ABSTRACTS

David Wesson, *Abstract Editor*

From recently conducted critical studies of the Halphen test, J. Pieraerts and Emile Simar report as follows: (a) No increase in sensitivity is obtained by diluting the product under test; (b) pure furfural has no effect on the reaction; (c) pyridine increases the speed and sensitivity of the reaction; (d) contrary to Gastaldi, very pure amyl alcohol does not give the same coloration with the Halphen reaction. *Mat. grasses* 20, 8312-6 (1928)

A new apparatus for the reduction of nickel catalyst is described in *Masloboino Zhirovoe Delo No.* 2, 8-11, (1928). The author claims the advantages for his apparatus of mechanical charge and discharge, absolute tightness during the complete operation, very good contact between the hydrogen and the catalyst, the possibility of drawing samples during the process without cooling the apparatus, and the possibility of discharging the catalyst while hot.

Methods heretofore used for the isolation of erucic acid from rapeseed oil have been unsatisfactory, due to difficulty of manipulation, or to low yield or impurity of product. A newly reported method is based on the observation that by adding small quantities of lead acetate to the alcoholic solution of the total fatty acids obtained from the oil, the saturated acids are precipitated first. The other unsaturated acids are separated by means of magnesium acetate. It is claimed that this method gives a good yield of pure erucic acid. *Z. angew. Chem.* 41, 157-9, (1928).

A heavy lubricant, substitute for castor oil, designated as "Mineral Castor Oil" is prepared by mixing a basic aluminum soap with mineral oil. The aluminum soap is prepared by precipitation from an aqueous soap solution with a solution of an aluminum salt, in the presence of an alkali. U. S. Patent No. 1,691,654.

The German Commission for Fat Analysis is standardizing the methods for the analysis of Turkey Red oil, and is broadcasting some questions for public discussion on the methods for such sulfonated oils that can be split quantitatively with concentrated hydrochloric acid. *Chem. Umschau Fette, Oele, Wachse u. Harze* 35, 270-4 (1928).

The percentage of saturated constituents in those fats which contain only triolein and trilinolin as their unsaturated components may be calculated from the thiocyanate numbers of triolein and trilinolin, which are 86.06 and 86.65 respectively. The equation for determining the saturated constituents is given in *Z. angew. Chem.* 41, 1046-8 (1928).

Lignoceric acid has been detected as present in olive oil extracted by carbon disulfide, and may account for the variations in the constants of such oil from those of other olive oils. *Chem. Umschau Fette, Oele, Wachse u. Harze* 35, 275-7 (1928).

It is stated that the formation of isooleic acid in the hydrogenation of soya bean oil is lessened when the reaction temperature is maintained at low levels. The greater the amount of catalyzer used the greater will be the formation of isooleic acid. Small percentages of copper in the nickel catalyzer cause the formation of a large amount of the isooleic acid, but increase of the percentage of copper to four percent seems to reduce this formation of isooleic acid. *J. Soc. Chem. Ind. (Japan)* 31, 467-9; *Suppl. Binding* 111-2B (1928).

The color of fatty acids obtained by saponifying natural fats with "Kontakt" reagent may be improved by washing the fats before saponification with a mixture of sulfuric acid and soluble sulfates. For vegetable oils sodium sulfate is used and for animal oils a mixture of sodium sulfate and zinc sulfate has been found preferable. *Masloboino Zhirovoe Delo* 1928 No. 1, 28-30.

Chloroform, alcohol, ether, and chloral hydrate are said to possess the common property of accelerating the reaction between caustic soda or soda ash and free fatty acids in the saponification of olive oil and oleic acid. *Boll. soc. ital. biol. sper.* 3, 359-62 (1928).

Concerning Neatsfoot Oil and Its Adulteration*

By DR. MARTIN AUERBACH

Under the above title I published in No. 31 of *Seifensieder-Zeitung* some experiences which I had in my laboratory concerning the adulteration and examination of neatsfoot oils. Some weeks ago there came under my observation an oil on which a test for adulteration was made which certainly is to be designated as original.

The sample was labeled: "Neatsfoot Oil," (purely animal oil).

The appearance of the sample was rather striking. It showed an unusual fluorescence. By analysis it was established to contain:

Water (volatile at 100°)	traces
Mineral substance	traces
Organic substances (insoluble in ether)	.0%
Unsaponifiable matter	52.5%
Saponifiable matter (by difference)	47.5%
Free fatty acid, as oleic acid	1.6%

The unsaponifiable parts were on account of their fluorescence pronounced to be mineral oil without further investigation. To this decision objection was made and there was submitted to me an analysis which contained the following data:

Specific gravity at 15°	.890
Freezing point	—6°
Point of turbidity	—1°
Iodine number	40—42
Free fatty acids	2—3%
Unsaponifiable matter	43%

Although every specialist recognizes from these data with certainty that pure neatsfoot oil is not involved in this case, the attempt at deception was contained by the claim in writing that the oil in question was absolutely pure animal oil, and that most chemists pronounce the unsaponifiable ingredients falsely to be mineral oils. It was stated that in America the chemists involved had become convinced of the fact that the oil involved was in reality 100% pure animal oil.

The further proceedings as well as the further investigations excluding the oil resulted in a perfectly clear picture concerning the attempt at deception. The unsaponifiable matter was in reality not mineral oil, but proved to be wool fat olein by reason of its iodine number and its optical property.

Although I hardly believe that American chemists are willing to designate an oil of this kind, originating it is true from an animal product, as a purely animal oil, I myself had difficulties, in view of these American assertions, to make clear to my agent that the oil was neither a pure neatsfoot oil—which he was willing to acknowledge in any event—nor in general a pure animal oil.

I believe that this attempt at misleading the consumers of the expensive neatsfoot oil deserves general interest.

* *Seifens.-Ztg.*, Vol. 55, No. 34.

Gold Dust Plan Effective

The Gold Dust Corporation has announced that more than 51 per cent. of the capital stock of the Standard Milling Company have been deposited with the Equitable Trust Company as assenting to the offer of last Jan. 8, under which Gold Dust offered its securities in exchange for those of Standard Milling.

New Books

Glycerol and the Glycols by James W. Lawrie, Ph.D. Published by Chemical Catalog Co., Inc., New York, 425 pages. Binding cloth. Size, 6¼ by 9¼. The first five chapters of the book are devoted to a review of the various methods of production of glycerol. Its physical and chemical properties are then analyzed, and quantitative and qualitative tests are given. International standard specifications are listed, and statistics concerning past production and price trends are presented. Two chapters are devoted to the production and properties of nitroglycerol and the glycols. The commercial uses of these products are enumerated, and the book closes with an attempt to forecast the future use and importance of glycerol.

The Virginia State Conservation and Development Commission of Richmond has recently issued a most attractive brochure entitled "Industrial Virginia," which the Commission describes as "A brief industrial sketch and fact sheet. This booklet gives the pertinent facts concerning the developed industries and the industrial opportunities in the "Old Dominion." It contains a wealth of interesting material attractively and concisely presented, and should have a place in the file of every industrialist. Copies of the booklet may be obtained from E. O. Fippin, Secretary, State Conservation and Development Commission, Richmond, Virginia.