equal to that used in the preservation of most perishable foods, and in some cases is even larger than the amount necessary to preserve. The vines were tested at intervals during the cranberry season, but not even a trace of benzoic acid could be found.

The writer called the attention of Dr. W. D. Bigelow, of the United States Department of Agriculture, to the exceptionally large amount of benzoic acid naturally in cranberries, who immediately began a thorough investigation of this matter. We worked entirely independently of each other all summer and fall, and as far as I have been able to ascertain, our results have agreed in nearly every detail.

G. F. MASON.

DEPARTMENT OF CHEMICAL RESEARCH,
H. J. HEINZ COMPANY,
PITTSBURG, PA.
March 16, 1905.

Determination of Nitrites in Waters.—Apropos of R. S. Weston's interesting notes upon this topic[1] it may be worth while to call attention to the fact that the "nitrite" error, due to the presence of burning Bunsen lamps, is often much greater than is suspected. In the water laboratory here the chemically pure distilled water is prepared by the use of a large copper retort heated by a very broad Bunsen burner. Only one other lighted burner is constantly in the room and that a small one. Distilled water, as delivered by the tin worm, was tested with the following results, duplicates being run in each instance. One Nessler tube was exposed to the room atmosphere, after addition of the "nitrite" reagents, and the other carefully protected therefrom. The results are stated as parts per million.

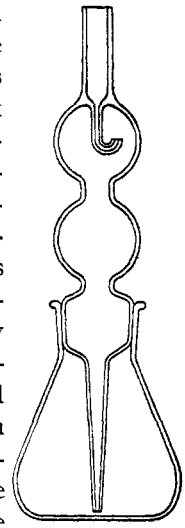
Conditions under which distilled water was collected.	Nitrites present in protected tube.	Nitrites present in unprotected tube.
Not allowed to come in contact with air of laboratory	none	0.0015
Slight contact with air. Tin condensing tube entering neck of receiving bottle	0.002	0.003
Water allowed to drop six inches through open air to receiving casserole	0.007	0.008

W. P. MASON.

RENSSELAER POLYTECHNIC INSTITUTE,
TROY, NEW YORK.

Pipette Weighing-bottle.—Among chemists who are called upon to analyze milk the need of a combination pipette and weighing-

[1] This Journal, **27**, 281.



bottle has often been felt. With this idea in mind Dr. H. M. Hill designed a pipette and bottle which admirably answers the purpose and has been found to be a great help in weighing milk for analysis. In laboratories where only analytical work is done or where each assistant or student has his own apparatus it would not be necessary to change the form of the apparatus as originally designed; but in large technical laboratories where a great variety of analytical, as well as commercial, work is being done, I found it necessary to make certain changes in this apparatus on account of the small ground cap, which is fitted over the mouth-piece of the two-bulbed pipette in the original form of the apparatus, being continually mislaid and very often lost. Sometimes the chemist using two or more pipettes will misplace the cap, thereby causing an error in the weighing, and the work must be begun anew. The improved apparatus obviates all these disadvantages and errors, and consists, as is seen in the drawing, of a weighing-bottle $1\frac{3}{4}$ inches in diameter in its widest part, $2\frac{1}{2}$ inches high and $\frac{3}{4}$ inch in diameter of mouth, into which is fitted a pipette $5\frac{1}{2}$ inches long, with three bulbs. The lower bulb acting as a stopper and the upper one having a small bent capillary tube inserted between mouth-piece and bulb, prevents evaporation. The pipette weighing-bottle weighs from 25 to 27 grams and has been found to be of excellent service in the analysis of oils and light liquids. For use in weighing heavy liquids, such as bark extracts and the like, the lip of this pipette and capillary tube must be of larger diameter.

LOUIS E. LEVI.

CHEMICAL DEPARTMENT,
PFISTER AND VOGEL LEA CO.
MILWAUKEE, WIS.

REVIEW OF PHYSICAL CHEMISTRY.

BY F. G. COTTRELL.

Received February 20, 1905.

THE following article merely attempts to supplement the regular reviews of American Chemical Research, in this Journal, by citing the more important foreign work for the past year or more which falls within the somewhat loosely defined