

## Report on Microchemical Methods

By C. L. OGG, *Referee* (Eastern Regional Research Laboratory,\* Philadelphia 18, Pa.)

The study of the determination of oxygen in organic materials has been continued this year. More collaborators have been obtained and an additional sample has been analyzed to determine the performance of the method with materials which are predominantly hydrocarbon in nature.

The Referee has been experimenting with the isothermal distillation method for molecular weight determination to try to develop a more simplified, efficient apparatus. The results look promising but are not sufficiently complete to warrant a report on the method this year.

A number of methods have been in the first action status for one to three years with no indication of unsatisfactory performance. These are generally old and tried procedures and should not need further proving. They are the gravimetric determination of the sulfate formed in the Carius and catalytic combustion methods for sulfur, the

phosphomolybdate method for phosphorus, the Carius method for iodine, and the method for ethoxyl and methoxyl group determination.

It is recommended†—

(1) That the study of methods for the determination of oxygen be continued.

(2) That studies be continued on methods for determining molecular weight.

(3) That studies aimed at improving the micro-Kjeldahl method, 37.9, be initiated.

(4) That studies on the determination of nitrogen by the Dumas method be held in abeyance for one year.

(5) That the following first action methods be made official:

Carius gravimetric combustion method for phosphorus, 37.16–37.17

Gravimetric catalytic combustion method for sulfur, 37.22

Iodine, *This Journal*, 41, 57 (1958)

Phosphorus, *This Journal*, 40, 72 (1957)

\* Eastern Utilization Research and Development Division, Agricultural Research Service, U. S. Department of Agriculture.

† For report of Subcommittee C and action of the Association, see *This Journal*, 42, 24 (1959).

## Report on Microanalytical Determination of Oxygen, Part II

By AL STEYERMARK, *Associate Referee* (Hoffmann-La Roche Inc., Nutley, N.J.)

For last year's study (8) on the determination of oxygen, the collaborators were asked to analyze two samples, benzoic acid and Gantrisin® (3,4-dimethyl-5-sulfanilamido-isoxazole, by whatever methods they were currently using in their laboratories, to do four determinations on each sample, and to report whatever results they obtained, unless there were some definite reasons for not so doing. In addition, the collaborators were asked to give information regarding the important points of the methods used, including such things as literature references, whether the

results were obtained volumetrically or gravimetrically, purification trains, temperatures, etc. Since only six laboratories participated, statistical comparisons of the methods and variations of procedures could not be made, but striking similarities in procedure were mentioned, inasmuch as *all* of the collaborators obtained excellent accuracy and precision.

During the past year, a number of additional laboratories signified their willingness to participate provided that they could still use the methods in use in their own labora-