LETTERS TO THE EDITOR

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The July 1964 number of the Journal carries on p. 570 a letter by Dr. Bergene Kawin proposing an amendment of a formula I had submitted in order to correct an error which occurs in a paper by Dr. Razzak, the same Journal 4:244, 1963. My letter was printed in the April 1964 number, p. 319. I maintain that my formula should be used and suggest that Dr. Kawin's formula is impractical and actually disturbing.

The difference between the formulas is this: Kawin's formula contains the additional term $e^{-\lambda t}$, obtained by correct integration, a result an average college freshman would have reported. Mathematically it is correct. This term has the character of a "transient." It was intentionally ommitted by me, and I am sure by the original author also. Every physicist would automatically do the same because the term in question is negligibly small. Neglect of this term is of the essence of the method in order to save redundant computations which are reintroduced by the Kawin version. This is a numerical example, based on Fig. 1 of Razzak's article. We assume $t = 10$, and $T_{1/2} = 1.5$. Here are the results for the corresponding area, taking N_F for the unit of length.

Kanner's formula:
Area $= t - T_{1/2}/0.69 = 7.83$
Kawin's formula:
Area $= t - (T_{1/2}/0.69)\ (1 - e^{-\lambda t}) = 7.85$

The difference is about 0.25 per cent.

The term missing in my and Razzak's version is $e^{-\lambda t}$. In our example it has the value of about 0.01. Its inclusion complicates the computation, necessitates the use of a table of exponentials, but has no practical effect whatsoever on the result.

Dr. Kawin's proposal not only lacks utility but actually introduces useless computational complications.

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TO THE EDITOR

The article "Channel Ratio in the Determination of Two Gamma-Emitting Radioisotopes" by R. P. Spencer and Burton Seife (Journal of Nuclear Medicine 5:562, 1964) presents a two dimensional count ratio method of solving for two elements in a mixture.

A more complete description of this method of solution appeared last year in your publication. That was my paper "Computers in Activation Analysis" (4:306-311, 1963). This article included a description of a three element solution and actual results for a composite of calcium, manganese, and magnesium.

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