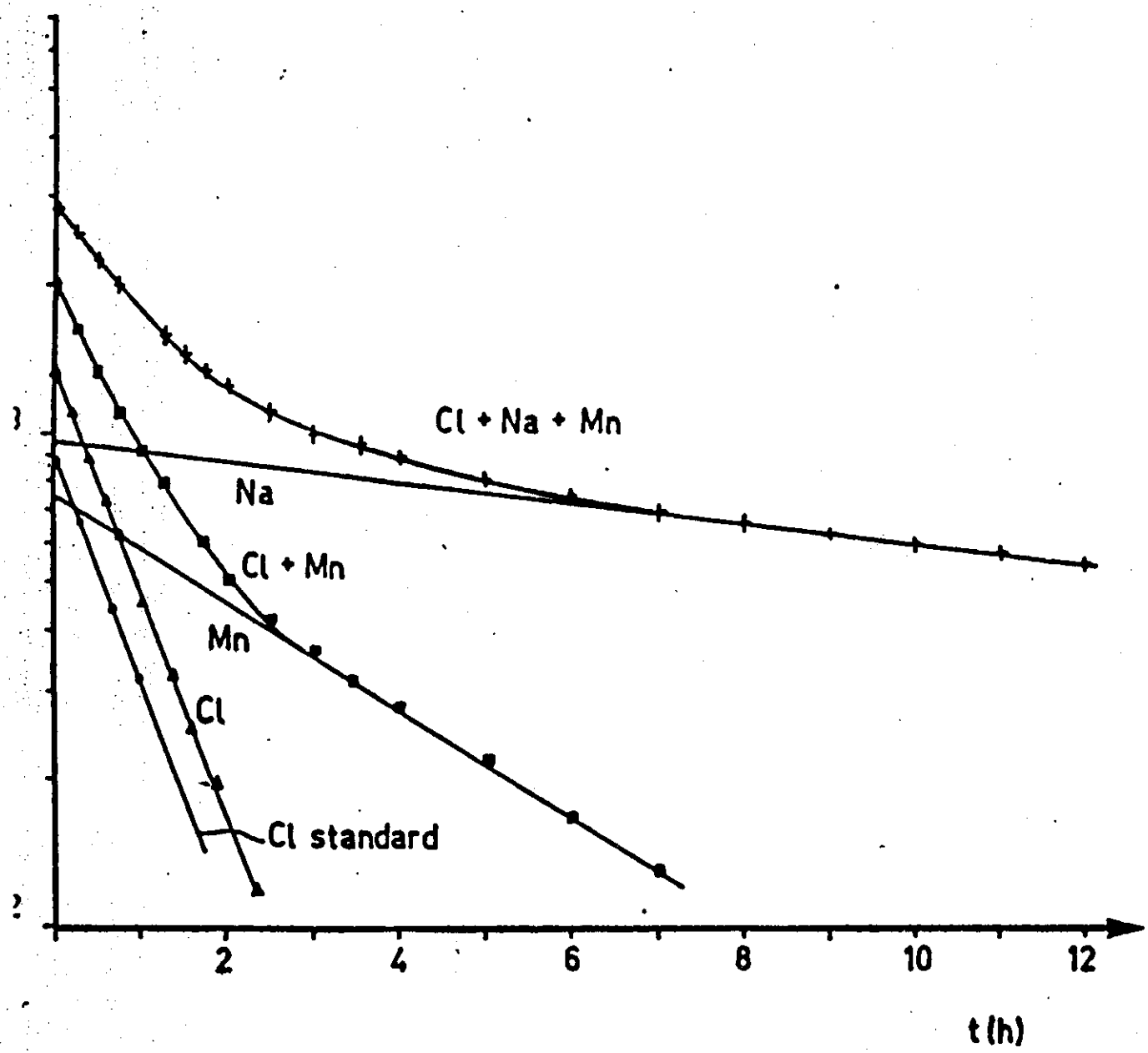

9.1. Decay curve of chlorine in a terphenyl sample containing Na and
).

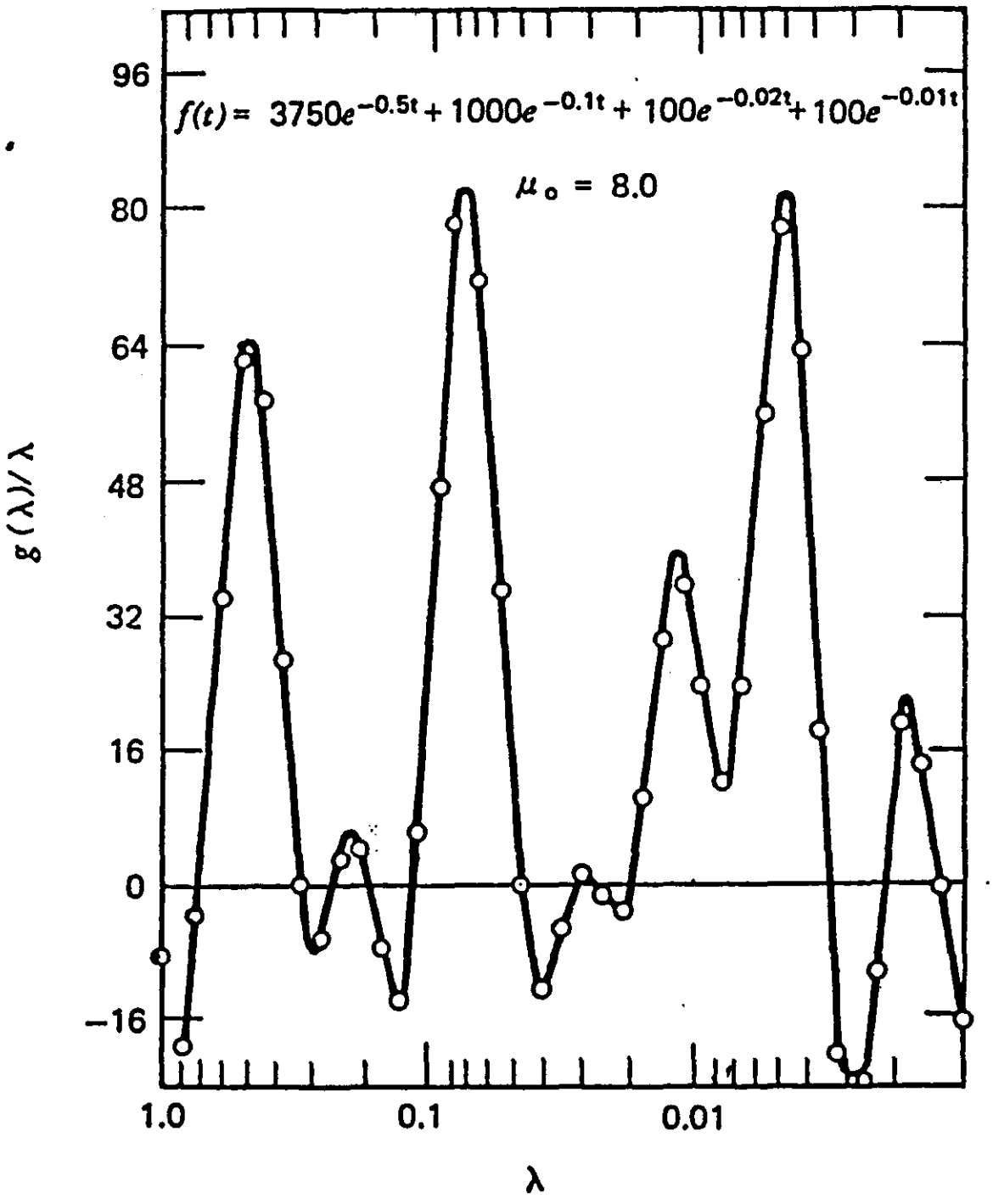

Figure 7.18 Resolution of a four-component decay curve by a Fourier transform analysis method. (From D. G. Gardner and J. C. Gardner, Analysis of Multicomponent Decay Curves by Use of Fourier Transforms, in *Applications of Computers to Nuclear and Radiochemistry*, NAS-NS 3107, 1963, pp. 33–40.)

