tivity is assumed negligible. Program run-time for each mark is 50 msec including data collection time.

The program is entered through a user-written function consistent with the Nuclear Data language NUTRAN. Entry to the acquire-mark loop ("Mark") and exit from the program to NUTRAN text ("End Mark") are by two remote hardware interrupt lines that are standard to the Nuclear Data Dual Isotope Interface. Details of the program will be sent on request to any reader.

J. MASON
The Royal Infirmary
Bradford BD9 6RJ, England

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DESIGN OF A NEW LIQUID SCINTILLATION VIAL

In the charcoal separation method for radioimmunoassay, transfer of the last drop from the radioimmunoassay (RIA) tube to the scintillation vial (using the principle of superficial tension) is not simple. Transfer is variable, incomplete, and error can be considerable. I propose a new design for liquid scintillation vials (Fig. 1) intended to avoid this problem.

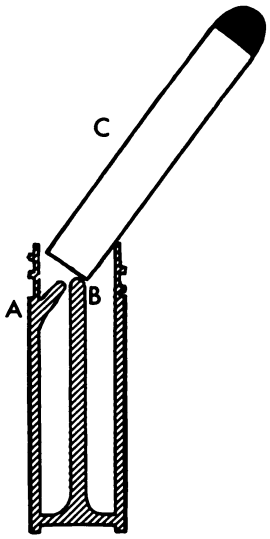

FIG. 1. Cross section of liquid scintillation vial with (A) lateral protuberance, (B) central stem, and (C) RIA tube.

Figure 1 illustrates a solution to the problem in either of two ways: a stem can be provided in the middle of the vial (of suitable material) or a protuberance from the border of the vial can be built. With either method, the last drop of supernatant in the RIA tube can be easily and totally transferred to the vial by touching the prolongation. Use of scintillation vials with such a modification should improve the accuracy of measurements.

Using common scintillation vials with plastic or wooden sticks attached, I have demonstrated the feasibility of this design in pilot studies. The modified vials are easy to use and appear to facilitate quantitative transfer.

J. A. FERNANDEZ-POL
Veterans Administration Hospital
Buffalo, New York

"POLYPHOSPHATE BONE SCANS, ^{32}PHOSPHORUS, AND ADENOCARCINOMA OF THE THYROID"

The article by Klinger (*1*) on the role of bone scans and ^{32}P therapy in adenocarcinoma of the thyroid contains several statements that make interesting reading. However, one loose phrase, to wit, ". . . the drop in RBC with radioactive iodine . . ." should not go unchallenged since it produces an inference that may be quoted subsequently, yet is probably incorrect. The authors presented no evidence to support a relationship between the decrease in hematocrit and the radioiodine therapy except a temporal relationship between the two events. Even this temporal relationship seems contrary to the inference since the decrease in hematocrit appeared to be prompt, whereas if ^{131}I-induced, one would expect it to have been delayed several weeks.

Furthermore, the amounts of radioiodine administered appear particularly inadequate to depress the bone marrow in view of the lack of selective localization of ^{131}I in the skeleton of this patient.

Perhaps there was clearly an association between the ^{181}I therapy and the drop in hematocrit but no cause and effect relationship should be inferred until a sound mechanism is available. I hope that the author will explore other explanations for the drop in hematocrit.

GERALD L. DENARDO
School of Medicine
University of California
Davis, California

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