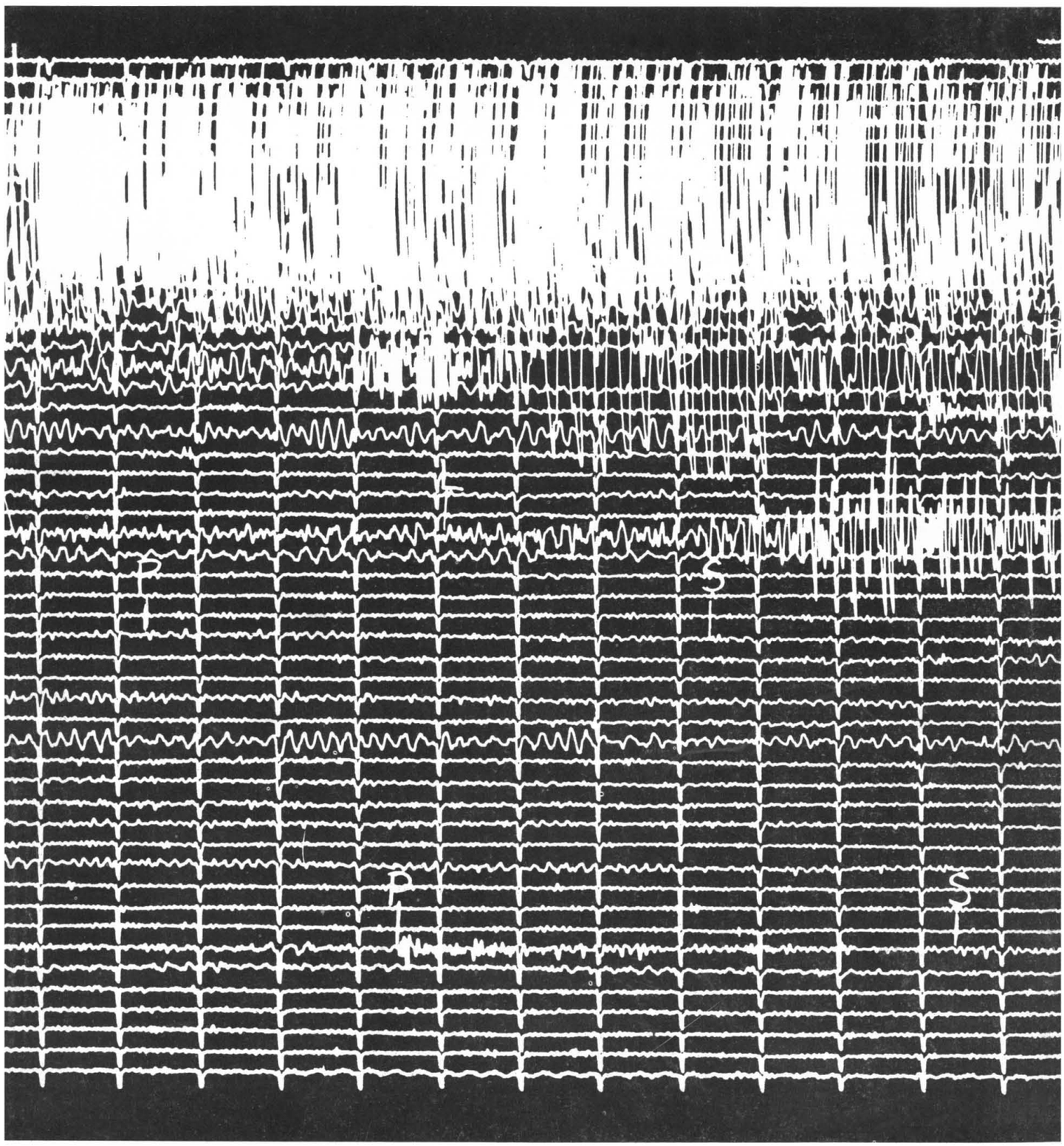
SCIENCE

3 July 1964
Vol. 145, No. 3627

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE



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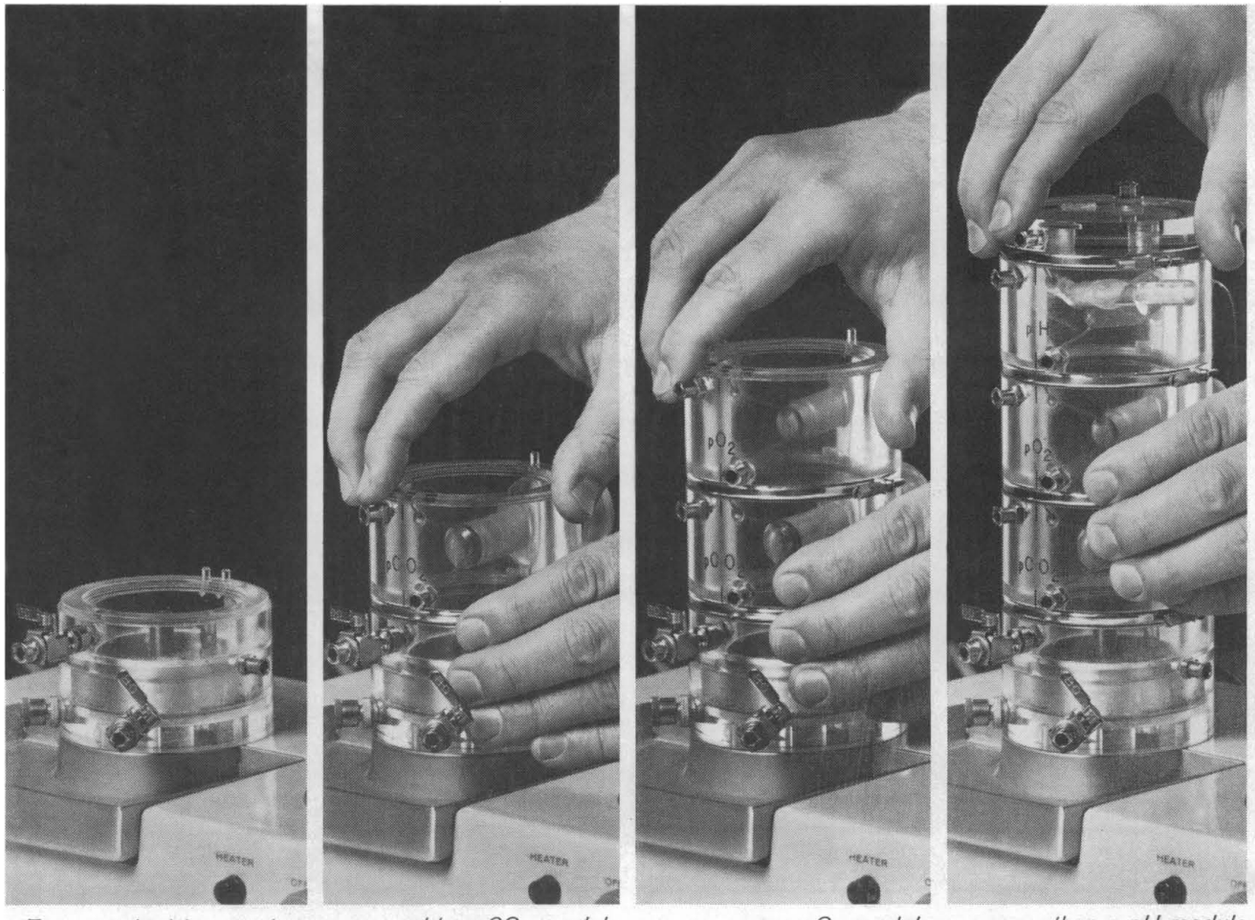