9.2a

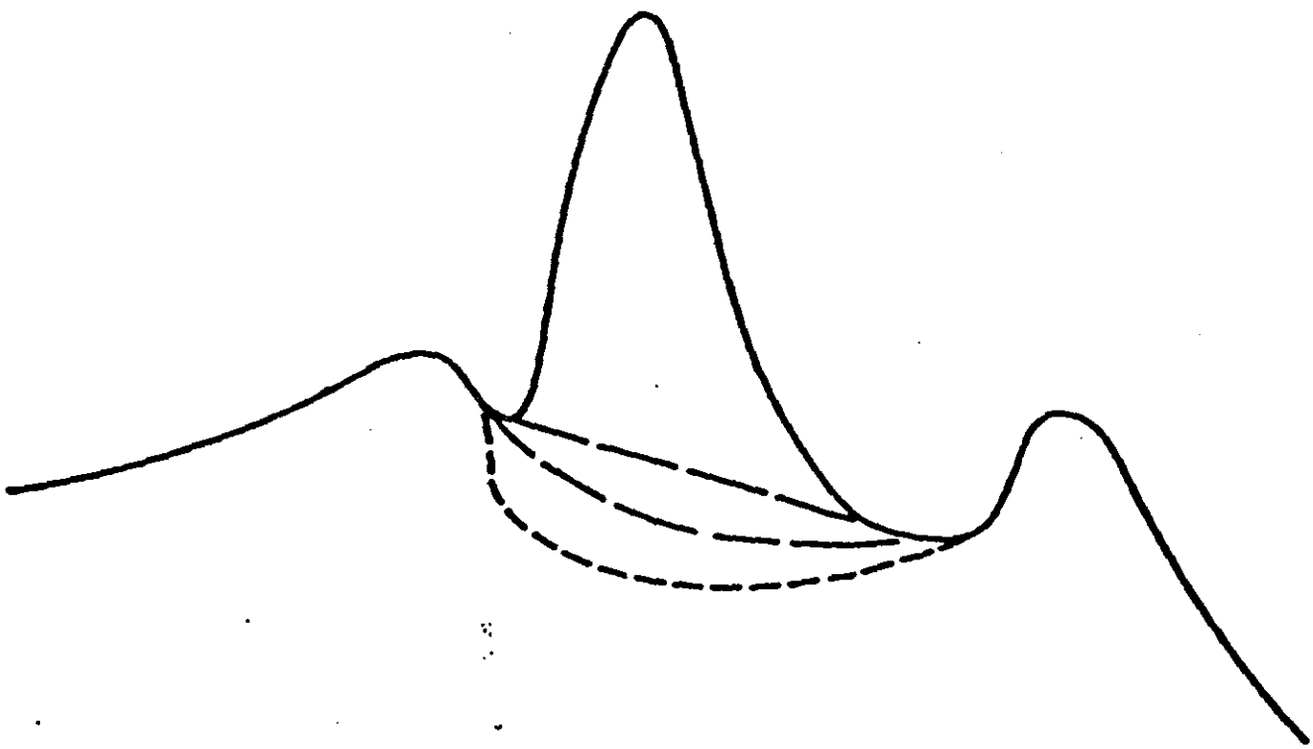

Figure 7.9 Simple subtractions of baseline from a full energy peak in a mixed γ-ray spectrum. Considerable errors may result, especially if the Compton continuum of a higher energy gamma ray represents a significant fraction of the total distribution in the pertinent full-energy channels.

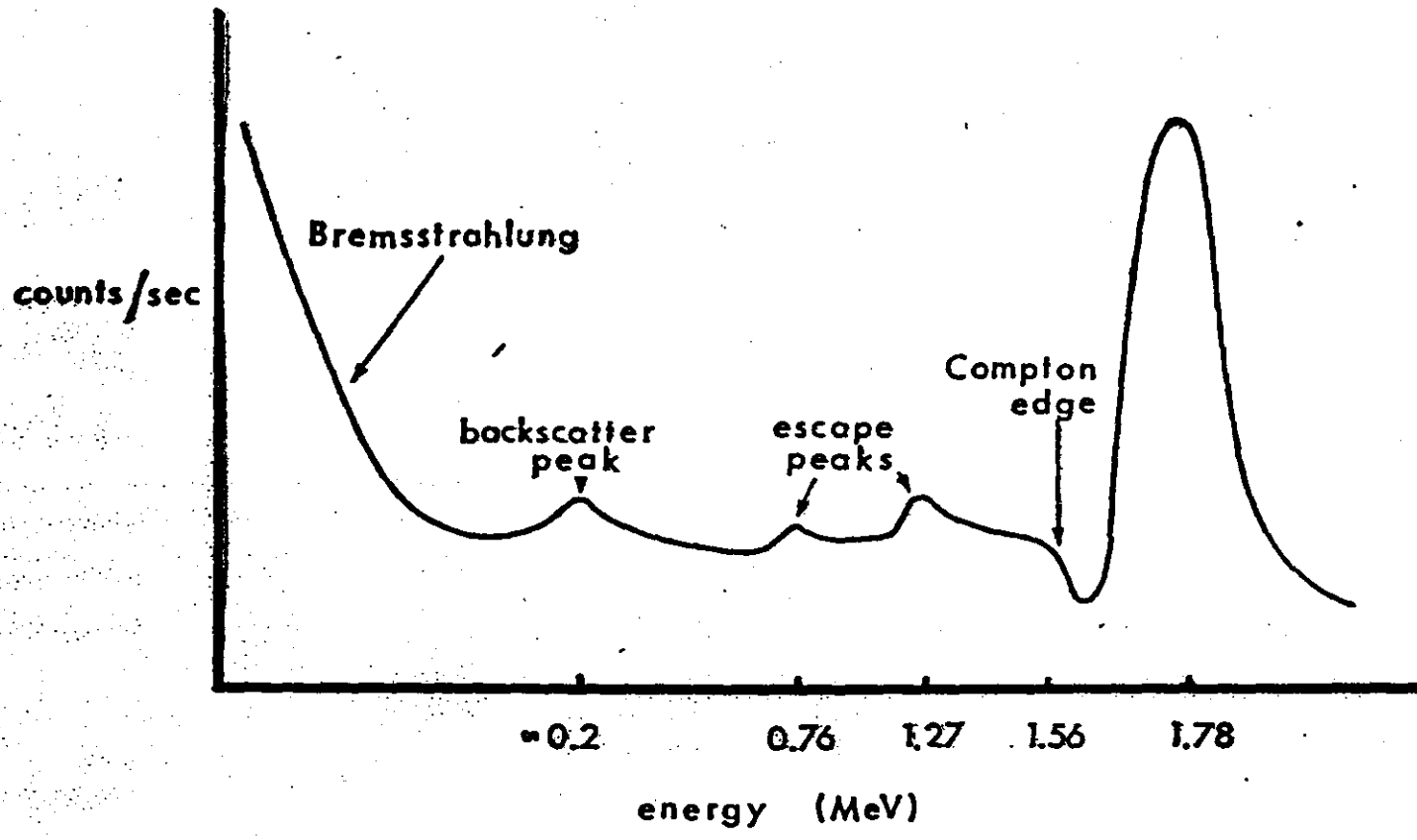

FIG. 7. Typical γ-ray spectrum from ^{28}Al.

