# Positive stop readings in 1.13 seconds



# SHADOGRAPH<sup>®</sup> small animal balance provides visible accuracy to 350 milligrams

Model 4203B-TC-SA Shadograph is designed especially for high-speed, precision weighing of mice, chicks, frogs and small rats. It can reduce tedious weighing operations by hours . . . give you more time for other work. Light-projection indication is fast . . . provides sharp shadow-edge reading on frosted glass dial. Parallax reading eliminated. Capacity 1500 grams. Dial graduated in two columns: 0-30 grams and 15-45 grams. Shutter closes dial column not in use. Beam 100 grams in 1 gram graduations. Weighs accurately in out-of-level positions. Other models up to 3 kilos for rats, hamsters and guinea pigs.



## TISSUE AND TUMOR BALANCE

Model 4142 recommended for fast, precision weighing of cancer tissue and tumors. Weighpan is shielded from air currents by clear plastic door . . . easily removed for sterilization. Rated capacity 15 grams; visible sensitivity to 5 milligrams. Movable viewer for 5-column dial, each column 3 grams with 5 milligram graduations. 5-notch beam corresponding to dial columns.

VISIT US AT: THE NATIONAL INSTITUTES OF HEALTH SHOW Bethesda, Md., October 4-7

AND:

ANIMAL CARE PANEL SHOW St. Louis, Mo., October 26-28

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and regeneration may occur promptly.

The insular tissue makes up about 2 percent of pancreatic mass in normal tissue and may make up as much as 3 percent in obese persons. Insulin plays a role in stimulating pinocytosis in certain fat cells. The ratio of alpha to beta cells is approximately 1 to 3 in man. In the diabetic patient, the average weight of the island tends to be about one-third that of the normal island. If there are not qualitative evidences of damage to the island in diabetes mellitus, there is almost always a quantitative reduction. The first evidence of disease in the islands is hydropic or glycogenic vacuolization, which may progress to fibrosis or hyaline deposition. The pancreas of the young diabetic contains much less insulin than does that of a person who becomes diabetic later in life. Interestingly enough, the insulin requirement of the totally depancreatized individual or animal is somewhat less than that of the diabetic.

Insulin is clearly related to the beta cell, glucagon to the alpha cell. Insulin may properly be considered a growth hormone as well as a regulator of carbohydrate metabolism. Insulin tends to build glycogen and reduce fat. Unless special precautions are taken, insulin contains glucagon. Glucagon increases the metabolic rate and causes ketosis even before glycosuria develops. Glucagon may induce diabetes in some animals. After prolonged administration of glucagon to the experimental animal the alpha cells decrease in number.

Shields Warren Cancer Research Institute, Boston, Massachusetts

### **Forthcoming Events**

#### September

20-23. Conf. on Pure Food Laws, London, England. (Secretariat, Pure Food Centenary 1960, 14 Belgrave Sq., London S.W.1)

20-24. Aeronautics, 4th European cong., Cologne, Germany. (Wissenschaftliche Gesellschaft für Luftfahrt, Eberplatz 2, Cologne)

20-7. International Atomic Energy Agency, 4th general conf., Vienna, Austria. (IAEA, 11 Kärntner Ring, Vienna 1, Austria)

21-22. Industrial Electronics, 9th annual symp., Cleveland, Ohio. (G. E. Hindley, Reliance Electric & Engineering Co., 24701 Euclid Ave., Cleveland 17) 21-23. National Power Conf., Philadel-

21–23. National Power Conf., Philadelphia, Pa. (A. B. Conlin, Jr., ASME, 29 W. 39 St., New York 18)

22. Society of Plastics Engineers, Binghamton, N.Y. (T. A. Bissell, SPE, 65 Prospect St., Stamford, Conn.)

22-23. High Temperature Resistance and Thermal Degradation of Polymers, symp., London, England. (Symposium Subcommittee, Plastics and Polymer Group,

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Soc. of Chemical Industry, 14, Belgrave Sq., London, S.W.1)

22-26. Cancer Cytology, intern. conf., Madrid, Spain. (Miss E. L. Hughes, Pan American Cancer Cytology Soc., P.O. Box 633, Coral Gables, Fla.)

23-25. Inter-Society Cytology Council, annual, Chicago, Ill. (P. A. Younge, ISCC, 1101 Beacon St., Brookline 46, Mass.)

24-2. American Soc. of Clinical Pathologists, Chicago, Ill. (A. H. Dearing, 2115 Prudential Plaza, Chicago, Ill.)

25-28. American Inst. of Chemical Engineers, Tulsa, Okla. (F. J. Van Antwerpen, AICE, 25 W. 45 St., New York 36)

25-30. North American Assoc. of Alcoholism Programs, 11th annual conf., Banff, Alberta, Canada. (J. G. Strachan, Alcoholism Foundation of Alberta, 9910

103rd St., Edmonton, Alberta, Canada) 26-28. American Inst. of Electrical Engineers, petroleum industry conf., Oklahoma City, Okla. (R. S. Gardner, AIEE, 33 W. 39 St., New York 18)

26-28. American Soc. of Mechanical Engineers, petroleum mechanical engineering conf., New Orleans, La. (A. B. Conlin, Jr., ASME, 29 W. 39 St., New York 18)

26-28. Electronic Industries Assoc., natl. conv., Pittsburgh, Pa. (V. M. Graham, EIA, 11 W. 42 St., New York 36)

26-28. Standards Engineers Soc., annual, Pittsburgh, Pa. (J. A. Caffiaux, SES, 11 W. 42 St., New York 36)

26-30. Instrument Soc. of America, New York, N.Y. (W. H. Kushnick, ISA, 313 Sixth Ave., Pittsburgh 22, Pa.)

