MUNKTELL'S SWEDISH FILTER PAPERS



Munktell's Swedish filter paper has been on the market for many years, and is so favorably known that it is almost unnecessary to describe it. Its reputation is such that it may be said that it has become the standard by which other papers are measured, grade for grade.

J. H. Munktell makes many different types of filter paper, in order to be able to furnish a paper suitable to a large number of uses. These varieties cover the entire field of usefulness between the highest grade of analytical work and the uses calling for less expensive papers for general purposes.

We shall be pleased to correspond with anybody regarding these papers, and to furnish samples and literature giving the ash and other properties of the paper.







CAMPBELL CAPACITANCE BRIDGE

Recent developments in electrical methods of transmitting information involving the use of condensers of widely different capacities have necessitated the development of apparatus whereby these capacities may be easily and accurately measured.

The Capacitance Bridge has been designed for the accurate measurement of capacities from one micro-microfarad to 30 microfarads. The percentage accuracy of reading is almost constant over the greater part of the range. A rheostat allows the loss in the condenser to be balanced, and the power factor to be deduced.

The chief uses of the instrument are: Measurement of Capacitance Comparison of Nearly Equal Condensers Measurement of Small Inductances Measurement of High and Low Resistances Testing of Highly Inductive Coils

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U. S. BUREAU OF STANDARDS CERTIFICATION OF BLOOD COUNTING CHAMBERS

In an article on "Blood Testing," in *The United States Daily, December 24th, 1926*, Dr. Lewis V. Judson, Chief of the Length Section, Weights and Measures Division, U. S. Bureau of Standards, states:

"" * * * * * * * * * The Bureau of Standards is not engaged in any researches or testing regarding the use of the chambers in actual blood counting. It has wisely limited its activity in connection with these instruments solely to the standardization and test of their dimensions, on the accuracy of which the precision of the instruments depends. It is from this point of view also that the Bureau has pointed out the advantages of the Improved Neubauer ruling and of the modern one-piece construction of the slides, both being features which specialists in the medical profession also commend.

The test of haemacytometer apparatus at the Bureau of Standards undoubtedly has raised the general standard of accuracy of these instruments.

Not all manufacturers have yet reached the goal of accuracy which one of them has maintained from the beginning of work on a production basis, namely, a perfect score in the accuracy of counting chambers tested at the Bureau. Chambers with errors in depth amounting to as much as 10 to 25 per cent have been received at the Bureau.

Some chambers with very large errors in depth have been tested within the past year. Precise blood-counting apparatus is, however, being made on a comparatively large production basis in this country, and is available on the market. A test at the Bureau of Standards will determine the precision of apparatus submitted to it for test.''

It is our opinion that the perfect score mentioned refers to Levy and Levy-Hausser Counting Chambers. However, we emphasize the importance of purchasing counting chambers with U. S. Bureau of Standards certification, as such certification subsequent to purchase involves both delay and inconvenience.

If a Levy or Levy-Hausser Counting Chamber purchased without certification should fail to pass Bureau of Standards certification, it will be replaced by us without charge. No such instance has occurred in the sale of over 45,000 Counting Chambers.

The certification of counting chambers and diluting pipettes by the U. S. Bureau of Standards was first undertaken in 1917 at our request.

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SCIENCE

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THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

RENO MEETING OF THE PACIFIC DIVISION

THE eleventh annual meeting of the Pacific Division held at Reno, Nevada, June 22 to 24, 1927, was generally conceded to be a very successful one, especially from the viewpoint of the visiting scientists. That nearly 200 could be gathered together at a point so remote from population centers was considered a notable achievement. Credit is due President Walter E. Clark and his very efficient committee on arrangements, under the chairmanship of Professor Maxwell Adams, for the harmonious functioning of the various programs.

The outstanding event of the general sessions was undoubtedly the address of President Arthur A. Noyes on "The Periodic Relations of the Elements." This occurred on Wednesday evening, June 22, when after a charmingly cordial welcome by President Clark, of the University of Nevada, and the acknowledgment on behalf of the executive committee by Vice-president Joel H. Hildebrand, President Noyes launched into his theme.

The progression and recurrence of chemical and physical properties with increasing atomic number was considered in relation to the knowledge of the structure of atoms as developed within the past two years by spectroscopists and physicists.

A novel feature of the lecture was the presentation of a large colored chart showing the energy-levels and quantum relations of the constituent electrons in the various neutral atoms and in the ions resulting from them by successive losses of electrons. By frequent references to this chart, it was shown in general that these modern conceptions of atomic structure correspond to the well-known periodicity of properties; and in particular the extent was indicated to which these conceptions account for such properties as valence, ion-formation in crystals and solutions, and the radii of neutral atoms and of the ions in the solid states.

It is hoped that this address may be published for the benefit of members who were unable to attend the meeting as well as for the information of the interested public.

The Research Conference scheduled for the luncheon period of the second day was accorded more time than at previous meetings and embraced reports of recent achievements in research in Pacific Coast labo-



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The annual announcement will be sent on application to The Director, Marine Biological Labora-tory, Woods Hole, Mass.





UNIVERSITY OF MANITOBA APPOINTMENT IN ZOOLOGY

ATTUINTIMEINT IN LUULUUI The Board of Governors of the University of Manitoba will proceed to appoint, on or after Sep-tember 15th next, a Professor of Zoology to succeed Professor C. H. O'Donoghue, who has resigned. The appointee will be head of the Department of Zoology and will be responsible for the organization and direction of instruction in the ordinary courses required for degrees in Arts and Science. He will also be required to participate in the teaching work involved therein. Salary, \$4,000.00 per annum. Three printed or typewritten copies of letter of application and testimonials should be forwarded to the Secretary of the Board of Governors. The ma-terial submitted should include full details with respect to the applicant's age, academic courses and degrees, and his training and experience both in teaching and research. It should be accompanied by copies of published papers and a recent photograph. Address: THE SECRETARY,

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