9.36

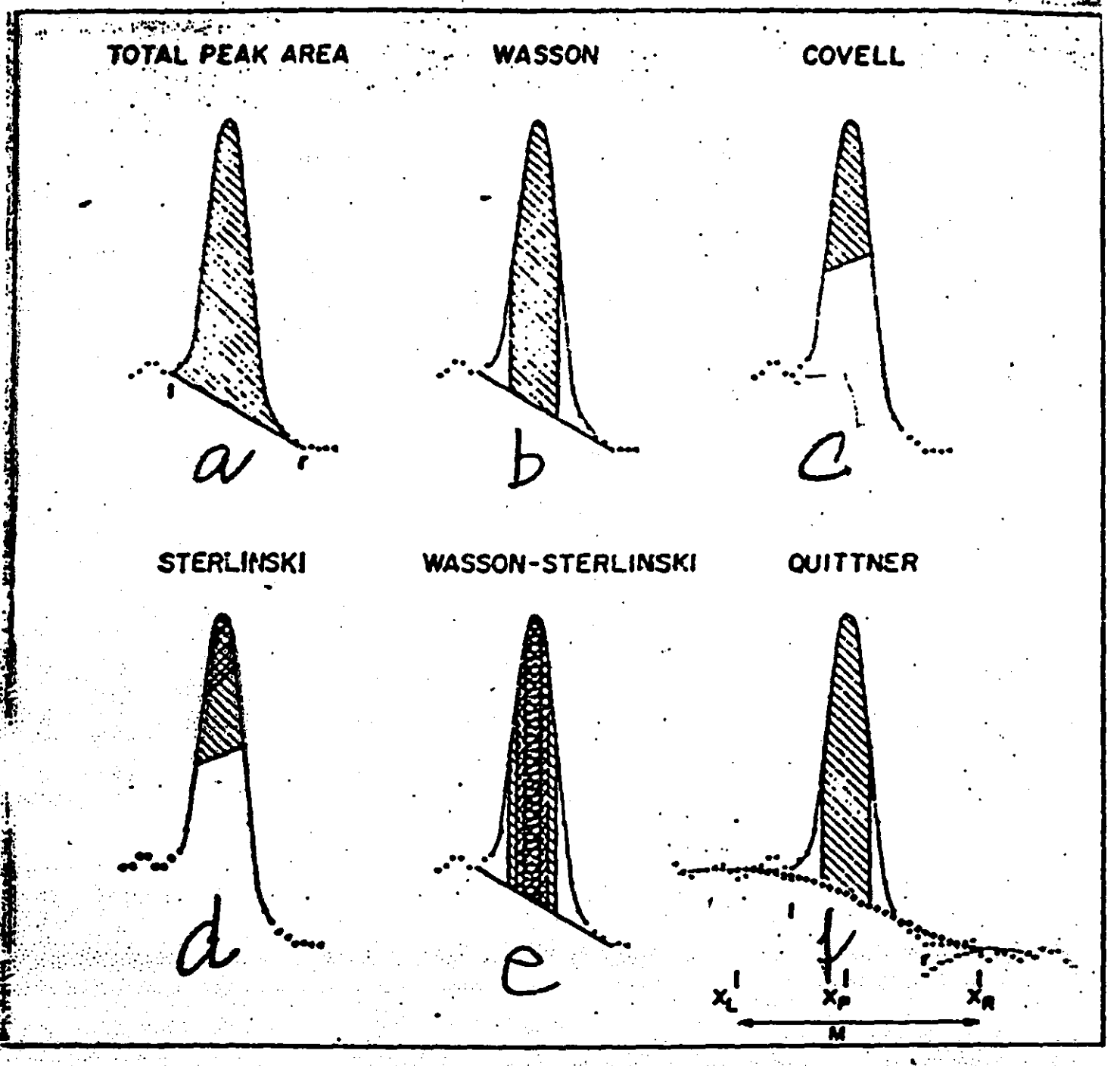

Figure 1. Six of the seven methods of photopeak integration employed in this study

