene)-ditetrazolium chlovide) as a good reagent for histochemistry of oxidative enzymes.

The authors have demonstrated succinic dehydrogenase system and DPNH diaphorase activity in kidney, cerebellum and Hela cells using TNBT and NBT.

As a result, TNBT was better than NBT in following two items.

- (1) Size of formazan granules of TNBT was more homogeneous and finer than those of NBT.
- (2) Solubility of formazan of TNBT was lower than that of NBT.

Studies of New Buffer Solution in Histochemistry

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In experiments of enzyme reactions, buffer solutions are usually added to the test solution for keeping the hydrogen ion concentration in a certain range. Each constituent of various buffers has its own properties as a chemical

Table 1.

Ac. : 1/10-N Acetic Acid

NTA. : 2Na. 1/10-Mol. Nitrilotriacetic Acid Disodium Salt.

Ac : NTA. 2Na	pH
7 : 3	3.5
6 : 4	3.6
5 : 5	3.7
4 : 6	3.8
3 : 7	3.9
2 : 8	4.0
1 : 9	4.3
0 : 10	7.8