RADIOIMMUNOASSAY OF β-FETOPROTEIN — STUDY ON SPAC-α-FETO KIT —. M.Usami. Nuclear Medicine Clinical Laboratory, Faculty of Radiology, Okayama Saiseikai General Hospital.

We conducted a series of tests on the SPAC-α-Feto Kit whose results were highly satisfactory — Reproducibility of standard curve; C.V.=2.4-8.3%, Inter-assay precision; C.V.=1.4-5.9%. Intra-assay precision; C.V.=2.5-4.8%. The measured value of diluted sera with buffer solution (1/2-1/1,000) well accorded with the theoretical value at any dilution. The recovery rate was 94.6-115.7%. A wide range of incubation temperatures and times were applicable: no problems appeared at temperatures in the 15-30ºC range with a time of 2-10 hrs for the 1st incubation and 16-72 hrs for the 2nd incubation. A highly positive correlation (r=0.95 or above) was found between SPAC-α-Feto Kit and both α-Feto Kit "Dalichi" and other companies' kits. The normal fasting value was 4.52±2.29ng/ml and the values for various liver diseases showed little deviation from other reported values. The kit requires no centrifugation due to solid phase antibody coated tube and is significantly easy to handle and use. From the above, it can be concluded that the SPAC-α-Feto Kit has been more desirably improved for ordinary clinical examination.


Generally considered, deep freezing serum contain dose not change in one to two months, but we were observed remarkably changed AFP values during storage at RIA method. These results has been presented in the 19th annual meeting JNM 1978.

Since, we have been checked AFP value changes to the serum storage periods. These test data as follow:

<table>
<thead>
<tr>
<th>period</th>
<th>total</th>
<th>decreased ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976-1978</td>
<td>118</td>
<td>56</td>
</tr>
<tr>
<td>1979-1981</td>
<td>155</td>
<td>129</td>
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</tbody>
</table>

The AFP values remarkably changed in 1976 to 1978 period but no changed at 1979 to 1981 period. This difference results are unknown origin, our technical accuracy are no problem. Our AFP values of the control serum are the average and standard deviation as follows: 1976-1978 n=83 X=94.3 ±7.2ng/ml c.v.7.6% NMS2a 1979-1981 n=143 X=102.8 ±5.6ng/ml c.v.5.6% QC-RIAS We can not show the details of this unknown origin, however, the modification of AFP RIA kits (DAINABOT alfa RIAT) quality can not be disregarded.

IMMUNOLOGICAL STUDY OF CEA BY THE AUTO-ANTIBODY TO CEA. M. Hamazu, Y. Ochi, S. Hosoda and T. Miyazaki. Shiga Univ. of Medical Science, Otsu, Kyoto prefecural Univ. of Medicine.

Previously we reported that CEA has immunological cross-reactivity with α-acid glycoprotein (AG), and that CEA has AG immune determinant. In this study the immunological characterization of CEA by the auto-antibody to CEA in cancer patients was examined. When 125I-CEA was further purified by affinity chromatography using anti-AG bound to Sepharose, the unbound fraction did not react with both the auto-antibody to CEA and the monoclonal antibody to CEA, but almost all radioactivities of the bound fraction (>90%) reacted with both antibodies.

The specific binding of 125I-CEA with anti-AG was inhibited dose-dependently by the simultaneous incubation with the IgG fraction of the auto-antibody to CEA.

CEA-RIA was performed by the reaction of the auto-antibody to CEA and 125I-CEA purified by anti-AG chromatography. The estimated CEA level in non-cancerous organs (thyroid, lung, heart, liver, spleen, adrenal and kidney) and in feces (or meconium) was lower (about 1/3) than the value estimated by Roche's method. The experimental result means that CEA contains immune determinants in common with AG.