9.36

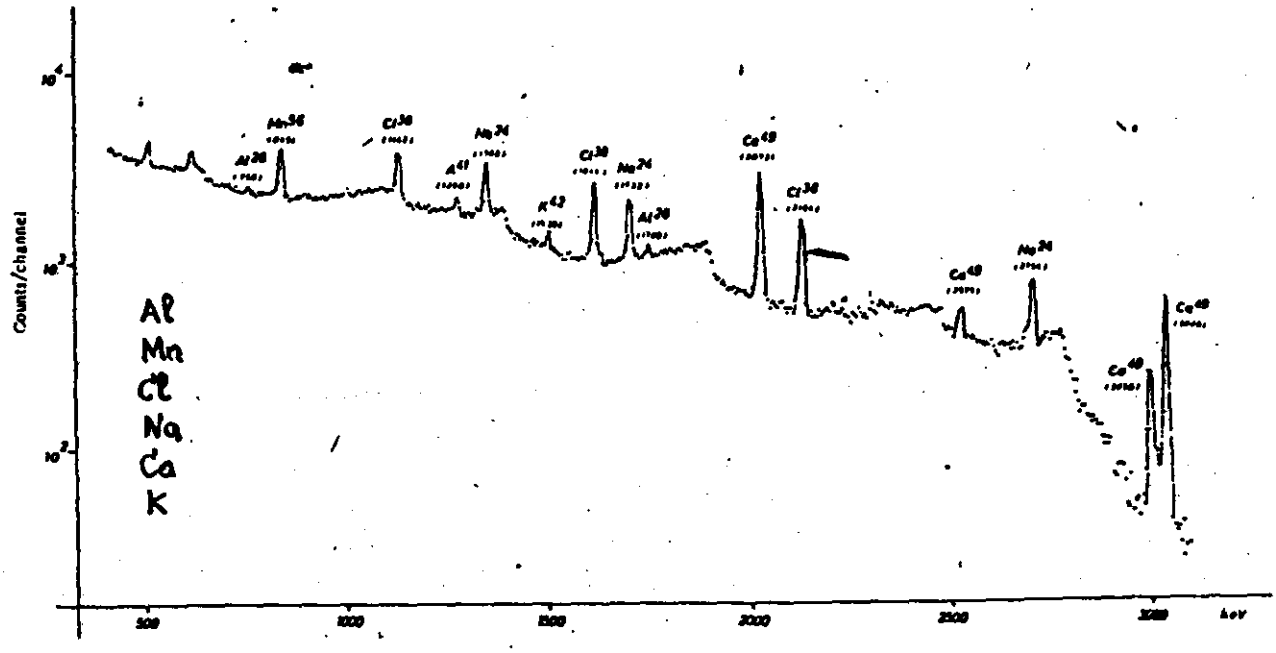

FIG. 1. Gamma spectrum of powdered kale leaves after a short neutron irradiation (1 min), obtained with an 11-cm³ Ge(Li) detector.
Neutron flux = 2×10^{13} n/cm² s.
Decay time = 4 min.
Counting time = 17 min.

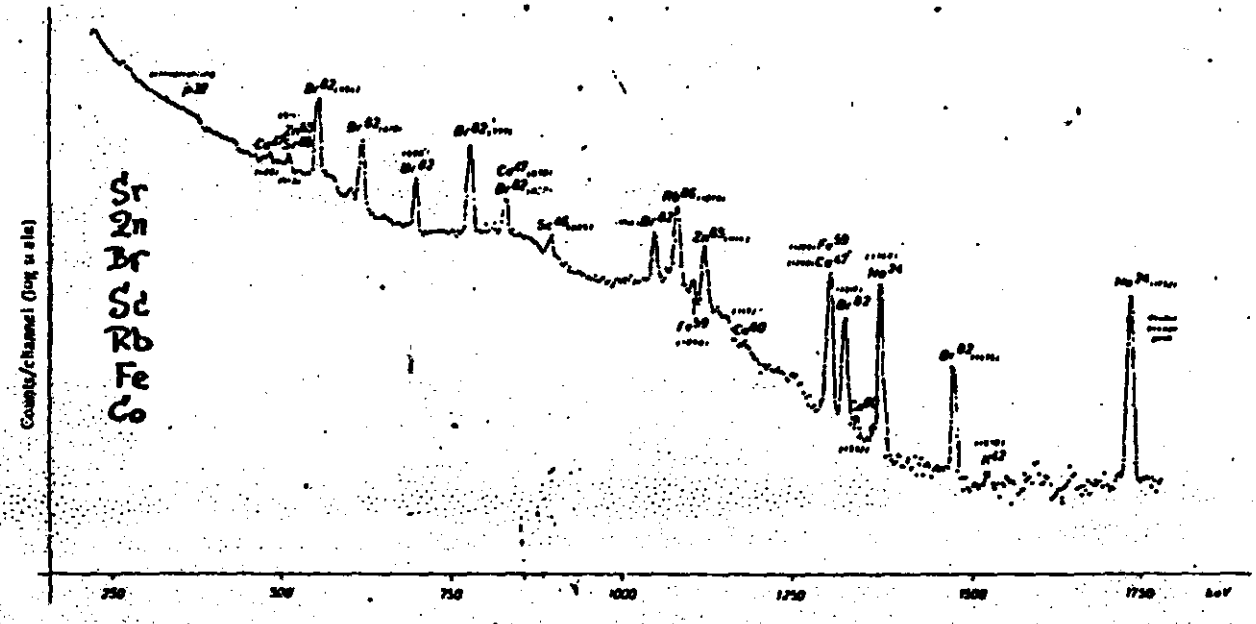

FIG. 2. Gamma spectrum of powdered kale leaves after a long neutron irradiation (8 d) obtained with an 11-cm³ Ge(Li) detector.
Neutron flux = 5×10^{13} n/cm² s.
Decay time = 9 days.
Counting time = 68 min.

