

gested in the Associate Referee's report on shellfish be applied to authentic progressive decomposition packs of shrimp.

(7) That succinic acid as an index of decomposition in fish products, *This Journal*, **39**, 608 (1956), be studied collaboratively.

(8) That studies of uric acid as an index of filth in nuts, cereals, and eggs be continued.

(9) That search be continued for chemical indexes of fecal matter in foods.

(10) That study of chemical methods for decomposition in nuts be continued.

(11) That the study of the determination of ammonia nitrogen in eggs be discontinued.

(12) That the method for the determination of TMA in fresh and frozen fish, described in the Associate Referee's report (*This Journal*, **42**, 292 (1959)), be studied collaboratively; and that application of the method to a fish distillate instead of to a fish extract be studied.

(13) That the first action method for the determination of pyoverdine in eggs, **16.045-**

16.046, be further studied, as suggested in the Associate Referee's report (*This Journal*, **42**, 289 (1959)).

(14) That study be made of the acidic constituents in olives.

(15) That the method for separation and identification of sodium salts of $C_2 - C_5$ volatile fatty acids by paper chromatography, *This Journal*, **43**, 428 (1960), be applied to eggs, fish, and other foods in which they occur as a result of decomposition.

(16) That the study of the use of gas chromatography to detect and determine products of decomposition in foods be continued with particular reference to volatile acids.

(17) That studies be initiated on the determination of monoglycerides in butter as an index of decomposition.

(18) That studies be made on lactic and volatile acids resulting from bacterial decomposition in strawberries.

(19) That search for indexes of decomposition in grapes be continued.

Report on Microchemical Methods

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A follow-up study was conducted on the direct determination of oxygen, with all collaborators using the same method. In the previous study, each collaborator used his own procedure, which he described in detail when reporting his results. All methods were modifications of the Unterzancher procedure, and all gave good results. However, the method selected for test this year had been used successfully for several years and appeared free from interfering side reactions.

Results were good for all samples tested and indicated that the method is sufficiently accurate and precise to warrant recommendation as an official, first action procedure.

Recommendations

It is recommended—

(1) That study of micro methods for determination of molecular weight be continued.

(2) That the method for determination of oxygen, described in the Associate Referee's report, be adopted as official, first action.

(3) That the first action method for the determination of fluorine, *This Journal*, **44**, 158 (1961), be subjected to further collaborative study.

(4) That a study be initiated of closed flask combustion methods for the halogens and sulfur.