

*Minutes of the Seventh Fall Meeting of the American Oil Chemists Society

Congress Hotel, Chicago, Illinois October, 12-13, 1933

Thursday, October 12, 9:30 A. M.

PRESIDENT HARRIS called the meeting to order and welcomed the members of the Society to the Chicago meeting. Tribute was paid to Mr. W. H. Irwin, Chairman of the Chicago Local Committee, and to Mr. W. D. Hutchins of Savannah, Chairman of the Membership Committee, through whose efforts a gratifying increase in membership has occurred. The meeting was then turned over to Mr. Archibald Campbell, Chairman of the Soap Committee.

The first report called for was that of the Soap Analysis Committee which was read by Mr. M. L. Sheely, Chairman.

Mr. W. H. Irwin moved to refer all committee reports to the Uniform Methods Committee. The motion was seconded and approved.

In the absence of Mr. J. G. Vail, Chairman, the report of the Detergents Committee was read by Mr. J. E. Doherty.

The report of the Paper and Ink Stability Committee was read by Mr. L. F. Hoyt, Chairman. The members of this committee had only recently been appointed and held their first meeting on September 13th. A program for future study had been outlined at this meeting, and was read by Mr. Hoyt.

The report of the Glycerine Analysis Committee was read by Mr. J. T. R. Andrews, Chairman. Before reading his report, Mr. Andrews remarked that the committee members had not had an opportunity to examine the final results of their work and consequently his report was to be considered a presentation of data and not the basis for any recommendations.

Mr. Campbell made a few general remarks stressing the importance of the work of the committees and suggesting that any new problems which might come up be referred to him for special analysis by one of the committees.

Due to another engagement it was necessary for Dr. A. D. Holmes to present his paper on "Some Results That Have Been Obtained by Supplementing the Dietary with Cod Liver Oil," on Thursday instead of Friday, as shown on the program.

A paper was presented by Mr. Kenneth H. Hoover of Chicago on "Some Newer Aspects of Glycerin."

Mr. Campbell announced that Mr. John W. Hall of Chicago, who was to have presented a paper on "Wasted Time," was not able to attend the meeting. Mr. Campbell took this opportunity to comment on the importance of the broker to the fats and oils industry, bringing out the fact that while it is the prerogative of the Society to draw up regulations, it is left with the broker to see that they are adopted by the trade.

Mr. T. Linsey Crossley of Toronto presented a paper on "Paper Processing for Package Purposes."

Mr. F. E. Boyce of Omaha presented a paper on "Packaging Laundry Soaps."

In the absence of the authors, Mr. C. B. Cluff read a paper on "Heat Requirements for Fatty Acid Distillation" by Mr. Victor Mills and Mr. R. C. Daniels of Cincinnati.

The meeting adjourned at 12:30 p. m. for lunch.

The afternoon meeting was called to order at 2:00 p. m. by Mr. Campbell.

Mr. A. S. Richardson of Cincinnati presented a paper on "Some New Detergents."

Mr. O. M. Morgan of Ottawa presented a paper on "A Quantitative Estimation of Detergency."

Mr. V. Voorhees presented a paper on "The Removal of Stearin from Fatty Oils with Liquefied Hydrocarbon Gases" by himself in collaboration with Mr. C. E. Adams and Mr. G. L. Parkhurst of Chicago.

A chemical warfare service training film was next presented.

The meeting adjourned at 5:00 p. m.

Friday, October 13, 9:00 A. M.

PRESIDENT HARRIS called the meeting to order. Mr. W. H. Irwin presented the report of the Fat Analysis Committee.

Mr. Irwin called attention to the fact that a motion was in order to refer his report to the Uniform Methods Committee. This motion was accordingly put through.

President Harris announced that Mr. L. Wilson Green's paper on "Chemical Microscopy of Fats and Waxes" would be read by title and would be published later in the journal of the Society.

Dr. A. D. Barbour of Toronto presented a paper on "Various Methods of Determining Iodine Values and Their Effect on the Results of Fat Analysis."

Dr. K. K. Jones of Chicago presented a paper on "Recent Developments in the Vitamines of Oils and Fats."

Mr. L. M. Tolman announced plans for a golf tournament at the Beverly Country Club.

President Harris made a few remarks concerning the necessity of supporting the Society's journal, OIL AND SOAP, and complimented the work of Mr. W. H. Irwin, Chairman of the Journal Committee.

Mr. Irwin asked that the members patronize the advertisers in OIL AND SOAP, and called attention to the fact that the continuance and expansion of the journal depended upon their support.

Mr. C. B. Morison of Chicago presented a paper on "Shortening Requirements for the Baked Product."

Dr. J. J. Vollertsen of Chicago read the report of the Uniform Methods Committee which was adopted in the following motions:

Soap Analysis Report

A motion was made to adopt the report of the Soap Analysis Committee, including the exceptions made in the report. It is recommended, however, that the two exceptions noted in the report, namely,

- (a) unsaponified and unsaponifiable matter, and
 - (b) distillation moisture in highly filled soaps
- remain as tentative methods for another year before an official adoption is considered.

Fat Analysis Report

A motion was made and carried to adopt a method which has been studied by the committee for the determination of smoke point in vegetable and animal oils and fats.