9.3b

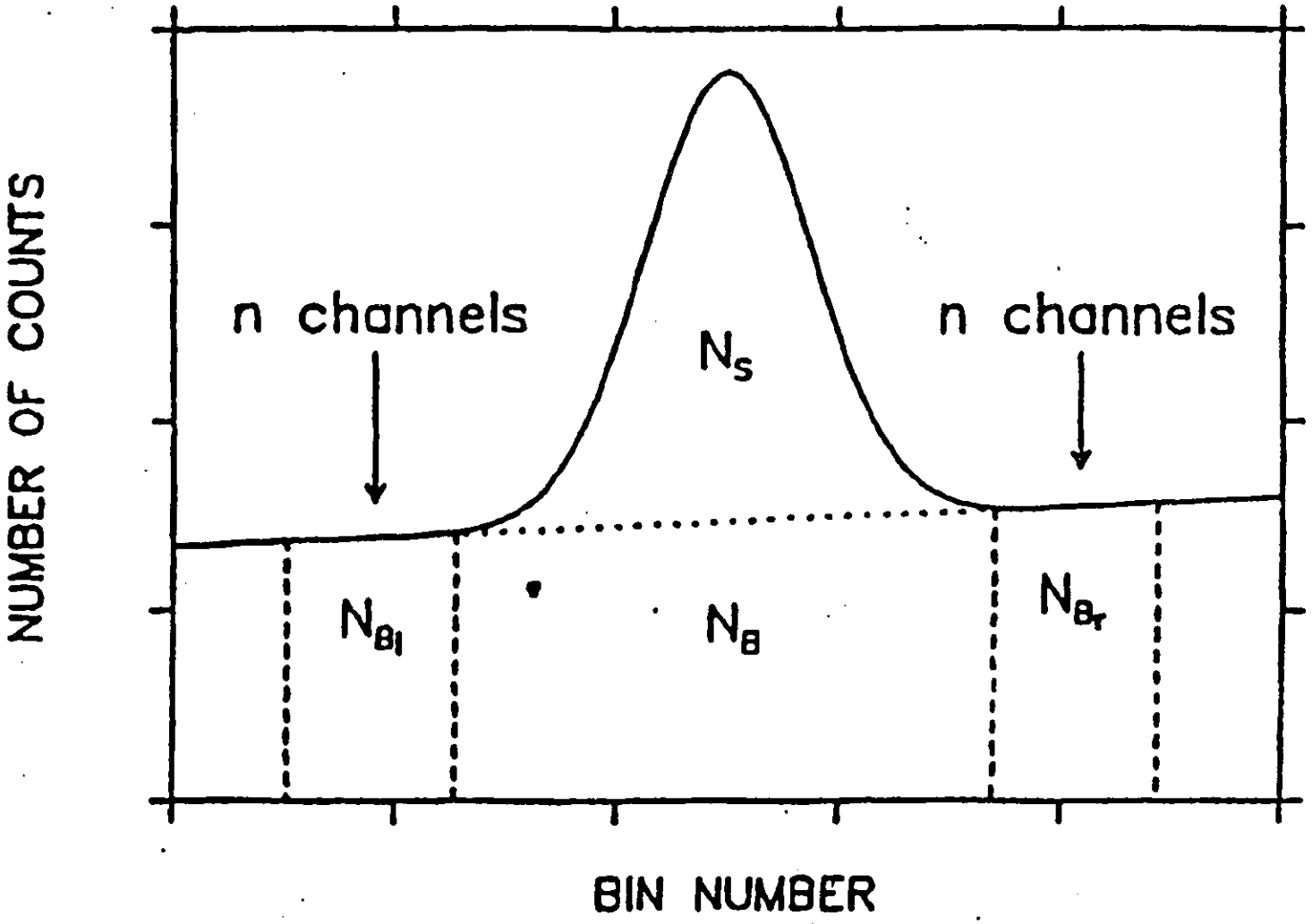

Fig. 1. This figure illustrates the various parameters involved in the determination of the peak area

