uranium before they received it (personal communication, 1975). On this basis, we suggest that the following nuclear reactions are responsible for the ^{239}Np:

$$^{238}U + {}^{1}n \rightarrow {}^{239}U$$

(thermal-neutron cross section = 2.7 barns)

$$^{239}U \rightarrow {}^{239}Np + \beta$$

($T_{1/2}$ = 23 min).

Molybdenum-98 has a thermal-neutron cross section of 0.14 barns. If we ignore the difference between the half-lives of ^{99}Mo (66.6 hr) and ^{239}Np (56.5 hr), we calculate that a contamination level of approximately 40 μCi of ^{239}Np per curie of ^{99}Mo would be expected from the 2 ppm of uranium contamination in the ^{98}Mo. This is about 25 times the maximum amount estimated for the first elution.

CONCLUSIONS

Iodine-131, ruthenium-103, and neptunium-239 were found in the eluates of ^{99}Mo–^{99m}Tc generators loaded with ^{99}Mo manufactured by thermal-neutron irradiation of ^{98}Mo. The level of contamination did not exceed maximum permissible levels (*10*) at any time, although on several occasions the contamination would have approached the maximum permissible levels less than 12 hr after elution.

Unfortunately, ^{131}I and ^{239}Np are not detected with adequate sensitivity in routine ^{99}Mo breakthrough tests. Detecting 6 nCi of ^{131}I per millicurie of ^{99m}Tc is difficult with equipment normally available in a nuclear medicine laboratory, and detecting 10 nCi of ^{239}Np per millicurie of ^{99m}Tc is completely impossible. Therefore, the control of these impurities must rest with the manufacturer. The manufacturer should ensure that the parent ^{99}Mo does not contain enough impurities to yield a product that is unacceptable. On the other hand, "after the fact" testing is possible for any nuclear medicine laboratory and should be carried out as a routine procedure so that the quality of the product is well established on a continuing basis.

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ERRATUM

In the article "Thallium-201 for Myocardial Imaging: Appearance of the Normal Heart" (*J Nucl Med* 17: 583–589, 1976), it was incorrectly stated that Dr. David J. Cook had been supported by a Clinical Research Fellowship from the Post-Graduate Committee in Medicine of the University of Sydney. Actually, it was Dr. Ian Bailey who had received this Fellowship. Also, the unit of measurement (cm) was omitted from Table 2.