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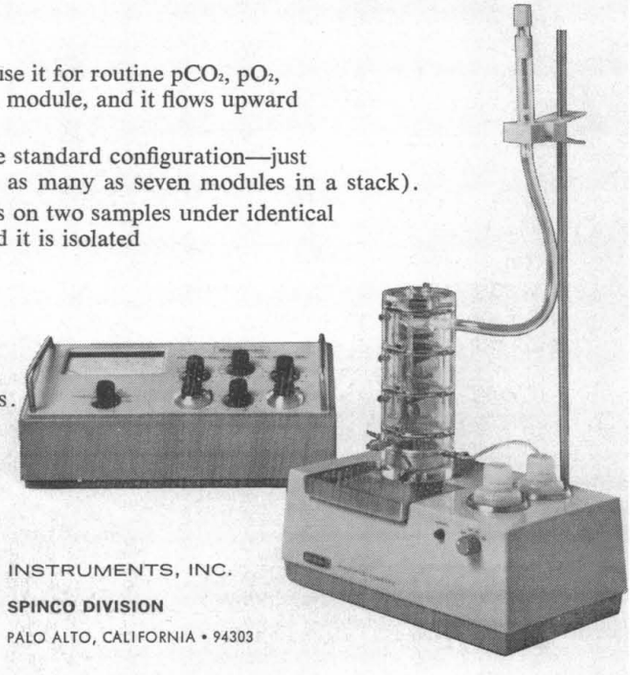

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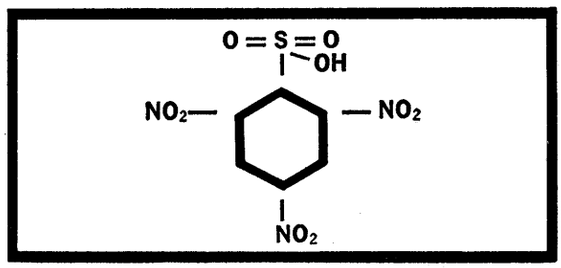


PRICE SCHEDULE:

100 grams	gm	$.60
25 grams	gm	.63
10 grams	gm	.70
5 grams	gm	.79

Reference: (1) T. Okuyama, K. Satake, J. of Biochemistry (Japan) 47, 654.

SPECIFIC STAIN FOR SH GROUPS IN TISSUES

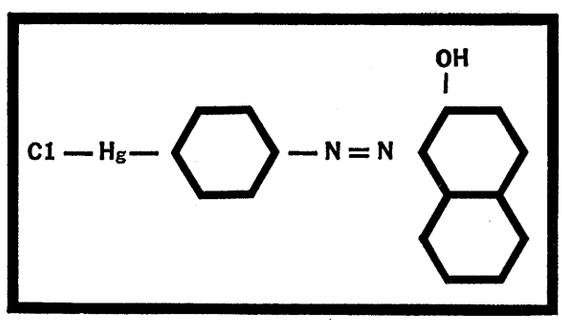
MERCURY ORANGE (1, (4 Chloromercuri Phenylazo) 2 Naphthol Red Sulphydryl Reagent).

Bennett reported that Mercury Orange is specific for attachment solely to SH groups in tissues (1) (2).

The tissue was fixed in trichloracetic acid, dehydrated in alcohol or prepared by freeze substitution. It was then teased into small fragments. Mercury orange (red sulphydryl reagent) (RSR) was employed as a saturated solution in solvent.

Using this standard, Bennett located SH groups in regions previously not known to contain them, such as nerve cell bodies, in retinal rods and in capillary endothelium.

After testing a number of reagents, Mauri, Vaccari and Kaderavek concluded that only RSR procedure was sufficiently sensitive and specific for thiols in tissues (3).



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References: (1) H. S. Bennett and P. A. Yphantis, J. Am. Chem. Soc. 70, 3522, (1948). (2) H. S. Bennett, Anat. Rec. 110, 231, (1951). (3) C. E. Mauri, F. Vaccari, and G. P. Kaderavek, Haematologia, 38, 263, (1954).

