6. Sterilize in the autoclave at 15 pounds (120° C.) for 15 minutes after the pressure reaches 15 pounds.

KRAEMER RESEARCH LABORATORIES,
MT. CLEMENS, MICHIGAN.

In briefly discussing the foregoing paper, Ivor Griffith and William Gray expressed the thought that in the process of distillation acid might be carried over. The former stated that in the laboratory under his supervision the distilled water is sealed as promptly as possible. It was suggested that the method of preparing distilled water might be a subject for another paper next year.

TINCTURE OF FERRIC CITRO-CHLORIDE.*

BY ADLEY B. NICHOLS.

In preparing Tincture of Ferric Citro-Chloride according to the N. F. IV, the writer has always noticed the difficulty of bringing the sodium citrate into solution and the heavy separation of saline matter, as the product was allowed to stand. It seemed to him that this excessive separation was uncalled for and needless, but the fact always remained that the N. F. III formula was not quite satisfactory, for the amount of sodium citrate had been increased from 425 Gm. to 500 Gm. per 1000 cc. of tincture.

A number of samples of the tincture had been prepared from various samples of sodium citrate on hand, and it was noted that there was a marked difference in the amount of salt which separated out in the different lots. Additional samples of sodium citrate were ordered from as many different firms as possible and tinctures prepared from each of these. The separation of salt again varied and in some cases it was quite difficult to dissolve the sodium citrate, even with aid of considerable heat.

In checking up the samples of sodium citrate, it was noted that several were labeled U. S. P. VIII, while others were U. S. P. IX, and the samples of tincture showed that there was the least precipitation in the tinctures prepared from the U. S. P. VIII salts. Upon referring to the two books, it was discovered that the salt official in the U. S. P. VIII had contained five and one-half molecules of water, while that in the U. S. P. IX contains only two molecules.

This discovery settled the trouble at once, for while the U. S. P. IX had recognized a different form of sodium citrate because of its better stability, the N. F. had missed this subsequent change in strength. Where the N. F. had raised the quantity of sodium citrate from 425 Gm. to 500 Gm. to insure a better Tincture of Ferric Citro-Chloride, they had apparently based their quantities on a U. S. P. VIII salt, while the salt which became official in the new revision was considerably stronger. The N. F. III tincture had actually contained 307 grams of anhydrous sodium citrate and the amount intended for the N. F. IV formula was 361 grams, while that actually present with the new salt amounted to 439 grams.

Two tinctures were prepared with the U. S. P. VIII salt, one using the original N. F. III formula, and the other the formula in the N. F. IV, and two tinctures

* Section on Practical Pharmacy and Dispensing, A. Ph. A., Asheville meeting, 1923.

were also prepared from a U. S. P. IX salt, using in the first a proportionate amount to represent the N. F. III formula, and in the second an amount which would represent the anhydrous sodium citrate as proposed for the N. F. IV. Solution was naturally more rapid in the tinctures which contained the N. F. III quantity of salt, but in all cases the final product was clear and there was practically no separation of saline matter.

Thus the quantity of sodium citrate in the N. F. IV formula, based on the U. S. P. IX salt, should be 412 grams, instead of 500 grams, this representing the actual amount of anhydrous sodium citrate as supposedly desired for the N. F. IV.

DEPARTMENT OF OPERATIVE PHARMACY,
PHILADELPHIA COLLEGE OF PHARMACY AND SCIENCE.

After discussion of the paper by Messrs. J. C. Krantz, Jr., and F. W. E. Stedem, it was suggested that the attention of the Revision Committees of the Standards should be called to the subject.

ABSTRACTS OF PAPERS READ BEFORE SCIENTIFIC SECTION, A. PH. A.

(Abstracts by Arno Viehoever.)

To be published in succeeding issues of the JOURNAL.

NOTE ON THE VARIABILITY OF THE COMPOSITION OF U. S. P. SYRUP OF WILD CHERRY.

By L. F. Kebler and W. F. Kunke.

During the examination of a sample of Syrup of Wild Cherry, purchased as of U. S. P. quality, it was found that the sucrose was materially lower than the amount calculated from the formula. Another brand of this Syrup was purchased and it likewise was low. The samples furthermore did not contain any hydrocyanic acid and the U. S. P. does not prescribe any. It was then decided to prepare a sample of the Syrup from a genuine specimen of Wild Cherry Bark, determine the degree of inversion of the sucrose and the percentage of hydrocyanic acid content in the finished syrup and the rate of inversion of the sucrose and the loss of hydrocyanic acid of samples, stored under different conditions. The results show that in a little over four months practically all of the sucrose was inverted and the hydrocyanic acid content was greatly reduced but not in proportion to the degree of sucrose inversion. Refrigeration seemed to retard the rate of acid changes.

THE ACTION OF CERTAIN CHEMICAL AGENTS ON THE STERILITY AND ACTIVITY OF TISSUE EXTRACTS.

By Wyly M. Billing.

The author discusses experiments to effect the sterilization of tissue fibrinogen, the natural coagulating agent of tissue, useful for control of hemorrhage by internal administration.

The customary methods of sterilization could not be employed. Of various chemicals used mercuric chloride, suggested by Mills, proved to give very satisfactory results. After describing the procedure of sterilizing the extract and of again removing the mercuric salt, toxic to higher forms of life, the author concludes:

"The resulting extract is in every way as active as it was before sterilization.

"While we have used this method of sterilization only in tissue fibrinogen it offers very interesting possibilities in the ever-growing field of protein preparations for injection because we are able by it to obtain a sterile product without permanently affecting its nature."

PNEUMOCOCCUS ANTIBODY SOLUTION.

With special reference to its nature, preparation, administration and effect.

By Paul S. Pittenger.

Antibody solutions are a new classification of biological products just beginning to come into use. After discussing in some detail the various phases of his subject indicated in the sub-title, he concludes that the satisfactory results obtained by leading pneumonia specialists throughout the United States in the past two years with antibody solutions mark an important step in advance in the specific treatment of lobar pneumonia.

New York Veteran Druggists' Association will celebrate its first anniversary on January 22nd.