9.3B

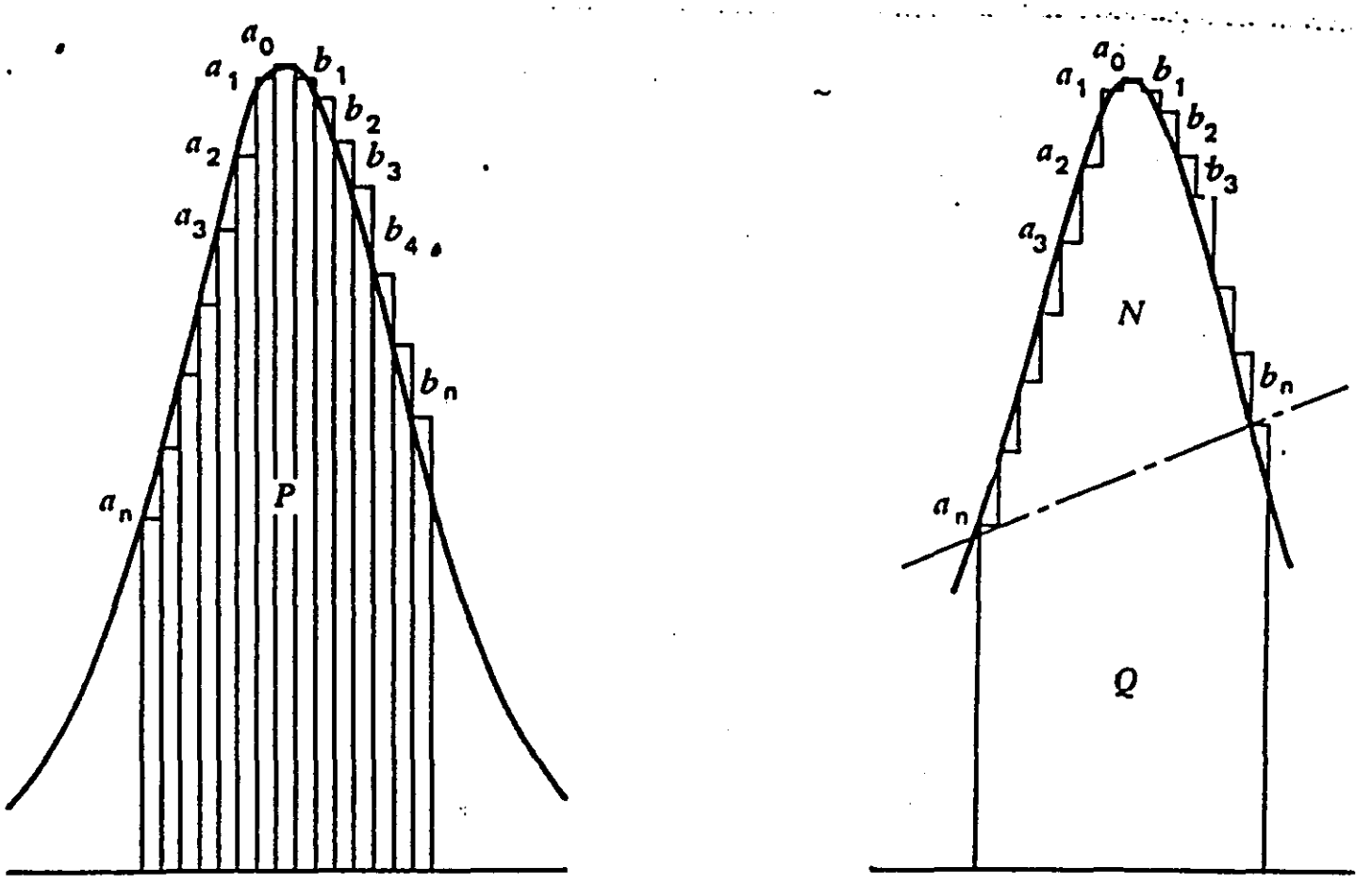

Figure 7.14 Pulse-height analysis data as a histogram in which the area P repre sents the total counts contained in channels a_n to b_n and the intersect between c and b_n above which the area N bears a constant relationship to the total are contained in the peak and therefore the gamma-ray intensity. [From D. I Covell, Determination of Gamma-Ray Abundance Directly from the Tot Absorption Peak, *Anal. Chem.* **31**, 1785, (1959).]