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AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

COVER

Facsimile of the seismogram of the Alaskan earthquake which was made by the visible recording instrument at the U.S. Department of Commerce, Washington, D.C. The record covers approximately 48 hours. Each horizontal line represents 1 hour and the vertical lines occur at 1-minute intervals. The preliminary wave of the main shock arrived in Washington at 03 hr 44′ 46″ U.T., 28 March (white arrow). The computed time of origin in Alaska was 03 hr 36′ 13″ U.T., 28 March. See page 74. [U.S. Department of Commerce]

NEW

STEROID ANALYSIS BY GAS LIQUID CHROMATOGRAPHY

by

A. ANNE PATTI, M.S.

and

ARTHUR A. STEIN, M.D.

Both of Albany Medical College
Albany, New York

Describes the detection and separation of steroids both in clinically obtained biological fluids and tissues and in certain experimental situations.

Selected methods which give reproducible results with semi-purified extracts and which permit the separation and identification of one or more steroids in biological fluids are presented. *The methods have been chosen for rapid clinical screening.*

The discussion is limited primarily to the authors' experiences with phases, column conditioning and instrument parameters. Some biochemistry is included to clarify the methodology and **applications of GLC to steroid analysis in the normal and disease states.**

July 1964
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About 124 pages
17 illustrations

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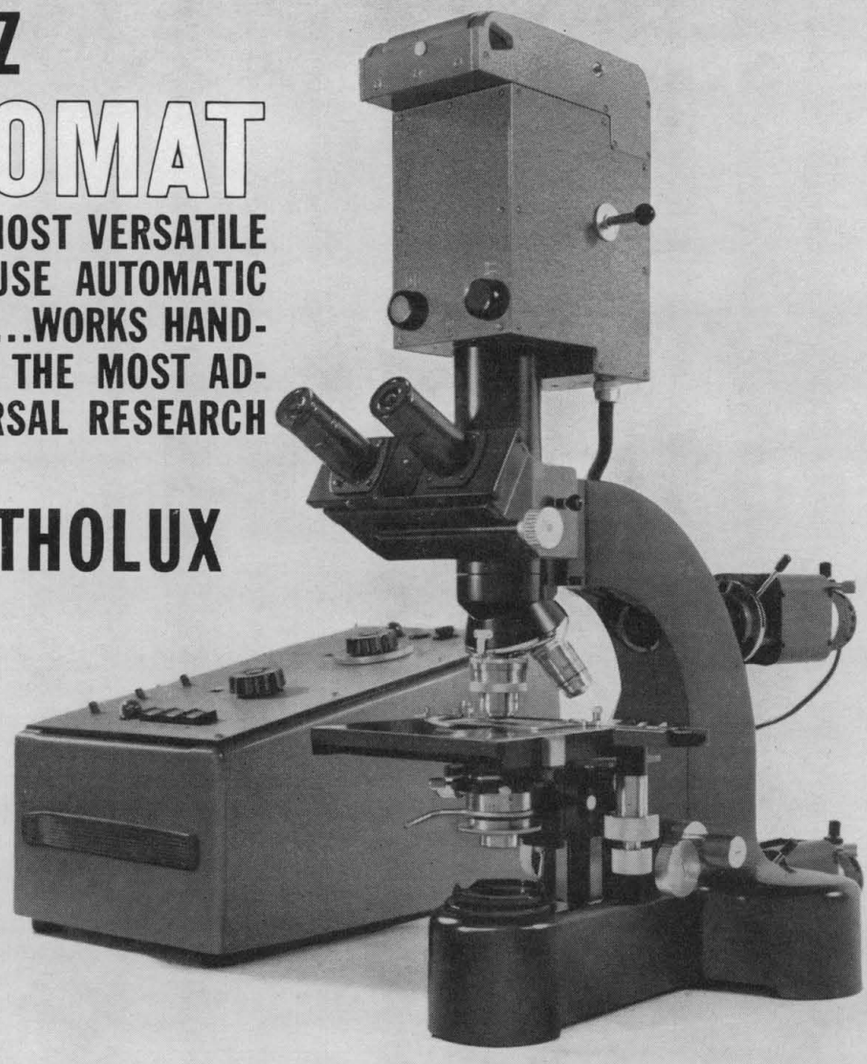

