the results of their analyses, the composition of each was determined by the methods previously described (J. Amer. Chem. Soc. 46, p. 775, 1924). The final results calculated from the analytical data are given in Table III.

TABLE III.
Saturated Acids

	Per cent	Per cent in Oil
Palmitic	51.43	9.77
Stearic	42.09	8.00
Arachidic	6.25	1.19
Lignoceric	0.23	.04
	100.00	19.00

The acids were recovered from the ester fractions and the small undistilled residues by saponifying them with alcoholic potash and decomposing the soaps, after the removal of the alcohol and solution in water, with hydrochloric acid. The acids were collected and completely separated from potassium chloride and any hydrochloric acid by remelting them with hot distilled water in the usual manner. The acids obtained from the five ester fractions and the undistilled residue were subjected to fractional crystallization from ethyl alcohol. No myristic acid could be detected in the acids from the first ester fraction. Arachidic acid was separated from the acids of ester fraction five as well as those from the undistilled residue which also contained the lignoceric acid. The acids from the distilled ester fractions, which were isolated and identified in each case, confirmed the deductions previously made from the mean molecular weights of the saturated acid esters. The composition of the oil in terms of glycerides is given in Table IV.

TABLE IV.
Percentages of Fatty Acids as Glycerides.

Glycerides of—	Per cent
Oleic	45.2
Linoleic	32.9
Palmitic	10.2
Stearic	8.4
Arachidic	1.2
Lignoceric	0.04
Unsaponifiable matter	0.8

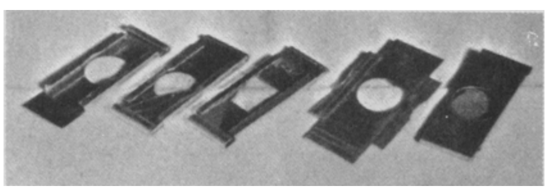
Upon comparing these results with those reported by Cruz and West (loc. cit.) it will be observed that the respective proportions of palmitic and stearic acids found in the two oils are very different, and that in contrast to the Philippine oil, no myristic acid could be detected in the product from Java seed.

Frames For Protecting And Repairing Lovibond Color Glasses

By EGBERT FREYER
South Texas Cotton Oil Co., Houston, Tex.

THE cost of Lovibond color glasses is such that should make us welcome any device designed to reduce the likelihood of their breaking when handled carelessly, to protect them from deterioration through their acquiring scratches, and to facilitate the utilization of fragments after breakage has occurred. In the more advanced designs of colorimeters (Oil & Soap, January, 1936), in which the glasses are mounted in revolving discs, these contingencies are not met; but it is believed that few laboratories possess such instruments, and it seems probable that some refineries may, like the one with which the writer is associated, have several sets of glasses in use at various stations in the plant, where they are subject to rough usage and careless handling, and where, accordingly, the use of the device I describe here should effect some saving.

This device is merely a light frame made from 28 gauge (0.014 in.) sheet aluminum. The writer received the cue for this application from the somewhat similar mounting frames designed by Mr. Kenneth Clough of the W. H. Curtin Company for holding microscope slides containing forams, or minute fossil shells. The design is clearly shown by the illustration.



Showing Design of Frame

Dimensions are not given, because the thickness of the glasses varies. In making these frames in quantity, it was found convenient to have two or more small slabs of steel each of the length and breadth of color glasses but with different thicknesses—to use as forms around which to bend the aluminum. Neat, angular bends are made by backing the aluminum sheet with a similar steel plate and holding in a vice. The bend is made by folding the metal over with a steel rule. The perforations were made cleanly and quickly by clamping a stack of the sheets (before bending, of course), between two short sections of heavy strap iron in which were drilled ⅝-in. holes. A piece of ⅝-in. shafting, squared off sharply on one end, was used as a punch. Some care is required to insure all the plates being exactly centered with respect to the holes.

When broken pieces of color glasses are to be mounted, the spaces in the frames not occupied by the glass are filled with pieces of sheet aluminum 1/16-in. thick, cut to such shape by chiseling and filing as to make a complete rectangle, when combined with the fragment, of the size of a whole glass. These portions of the assembly serve as convenient surfaces in which to stamp the numbers of the glasses. When whole glasses are mounted, the numbers may be scratched on the thin frame or marked on it by means of an electric device. After rubbing the numbers with a contrasting oil-proof impregnating material, such as a nitrocellulose lacquer, the numbers stand out in fine clarity, and will gladden the heart of the oil chemist who has depended upon reading the figures scratched on the glass, or who has despaired of trying to keep paper labels cemented to the ends of the glasses.