26-1. Natural Rubber Research Conf., Kuala Lumpur, Malaya. (Rubber Research Inst. of Malaya, P.O. Box 150, Kuala Lumpur)

27-29. Relative Humidity and Paper Test Methods, symp., Grand Rapids, Mich. (Technical Assoc. of the Pulp and Paper Industry, 155 E. 44 St., New York 17)

27-30. American Rocket Soc.-Power Systems Conf., Santa Monica, Calif. (R. L. Hohl, ARS, 500 Fifth Ave., New York 36)

27-30. American Roentgen Ray Soc., Atlantic City, N.J. (N. Jones, 20 N. Wacker Dr., Chicago 6, Ill.)

27-30. Association of Iron and Steel Engineers, annual conv., Cleveland, Ohio. (T. J. Ess, AISE, 1010 Empire Bldg., Pittsburgh, 22, Pa.)

27-30. Medical Photography, 1st intern. cong., Cologne, Germany. (Deutsche Gesellschaft für Photographie e.V., Köln, (Deutsche Nurmarkt 49, Germany)

28-1. International Soc. of Audiology, 5th cong., Bonn., Germany. (Prof. Langenbeck, Baumschuallee 29, Bonn)

28-5. Pan-Pacific Surgical Assoc., 8th cong., Honolulu, Hawaii. (F. J. Pinkerton, 230 Alexander Young Bldg., Honolulu 13)

30-1. American College of Radiology, Atlantic City, N.J. (F. H. Squire, Presbyterian-St. Luke's Hospital, 1753 W. Congress St., Chicago 12, Ill.)

30-1. American Medical Writer's Assoc., Chicago, Ill. (H. Swanberg, 510 Maine St., Quincy, Ill.)

#### October

1-2. Enzymes in the Manufacture, Storage and Distribution of Food, symp., London, England. (Society of Chemical Industry, 14 Belgrave Sq., London (S.W.1)

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2-5. American Inst. of Mining, Metallurgical and Petroleum Engineers, fall, Denver, Colo. (E. O. Kirkendall, AIME, 29 W. 39 St., New York 18)

2-6. Water Pollution Control Federa-on, 33rd annual, Philadelphia, Pa. tion, (WPCF, 4435 Wisconsin Ave., Washington 16)

2-7. American Soc. of Plastic and Reconstructive Surgery, Los Angeles, Calif. (T. R. Broadbent, 508 E. S. Temple, Salt Lake City, Utah)

3-5. Applied Spectroscopy, 7th symp., Ottawa, Canada. (C. R. Langdon, Aluminium Co. of Canada, Ltd., Arvida, Quebec, Canada)

3-5. Communications, 6th natl. symp.,

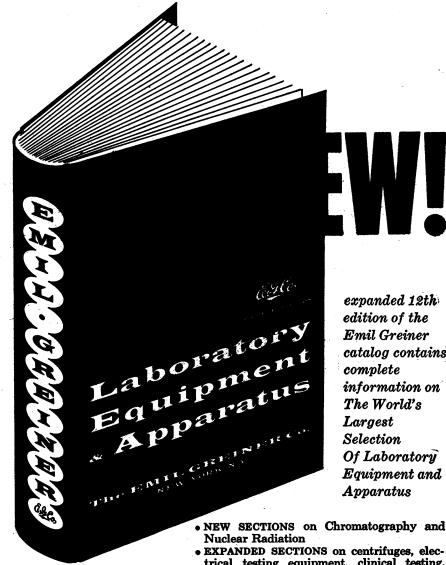
Utica, N.Y. (B. H. Baldridge, Communications Symp., Light Military Electronics Dept., General Electric Co., Utica)

3-5. Nuclear Science, 7th annual, Gat-linburg, Tenn. (H. E. Banta, Oak Ridge National Lab., P.O. Box X, Oak Ridge, Tenn.)

3-7. Atomic Energy, 5th intern. seminar, Wiesbaden, Germany. (Mr. Trebst, Diplom-Volkswirt, Generalsekretär, Internationale Studiengesellschaft e.V., Theodorenstr. 6-8, Wiesbaden)

4-6. Radio Interference Reduction, 6th conf., Chicago, Ill. (S. I. Cohn, Armour Research Foundation, 10 W. 35 St., Chicago)

(See issue of 19 August for comprehensive list.)



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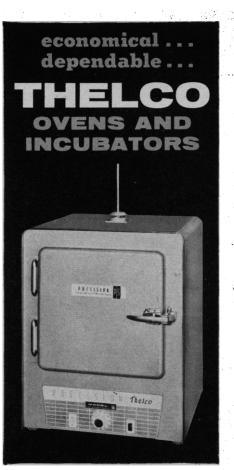
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