ABSTRACTS OF ARTICLES BY A. O. C. S. MEMBERS.

CANTALOUPE SEED OIL. W. F. BAUGHMAN, D. BRAUNS
AND G. S. JAMIESON, J. A. C. S. 42. 2398-2401.

(NOVEMBER, 1920.)

TABLE 1.—CANTALOUPE SEED OIL.

Chemical and Physical Characteristics.

Specific gravity 25°/25°....	0.9210
Refractive index 20°.....	1.4725
Iodine number (Hanus)....	125.9
Saponification value.....	192.3
Reichert-Meisss number....	0.33
Potenske number.....	0.26
Acetyl number.....	15.8
Acid value.....	0.43
Unsapnifiable matter, per cent	1.1
Soluble acids (per cent. butyric acids).....	0.4
Insoluble acids, per cent....	94.0
Unsaturated acids (determined), per cent.....	79.2 (Iodine No. 151.8)
Saturated acids (determined), per cent.....	15.3 (Iodine No. 10.0)
Unsaturated acids (corrected), per cent.....	80.2
Saturated acids (corrected), per cent.....	14.3

Analysis of the methyl esters of the saturated fatty acids and the bromine derivatives of the unsaturated acids lead to the conclusion that cantaloupe seed oil has the following composition:

Composition of Cantaloupe Seed Oil.

Glycerides of:	Myristic acid.....	0.3
	Palmitic acid.....	10.2
	Stearic acid.....	4.5
	Oleic acid.....	27.2
	Linolic acid.....	56.6
Unsapnified matter.....		1.1

99.9

The seed contained 30.4 per cent. of a bland, pale-yellow oil having an odor resembling that of olive oil and a pleasant fruity flavor. It is noteworthy that this oil, although it had stood in an ordinary glass bottle for two years in the laboratory, had an acid value of only 0.43.

H. S. BAILEY.

ADDITIONAL REFEREE CHEMISTS QUALIFY.

Mr. John Robert Mays, Jr., Barrow-Agee Laboratories, Shreveport, La.—Certified for crude cottonseed oil, cottonseed meats, hulls, meal, fertilizer, refined cottonseed oil and cottonseed.

Mr. Harry G. Lewis, President Little Rock Laboratories, Little Rock, Ark.—Certified for cottonseed-meal products and fertilizer.

Mr. A. W. Horrell, Barrow-Agee Laboratories, Memphis, Tenn.—Certified for cottonseed meal, cottonseed, peanuts and fertilizers.

Mr. J. C. Burt, Barrow-Agee Laboratories, Greenville, Miss.—Certified for crude cottonseed oil, cottonseed, cottonseed meats, hulls and meal.

Mr. Charles H. Cox, Barrow-Agee Laboratories, Memphis, Tenn.—All subjects.

DR. DAVID WESSON,

Chairman Examining Board, Referee Chemists.

Edward A. Eve, general manager Sea Island Cotton Oil Co., Charleston, S. C., on recent trip through the Eastern markets paid a short visit to the offices of the Interstate and reports business in the peanut industry as getting better. Dealers in Baltimore, Philadelphia, New York and Boston are optimistic, Mr. Eve reports.

SAMPLING COCOANUT OIL IN TANK CARS.

By P. W. Tompkins, Curtis & Tompkins,
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In the New York Produce Rules, rule 4, section 4, provides that cocoanut oil in tank cars should be heated to not less than 110 degrees F. before sampling, which is obviously unnecessary where cars are handled under ordinary conditions. It may be that this provision was originally intended to meet the needs of cold climatic conditions and provide sufficient latitude for cooling during the process of unloading the car. This rule has now been incorporated in the rules of the Interstate Cottonseed Crushers' Association (rule 2, section 4) and Foreign Commerce Association (rule 275), and reads as follows:

"When tank cars of cocoanut oil are sampled the same must be at a temperature of not less than 110 degrees F."

This temperature may also represent an unobserved typographical error and meant to read not MORE than instead of "not LESS than 110 degrees F." In any event, it is not customary when heating cocoanut oil in steamer tanks preparatory to loading directly to tank cars to exceed 110 degrees F. to any extent, which is sufficient for Pacific Coast climate conditions. Where tank cars are loaded directly from plant storage tanks, the oil is handled around 90 degrees F., and when ready to sample the temperature is about 80 or 85 degrees F.

As cocoanut oil melts at about 74 to 80 degrees F., and is sufficiently liquid for pumping at about 85 degrees, there can be no object of exceeding this temperature for the purpose of sampling. If this rule were to be complied with and tank cars sampled when the oil was less than 110 degrees F., it would necessitate heating steamer or storage tanks to a much higher and EXCESSIVE temperature to allow for cooling in the lines and during loading. In practice every effort is employed to keep the temperature as low as possible in order to prevent any damage due to darkening in color that the crude oil might sustain by excessive heating. When stationary equipment such as long pipe lines from docks to plants are used, the danger of the oil "freezing" before reaching the storage tank is eliminated by the central heating pipe, which controls temperature conditions.

While anyone familiar with bulk shipments of crude cocoanut oil would not employ sufficient heat to comply with the letter of this rule, it has been specifically referred to in contracts by technical traders, unfamiliar with the needs, and who have expressed surprise in the non-compliance of this provision, thinking, of course, that the sample could not be fairly drawn unless at this temperature.

It is advisable from the standpoint of safety and practicability that the rule be corrected to read "not MORE than 100 degrees F.," or that no mention of temperature be made at all, since as long as the oil is liquid there can be no object of having it above this temperature, nor is there any advantage in having the oil in tank cars at 110 degrees F. before sampling, when 80, 90 or 100 degrees F. would do just as well.

Cable advices from Spain report that the Spanish Government has lifted the embargo on olive oil so as to allow 20,000 long tons, or 5,866,000 gallons, to be exported. There will, however, be an export tax of 25 pesetas (pesetas \$.15) per 100 kilos (220 pounds) on all oil exported in tins, and 20 pesetas per 100 kilos on all olive oil exported in bulk.