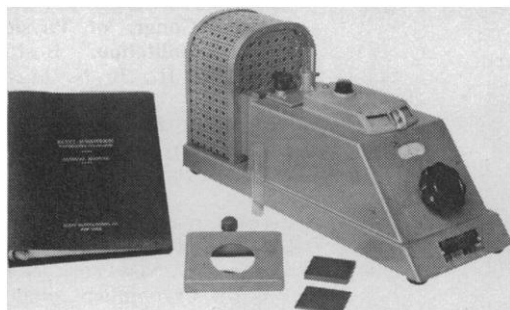


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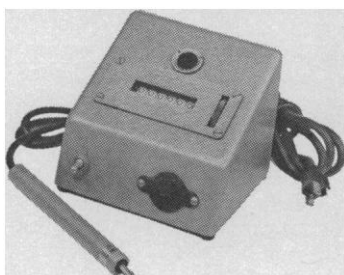


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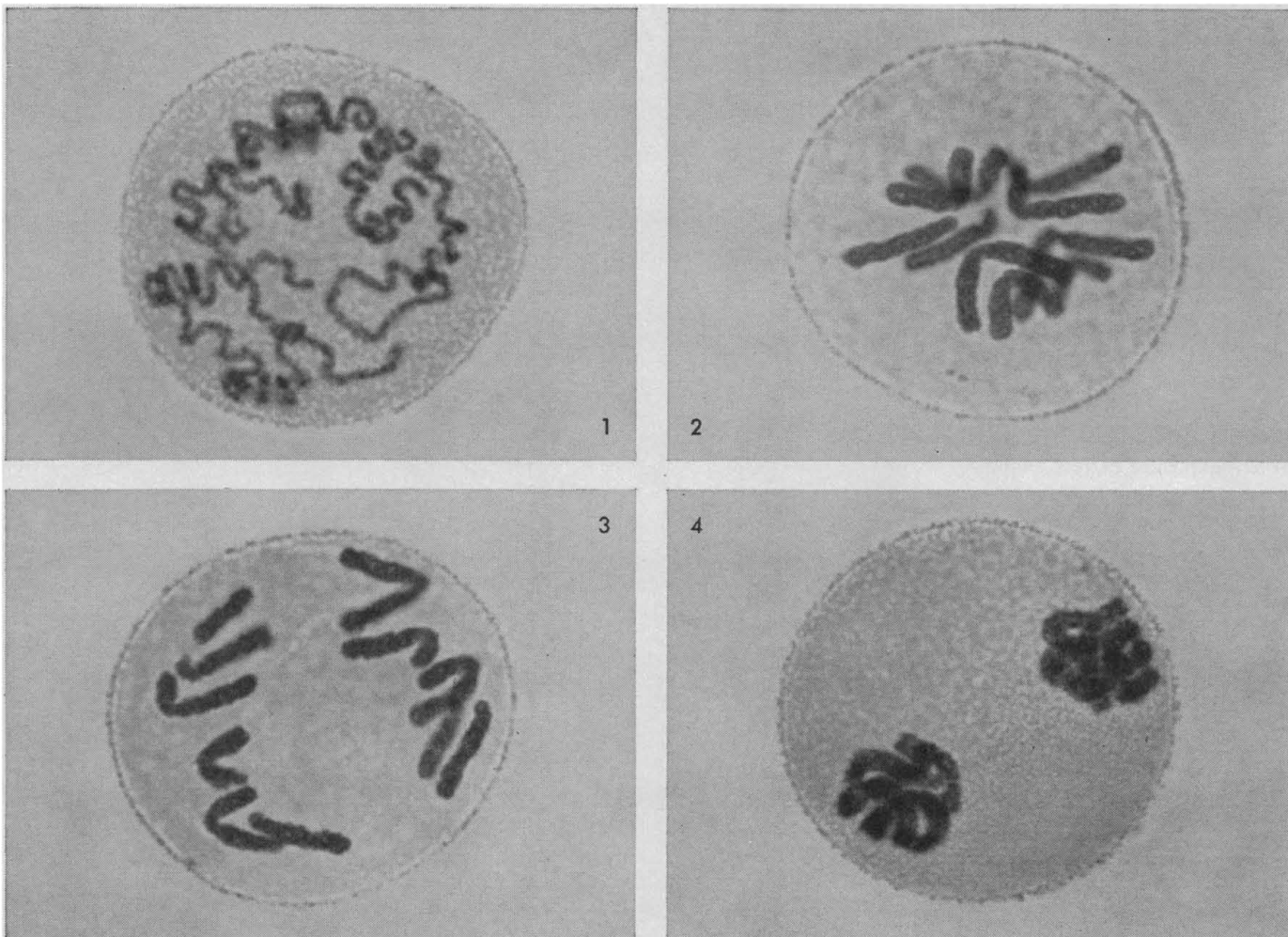
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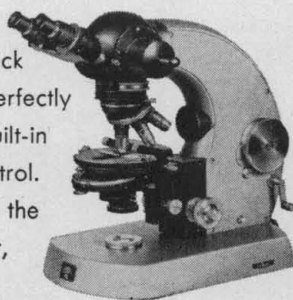


