

each other to derive the error of fluctuation of the former.

In a separate procedure, each of the known values was corrected by the indicated value and the standard serum value; and the correlation between this corrected value and the TBI was obtained.

Result:

The standard deviation of variability of the Triosorb value and the TBI value were  $\pm 0.35$  and  $\pm 0.03$  alike, our experiment demonstrated.

Also, the purity of the Triosorb solution per se proved to remain unchanged even at the end of the 3rd week of assay.

The variation in the indicated value of the sponge-uptake is so remarkable as to give a standard deviation of  $\pm 2.48$ , according to our sponge uptake correction method.

The coefficient of correlation of the TBI value and the Triosorb value, according to the standard serum correction method, was  $-0.8$ .  
Summary:

In our experiment, it is demonstrated that the purity of the Triosorb kit and the variability of the kits per se offer no essential problem except that a considerable degree of variability is seen in the sponge-uptake value indicated.

Accordingly, different correction procedures are nowadays employed in major clinical laboratories of hospitals or biochemical institutes.

It is desirable, therefore, that the producer of these kits should place emphasis on eliminating the variability of the Triosorb kits.

### **Comparative Study between TBI Method (Mallinckrort Company) and T<sub>3</sub> Method (Triosorb Test) in the Field of Obstetrics and Gynecology**

K. YOSHIMURA, S. ISHIHARA and T. ANDO

*Department of Radiology*

Y. TSUMUJI

*Department of Obstetrics and Gynecology Kanto-Teishin Hospital*

1. Clinical Application of <sup>131</sup>I-Triiodothyronine Resin Sponge Uptake Test (Triosorb test) in the field of Obstetrics Gynecology was already reported by us 1966 (*Acta Radiologica Japonica* 25, 5, 346-358). In this Literature, the mean value of T<sub>3</sub> test of the serum with the 94 normal pregnant women shows

significantly low.

2. Comparative Study between TBI method and F3 method was performed with the same serum of the 89 pregnant women. The value of TBI method are not only stable but significantly no difference to the serum of normal non-pregnant women.

### **Studies on the Methods of Separation of Protein-Bound ACTH and Free ACTH in Radioimmunoassay**

T. KONDO, T. KONO and M. FUKASE

*Second Division, Internal Medicine, Kyoto University, Kyoto*

Mathematical analysis of the dynamic equilibrium between a hormone and its binding protein suggests that the standard curve

of radioimmunoassay of the hormone is a hyperbola. From this point of view, only hydrodynamic paper electrophoresis (PEP)