enough to exclude the hemolysate contained free Na $_2$   $^{51}\mathrm{CrO_4}.$ 

- 4) The final labelled packed red cells were brought to the original volume with normal saline. The radioactivity of 0.3 ml of the labelled blood was measured by Well-type scintillation counter.
- 5) 0.3 ml of this blood was injected into the tail vein of mouse respectively.
- 6)  $25 \mu l$  of the blood was taken from retroorbital venous plexus into the heparinized microhematocrit tube at 5, 20, 40, and 60 minutes after injection. Each blood was

measured its radioactivity with Well-type scintillation counter. The cpm was plotted on semilogrithmic paper, and  $t\frac{1}{2}$  (clearance) was calculated from  $^{51}\text{Cr}$ -labelled blood disappearance curve.

7) The mice were sacrificed at 120 minutes after labelled blood injection. The organ uptake rate was calculated by dividing each organ cpm with initial cpm of 0.3 ml blood. Finally, the unit organ uptake rate was obtained by dividing each organ uptake rate with each organ wet weight.

## Use of 198Au colloid for Spleen Scanning

## H. SAITO

Radioisotope Laboratory, Nagoya University School of Medicine, Nagoya

The probability of visualization of the spleen with <sup>198</sup>Au colloid is believed to be very low so far. However the visualization of spleen with <sup>198</sup>Au colloid was successful in diseases with splenomegaly, especially when the spleen was scanned in prone position even in thick patient.

In chronic hepatitis, liver cirrhosis, Banti's syndrome, polycythemia vera, hemolytic anemia, chronic leukemia, cysts, and myelo-

fibrosis, 100% visualization was possible.

<sup>198</sup>Au colloid is easy to use, since it does not require any preparation, it has stronger energy and cheaper than Hg-203 MHP, Cr-51, Tc-99m and etc. In addition, <sup>198</sup>Au colloid visualizes the liver in the same time. Therefore, the use of <sup>198</sup>Au colloid is recommended in connection with the scanning of spleen in prone position.

## In Vivo Measurement of Splenic Blood Flow and Its Content Using <sup>133</sup>Xe, <sup>51</sup>Cr Red Cells and <sup>131</sup>I H S A

Y. TAKAHASHI, K. AKASAKA and T. MIYAKE

Hematology Division, Internal Medicine, Tenri Hospital, Tenri

M. TAKAHASHI, Y. KURODA and T. TANAKA

Department of Radiology, Tenri Hospital, Tenri

C. UYAMA, K. SOHMA and F. KONDOH

Faculty of Engineering, Kyoto University, Kyoto

Plasma and red cell circulation and their content in the spleen were measured with in vivo counting technique under coeliac catheterization.

Following successive injection of <sup>133</sup>Xe saline solution, <sup>51</sup>Cr erythrocytes and <sup>131</sup>I