

on the stripe (X) was measured.

The correlation coefficient between Y (T_3 -uptake rate of PVF) and X was -0.78 and there held the regression equation

$$Y = -0.42X + 37.5$$

The relation of T_3 -uptake rate of PVF sponge with other thyroid function test were as follows:

PBI	+ 0.674	(n = 82)
BMR	+ 0.58	(n = 40)
TUR	+ 0.69	(n = 31)
Triosorb RSU	+ 0.899	(n = 25)

3. Properties of PVF related to T_3^x -uptake test.

The adsorption of various labelled iodine compounds to this sponge proved peculiarity that some organic compounds such as T_3^x and T_3^x were for strongly adsorbed to the sponge than inorganic ones or simpler organic ones such as DIT.

The acetalized sites of PVF might be suitable electronacceptor to the electrondonor in thyronine or thyroxine.

Generally, however, in the T_3^x -test there mu be a concurrence in taking up T_3^x be-

tween sites of PVF on the other hand.

In order to elucidate the adsorption mechanism the author used certain characteristic chemicals such as urotropine which covers the OH-site of PVF and salicylate, guanidine, urea etc. which could degenerate serum protein and inhibit T_3^x or T_4^x in corporation into TBG.

Cold T_3 or T_4 naturally enhance the adsorption rate of T_3^x to PVF, while salicylate, guanidine, T KI and NaCl increase the T_3^x -uptake rate of UVF in higher concentration.

The characteristic property of PVF to differentiate some organic iodine compounds from inorganic ones could be availed for the purpose to follow the organization mechanism of iodine compounds in animals.

P.S. (1) T_3^x is more strongly incorporated in TBG than T_3 and in higher concentration in hypothyroid or pregnant serum than in hyperthyroid one.

(2) Sharp blackened are appeared in the autoradiogram of immunoelectrophoresis corresponds to the localization just upon lipo α_2 (and also α_1).

Formalized Polyvinyl Alcohol (PVA) Sponge as an Adsorber of T-3 Test

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A new method of the T_3 test which uses a piece of formalized polyvinyl alcohol resin sponge as an adsorber of T_3 was developed. The T_3 uptake by RBC was measured with one half of 10 ml whole blood specimen by the Hamolsky's original method, and the T_3 uptake by PVA sponge was measured with another half of the same specimen by the new PVA method. The T_3 uptake by PVA is proportional to the T_3 uptake by RBC. The average ratio of the both methods observed with 56 whole blood specimens was 2.82 (PVA vs REC).

The procedure of new method is as follows: 1.0 ml of serum or plasma is diluted

with 1.0 ml of saline. One drop of T_3 solution is added to the diluted specimen and mixed thoroughly. The mixed solution is transferred to 3 glass tubes, 0.5 ml each. A piece of PVA sponge (2 cm length, 1 cm diameter) is put into each tube to absorb the 0.5 ml solution. The tubes are incubated for 30 minutes at 37°C . The radioactivity of each tube is counted for one minute by a well type scintillation counter (0.1 microcuries, 10^5 cpm). Each sponge piece is washed 5 times with saline. The radioactivity of each tube is counted again for one minute. The uptake ratio is calculated by the formula, *cpm after washing/cpm original*.