9.3b

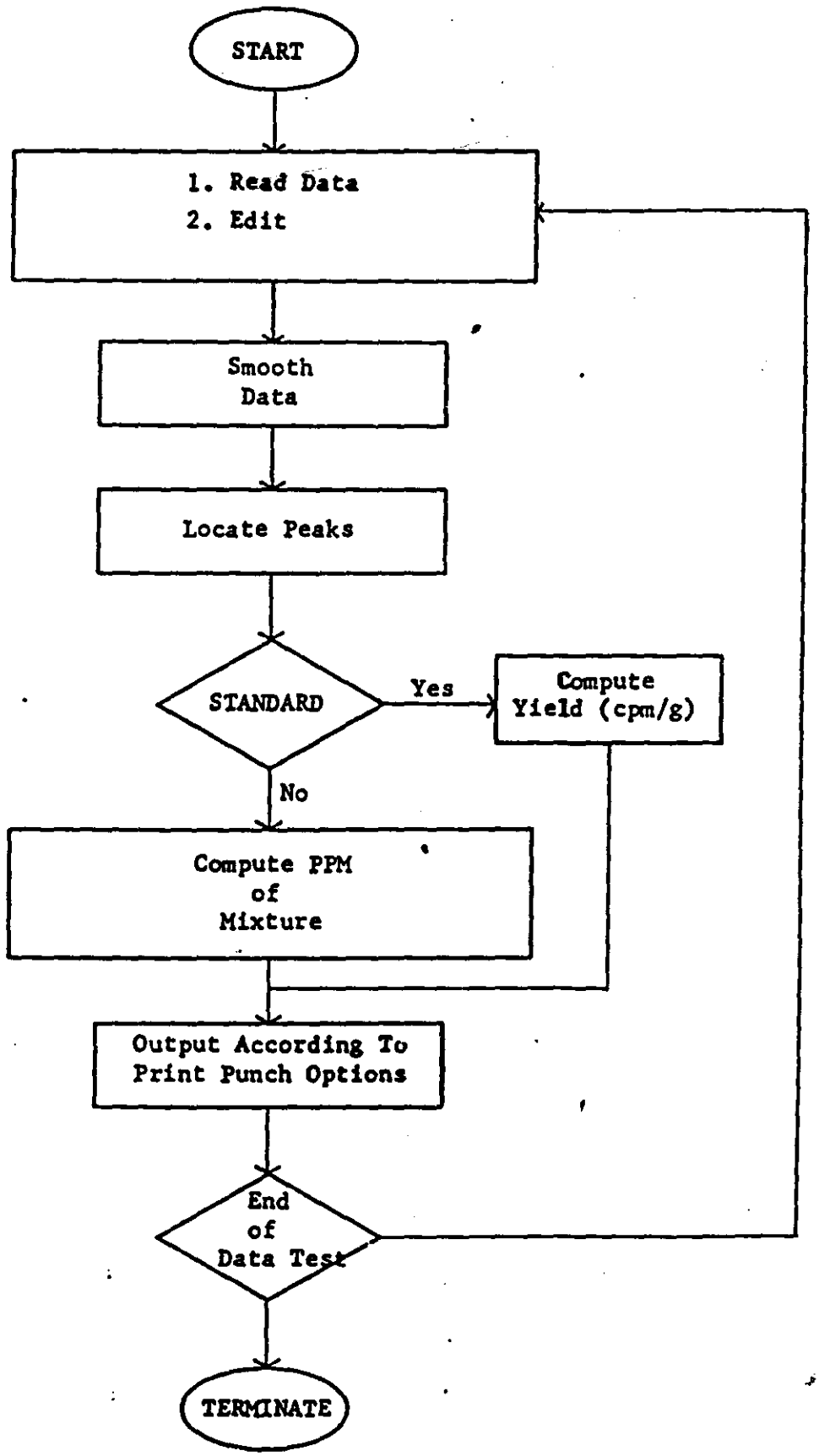

Figure 7.21 The general purpose activation analysis computer program, "Hevesy." [From H. P. Yule, "Hevesy," A Computer Program for Analysis of Activation Analysis Gamma-Ray

9.3C

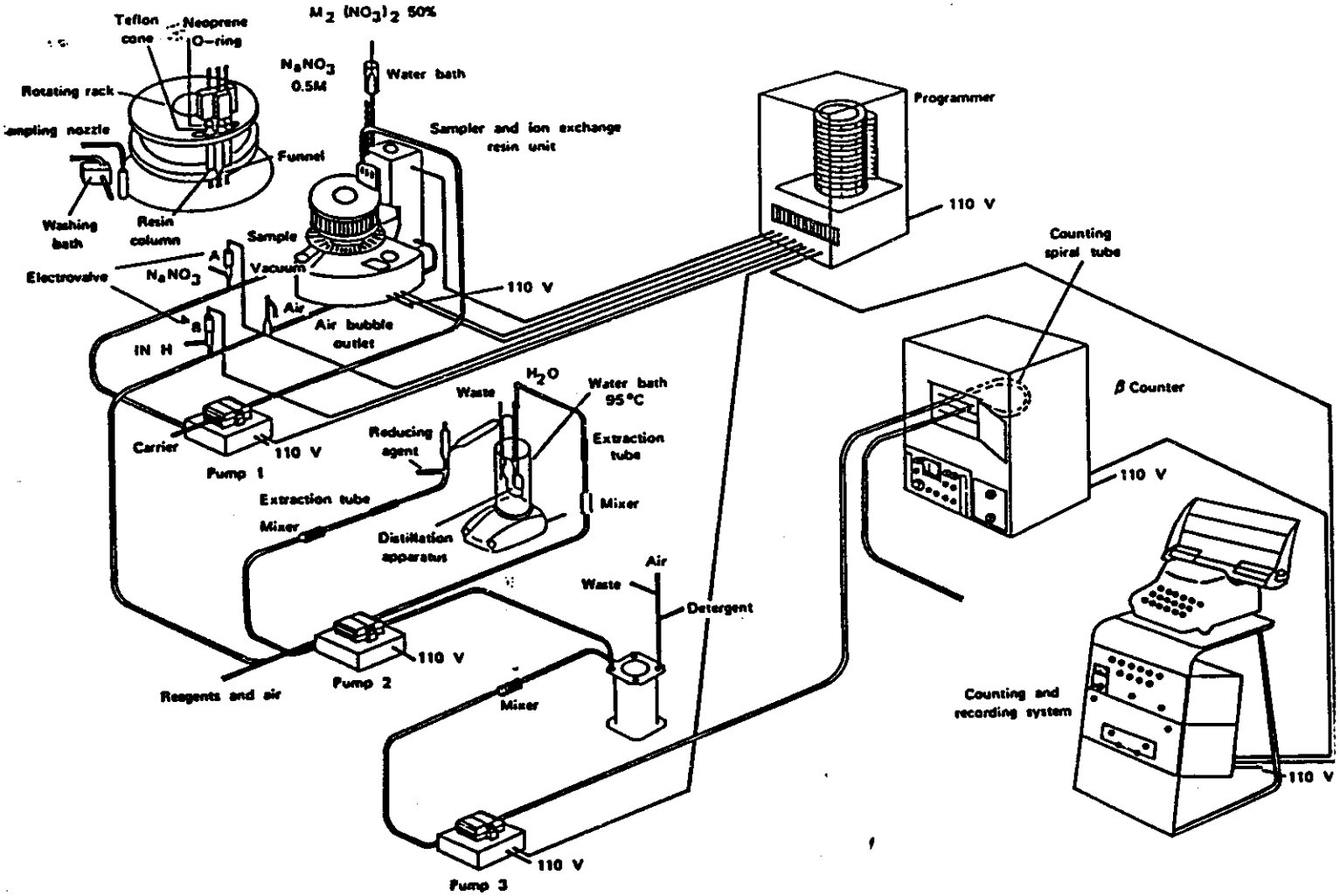

Figure 7.7 Schematic components of an automatic chemical treatment system. [From D. Comar and C. LePoec, on the Use of an Automatic Chemical Treatment System in Activation Analysis of Biological Samples, in *Modern Trends in Activation Analysis* (Texas A&M University, College Station, 1965), pp. 351–356.]

9.3e