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The Birthdays of Science

Science has three birthdays. On 4 January *Science* was 69 years old; on 9 February, 81 years old; and today, 3 July, *Science* is 84 years old. None of these is a particularly interesting birthday in number of years, but publication of this issue on the most ancient of the three birth dates provides an appropriate occasion for a bit of history.

The explanation of the multiple birth dates is fairly obvious; there were two false starts before the magazine got off to a record of uninterrupted publication. The first issue, a slim 12 pages and cover, appeared on 3 July 1880, with John Michels as editor. The AAAS meetings of 1880 and 1881 provided a substantial part of the content for the first two volumes. For a year and a half the magazine struggled along, with Thomas A. Edison, the magazine's behind-the-scenes backer, paying the weekly deficit of $100 to $150. By the end of 1881 his patience ran out; he paid the remaining debts, gave the magazine to Mr. Michels, and had no more to do with it. Michels brought out three scattered issues in early 1882, and that was the end of the first attempt.

But *Science* did not stay dead for long. Alexander Graham Bell purchased the name and good will from Michels for a generous $5000. With his father-in-law, Gardiner Greene Hubbard, who later founded the *National Geographic Magazine*, Bell organized a distinguished editorial company headed by Daniel Coit Gilman, president of Johns Hopkins. With Samuel Hubbard Scudder as editor, publication was resumed on 9 February 1883. The new magazine had eminent contributors and wide scientific scope, but it continued to lose money—something over $80,000 in a decade. In 1893 the AAAS voted to contribute to its support and Bell made another gift, but time was running out and publication was suspended in March of 1894.

Then another rescuer came along. James McKeen Cattell, head of the department of psychology at Columbia, bought the title and good will for $25, formed an editorial committee of great scientific competence, worked exceedingly hard as editor, secured a variety of domestic and foreign reports, symposium papers, addresses, and other materials, and succeeded in establishing *Science* so solidly that it has appeared regularly every week since Cattell's first issue was published on 4 January 1895.

In 1900 the AAAS entered into an agreement with Cattell to make *Science* the official journal of the Association. Cattell continued as editor and publisher; the Association paid him $2 (later raised to $3) for each member; and each member received a subscription. Circulation grew under this arrangement; the magazine increased in size; and the relationship continued until the end of 1945, shortly after Cattell's death. Under an agreement made some years earlier, the AAAS then became the owner and publisher. Payment to the Cattell estate, over a 10-year period, totaled $270,000.

The daily work of editing and publishing a magazine with a circulation of over 100,000 must, of course, be done by an office staff. But the feeling of ownership and responsibility is shared by a great many members and subscribers, who have been generous with their criticisms and suggestions. On this 84th anniversary we invite a continuing flow of suggestions and comments from interested readers.

—DAEL WOLFLE

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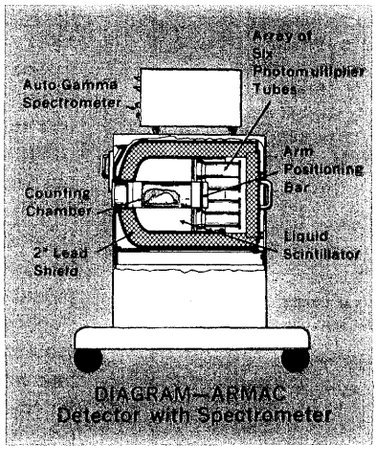

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(Photograph) COUNTING LIVE FISH IN FLOWING STREAM WATER. *Photo courtesy of* Oak Ridge National Laboratory *operated by* Union Carbide Corporation *for the* U. S. Atomic Energy Commission.

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