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The material in this section is prepared by the following contributing writers:

Robert L. Bowman (R.L.B.), with the assistance of Denis J. Prager (D.J.P.), Laboratory of Technical Development, National Heart Institute, Bethesda 14, Md. (medical electronics and biomedical laboratory equipment).

Joshua Stern (J.S.), Basic Instrumentation Section, National Bureau of Standards, Washington 25, D.C. (physics, computing, electronics, and nuclear equipment).

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Neither *Science* nor the writers assume responsibility for the accuracy of the information.

Address inquiries to the manufacturer, mentioning *Science* and the department number.

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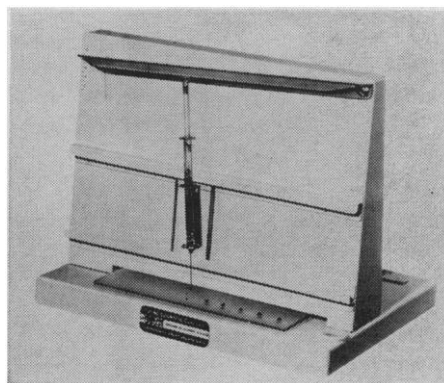
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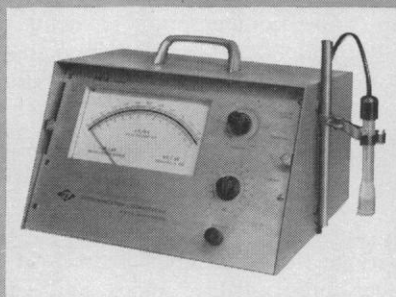
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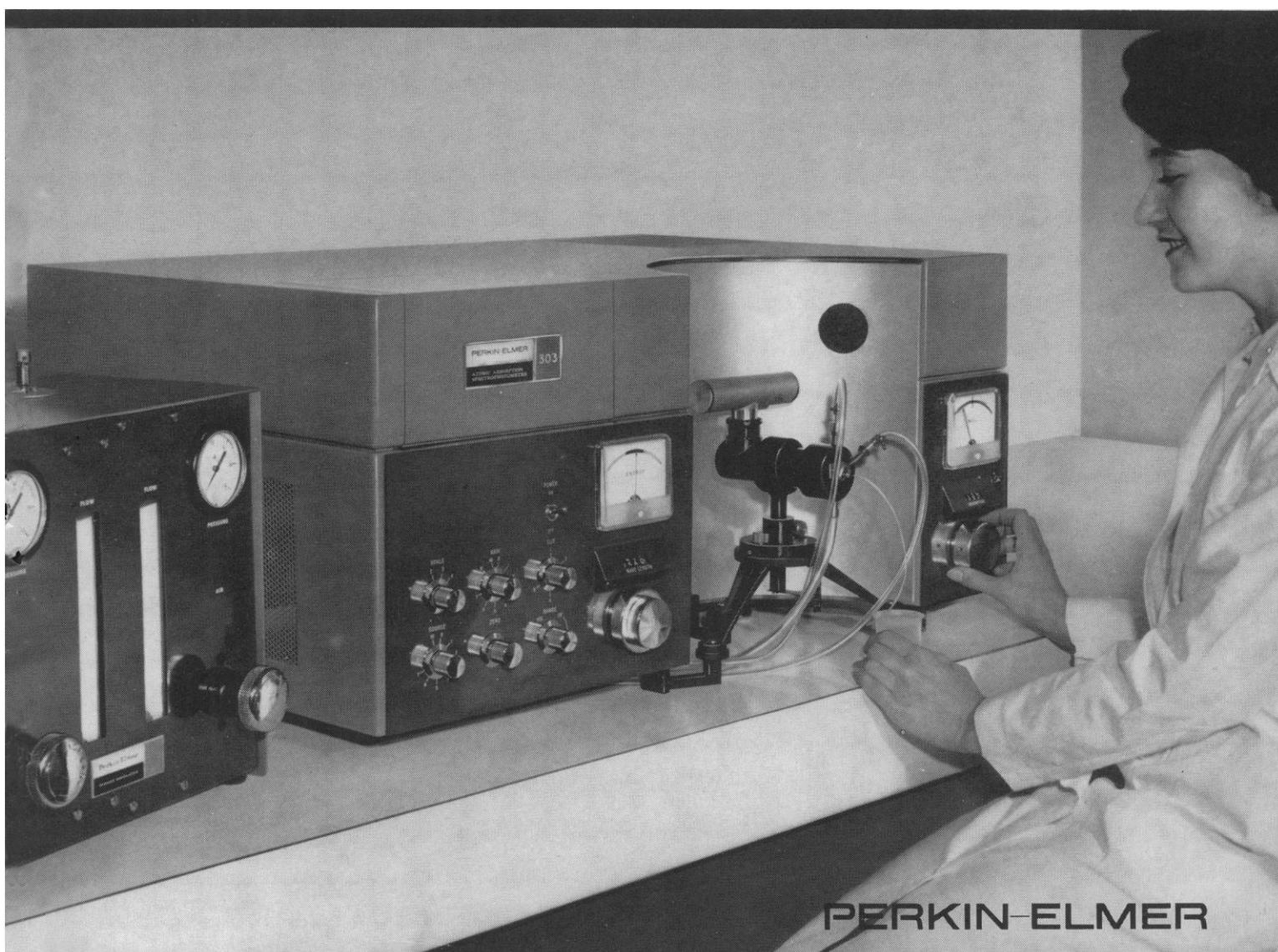
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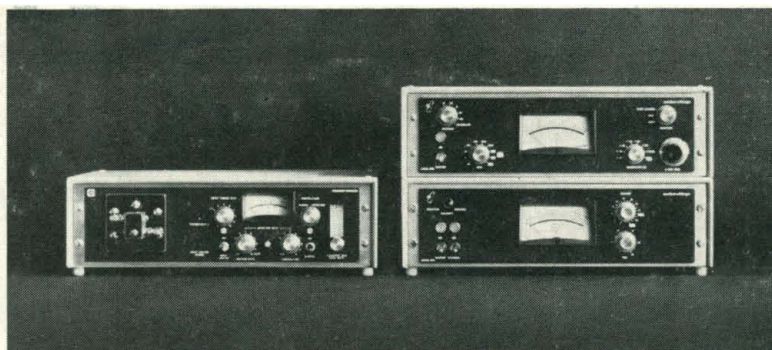
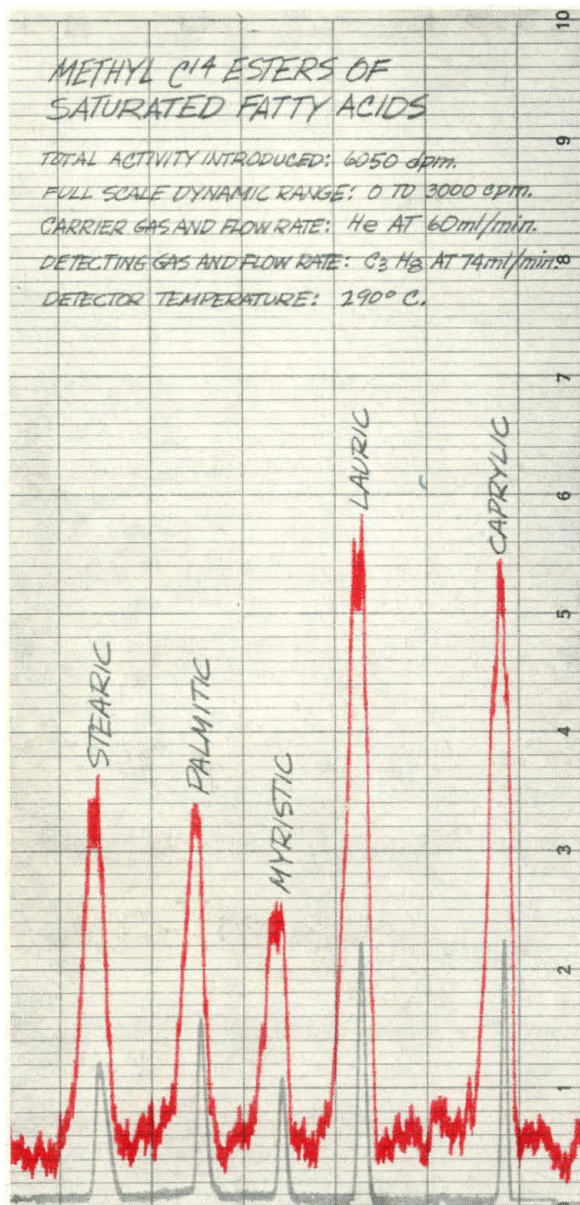
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Operates at the high temperatures—up to 300°C—required for good chromatographic separation.