A further advantage in the application of these frames will be appreciated by those who need new sets of glasses, or who want spare ones. It is this: that you may get two glasses for the price of one. The whole glass is broken across the center of its unmarked area, after scratching with a glass cutter, and the two separate parts are mounted in frames. Finally, it is apparent that when the glasses are stacked during use in the colorimeter tube holder, no scratching will result when minute, undetected particles of dirt are present, since the frames separate the glasses by at least the thickness of the aluminum. In fact, these frames prevent contact of the glasses with anything during normal handling, except when it may be necessary to wipe them clean.

American Chemical Regional Meeting at Omaha Next Spring

Omaha chemists will be hosts to the fourteenth midwest regional meeting of the American Chemical Society next spring—April 29, 30 and May 1.

Six divisional groups are being organized: agricultural and food chemistry, biochemistry, chemical education, industrial chemistry, organic chemistry, and physical and inorganic chemistry. Several symposia are planned, among them one on "Eggs" and another on "Chemurgy." Titles of prospective papers in industrial chemistry may be sent to the secretary of the industrial division, Dr. L. B. Parsons, Cudahy Packing Co., Omaha.

It is expected that this regional meeting in Omaha will appeal particularly to midwestern chemists because the next three national meetings of the American Chemical Society will all convene outside of the Middle West (Chapel Hill, N. C., Rochester, N. Y., and Dallas, Texas).

A REVIEW

By Professor W. E. Anderson.

Nutrition and Public Health. By Et. Burnet and *W. R. Aykroyd. League of Nations. Quarterly Bulletin of the Health Organization, Vol. IV,* 323-474 (1935).

In this world survey which deals with the relation of the rapidly expanding science of nutrition to public health, many topics, including the following, are considered: The place of nutrition in public health and preventive medicine; dietary and physical standards; food supply; education in nutrition; various examples of public health and nutrition work; and the problem of nutrition on a national and international scale. The roles of protein, fat, carbohydrate, mineral salts and vitamins in the diet are reviewed; and from the data compiled in the accompanying table, the distribution of calories may be calculated.

STANDARD DIETARIES PUT FORWARD BY VARIOUS AUTHORITIES AS SUITABLE FOR AVERAGE MEN

	Protein	Fat	Carbohydrate	Calories
	(grammes)			
Voit	118	56	500	3,055
Rubner	127	52	509	3,092
Atwater	125	125	450	3,520
Advisory Committee (Ministry of Health)	100[1]	100	400	3,000
Playfair ...	119	51	531	3,140
Tyszka	80-100[2]	60-80	500	3,000

[1]Including 37 grammes of animal protein.

[2]Including 40 grammes of animal protein.

Regarding the contribution of fat to the total dietary energy, it is interesting to observe various amounts recommended by students of nutrition. (In the dietaries proposed by Playfair and by Atwater fat contributes 15 per cent and 33 per cent, respectively of the total calories.)

"Standards of fat intake proposed by physiologists show wide variation, as does the actual intake of human beings in various parts of the world. The standard fat allowances of Voit, Rubner and others are about half the actual consumption of average men in Western civilization today. Fat has a high satiety value; its high caloric content reduces the bulk of food consumed; it is the vehicle of fat-soluble vitamins; infants at the breast receive about half of their calories in the shape of fat; it may yet be shown to possess some intrinsic quality of value to the organism. For these and other reasons, it seems advisable that standards of fat intake should not be too low."

In the chapter dealing with food supply, the dependence of national dietaries on a variety of factors—political, economic and agricultural—are strikingly emphasized.

The following annexes are included in the review:

General Survey of Nutrition in the Union of Soviet Socialist Republics.

Diet in Danish Residential Institutions.

Propaganda in Favor of the Consumption of Milk and Cheap Milk for School Children.

Scientific Society of Alimentary Hygiene (France).

Organization for Improving Nutrition in Japan.

Recommendations in Favor of an International Nutrition Institute.

Study of the Normal Functioning of the Alimentary Canal.

The authors, in concluding their stimulating report, suggest lines which seem desirable, particularly at the present juncture, for dealing with the practical problem of nutrition. They remark that "production, distribution and consumption have hitherto been considered mainly as economic phenomena without sufficient regard to their effect on public health. . . . The general problem of nutrition, as it presents itself today, is that of harmonizing economic and public health development."

(This report may be purchased at 50c per copy from the World Peace Foundation, 40 Mt. Vernon St., Boston, Mass.)