

TABLE 1. COMPARISON OF ANALYTICAL METHODS

Product	P10			G25			TLC		
	Chelate	Ionic	Bound to column	Chelate	Ionic	Bound to column	Chelate	Ionic	Hydrolysis reduced Tc
Tc-gluconate	98	0.4	0.6	37.4	2.6	60	98	1.2	0.8
Tc-glucoheptomate	99	0.6	0.4	66	1.3	33	99	0.6	0.3
Tc-pyrophosphate	95	0.6	4.3	22	—	78	97	0.4	2.7
Tc-DTPA	94	1.1	4.8	95	0	5	95	—	5

The above are averages of duplicate preparations.

^{99m}Tc-chelates. The chelates were ^{99m}Tc-gluconate prepared by electrolytic labeling, ^{99m}Tc-glucoheptomate prepared from a commercial freeze-dried kit which used stannous chloride as the reductant, ^{99m}Tc-pyrophosphate prepared by electrolytic labeling, and ^{99m}Tc-DTPA prepared by a modification of the procedure of Hauser, et al (4). The thin-layer chromatography provides a method of quantitating both the free pertechnetate using butyl acetate as the solvent and the "hydrolyzed reduced technetium" using normal saline as the solvent (3). These values may then be compared with those obtained from gel chromatography. The results obtained are shown in Table 1. It is apparent that whereas Bio-Gel retains the hydrolyzed reduced technetium, it does not retain any of the ^{99m}Tc which was originally associated with the radiopharmaceutical even if that radiopharmaceutical is a weak technetium chelate such as technetium gluconate. Thus, it can be seen that Bio-Gel does not exhibit the same artifact as Sephadex with weak technetium chelates.

However, it cannot be overemphasized that it is necessary to know what artifacts may be created by

a given quality-control method in order that the suitability of that method for a particular radiopharmaceutical may be evaluated and misinterpretation of results avoided.

M. W. BILLINGHURST
R. F. PALSER
Health Sciences Centre
Winnipeg, Manitoba, Canada

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"RADIOPHARMACEUTICAL SCIENTIST"

The term "radiopharmaceutical scientist" was prominently used in the recently held International Symposium on Radiopharmaceuticals in Atlanta, February 12-15, 1974. It is an awkward term, not in conformity with ordinary usage. By the word "scientist" is meant an individual learned in science or a scientific investigator; it is usually used when the individual's specialty or particular field of investigation is not specified. When the specialty is known, the individual is called by his specialty suffixed with an "-ist" such as chemist, internist, physicist, radiologist, etc. If the field of specialty does not lend itself to such an appendage, the word "specialist" is added instead, such as nuclear medicine specialist, etc. To

qualify a general term "scientist" with a rather restrictive term "radiopharmaceutical" contradicts the accepted usage, is redundant, and should be avoided. Perhaps, in considering the realm of his function, the term "radiopharmaceuticist" or "radiopharmaceutic specialist" would appear to be more appropriate than "radiopharmaceutical scientist." One may even doubt that the new term is more descriptive and less ambiguous than such recognized terms "radiopharmaceutical chemist" and "radiopharmacist."

C. T. PENG
University of California
San Francisco, California