Eliminates sample combustion and time-consuming analysis of individual fractions.

Offers interchangeable 20 ml and 85 ml detectors so that you can select the best sensitivity or resolution to fit your specific application.

Affords precise control of sensitivity and resolution through gas-flow adjustment.

Exhibits less than 2 cpm background per ml of detector volume.

Chart shows the simultaneous recording of the composition of the effluent (black trace) as measured by thermal-conductivity detector and of the component radioactivity (red trace) as measured by the BIOSPAN Model 4998.

## MAKE DIRECT ANALYSIS OF THE RADIOACTIVE COMPONENTS IN THE EFFLUENT FROM YOUR GAS CHROMATOGRAPH

Now, with Nuclear-Chicago's BIOSPAN Model 4998, you can reliably and accurately apply radioisotope techniques to dynamic gas chromatography. This new counting system continuously detects and measures the soft beta activity in the gas phase. Sample com-

bustion and lengthy preparatory processes such as fraction collection are no longer necessary. With this non-destructive counting technique, your sample is available for further analysis. These operating advantages permit maximum data-collection efficiency in minimum time and make your gas chromatograph an even more useful analytical tool.

The Model 4998 uses a highly efficient proportional radiation detector housed in a shielded enclosure. Both the enclosure and the connecting lines are temperature-controlled. A stable, well-regulated high-voltage supply furnishes the detector operating voltage.

The flow-through detector has sufficient volume to ensure adequate statistical accuracy for sample fractions of low activity, yet it can distinguish between closely spaced radioactive peaks. The detector's long voltage

plateau gives good long-term counting stability.

Data readout for the Model 4998 consists of a precision laboratory ratemeter that is compatible with any Nuclear-Chicago graphic recorder. The ratemeter can also be connected to a dual-channel recorder for simultaneous recording of effluent composition and component radioactivity on a single chart. A high-speed digital integrator is available for continuous presentation of quantitative data.

For more information on the BIOSPAN Model 4998, contact your Nuclear-Chicago sales engineer, or write directly to us.

NVC:B-4-225



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