At this time Dr. Vollertsen called attention to the interesting exhibits of reagents and apparatus on display.

Mrs. Edith Shuck of Chicago presented a paper on "Consumer Ideas of Oil Cookery."

Mr. A. E. King presented a paper on "The Accelerating Effect of Metals on the Development of Peroxides in Oils and Fats" written by himself in collaboration with Mr. H. L. Roschen and Mr. W. H. Irwin.

Mr. L. B. Kilgore of Washington, D. C., read a paper prepared by M. R. Coe and J. A. LaClerc for the last meeting of the American Chemical Society. The title of the paper was Photo Chemical Studies Relating to Rancidity.

Dr. Dorothy Whipple presented a paper on "The

Relation of Fats and Vitamines in the Diet."

Professor F. W. Bouska of Chicago presented a paper on "Butter, Its Commercial Aspects and a Diagnosis of Its Defects."

Mr. T. Linsey Crossley asked if consideration had been given to the quality of paper used to wrap butter.

Professor Bouska replied that the paper should be porous enough to admit of some evaporation.

Mr. W. D. Hutchins reported on efforts to obtain new members during the past year.

The meeting adjourned at 1:00 P. M.

*Discussion of the several papers deleted but will appear with the several papers as published.

Packaging Laundry Soap

By F. E. Joyce, Omaha, Nebr.

PAPER, inks, and containers are three items that make up the package of laundry soap. A technical discussion of the manufacture of these three is not intended, rather, the practical experience obtained from the use of the various grades of paper, types of ink and container materials.

With the advent of high speed wrapping machines and the urge for continuous non-stop production, it became necessary to use grades of paper with sufficient strength to stand quick jerks from the magazine. The cheaper grades of paper such as news print and book stock served very well at slower speeds but on high speed machines they were a continuous source of interruption because of frequent tearing and jamming in the delivery wheels. Just why these cheaper papers do not have the strength may be learned from the method of manufacture. Newsprint contains considerable untreated ground wood mixed with some treated fibres. In the paper making process the wood is disintegrated by caustic soda, sulphurous acid or neutral sodium sulphite to remove lignin and resinous matter to produce a clean wood fibre. Ground wood, on the other hand, is just what its name implies, merely wood ground to a powder and ready to be mixed with the treated wood fibres without undergoing any chemical process. A paper made by this method lacks strength and easily turns yellow on contact with alkali because of the presence of resinous matter. The cheaper book papers are made from worked over paper and a larger percentage of treated wood fibre. They look better than newsprint and print well but they tear easily and turn yellow with alkali like newsprint.

Other grades of paper tried frequently are parchment, dry waxed and sulphite. Parchment is rather expensive and has a tendency to crack if all moving parts of the wrapping machine are not perfectly synchronized; besides it does not lithograph as well as other grades of paper. Dry waxed paper works fairly well on slower machines but on fast wrapping machines the tendency is for two or three sheets to come out of the magazine instead of one, due to cohesion.

Of the grades of papers mentioned, experience has shown that the pure sulphite sheet is best. That is paper made from treated wood fibres alone without fillers such as ground wood, old paper stock and mineral fillers. Such paper is long fibre stock and does not tear easily. This type of paper is available in any weight and may be successfully used for both the inner and outer wrappers of laundry soap cakes. It is usually cut with the grain running the long way of the sheet. The surface of the paper is slightly roughened so there will be enough

friction to prevent more than one sheet at a time leaving the magazine. Pure sulphite paper is not affected by alkali even on long standing and makes excellent stock for fine printing and lithographing.

Fully as important as the paper is the ink that goes on to make up the design. There has been many a headache in the printing and lithographing trades on the subject of inks for laundry soap wrappers. The reason is plain. There have been very few alkali proof colors discovered. This accounts for the fact that the average laundry soap wrapper is not produced in exceptionally clean or brilliant colors. It will not be out of place to touch briefly on the composition of ink. Printing and lithographing inks are composed of a pigment, vehicle and a drier. The pigment is for color and body. The vehicle, or varnish, carries the pigment from the ink reservoir to a series of rollers to the printing plate and from the plate to the paper. After the ink is on the paper it must be dried quickly; that is the function of the drier. These driers do their work by oxidation of the varnishes and are usually the oxides of lead, manganese and cobalt. If driers were not used, it would take weeks for ink to dry. Oxidation is so rapid with metallic oxide that an ink becomes dry in five minutes. An exception to this is newsprint ink which dries by absorption due to the porous nature of newsprint paper.

Colors that are generally considered suitable for soap wrappers are:

Hansa Yellow	Fire Red
Cadmium Yellow and Reds	Para Red
Fast Orange	Ultramarine
Madder Lake	Earth Color Brown
Vermilion	Carbon Black
Toluidine Red	

Half of these colors are of mineral origin or are inorganic. The mineral colors are not affected by alkali but their use is objectionable from the printer's standpoint on account of the abrasive action of coarse pigments on printing plates. Carbon black, of course, is not affected by either acid or alkali or anything under the sun except a good hot fire. Most aniline colors except the ones just mentioned are affected directly; or, indirectly, by alkali in contact with varnish or linseed oil. When the vehicle is destroyed by alkali there is nothing to hold the pigment to the paper.

A wider range of colors could be discovered if the printing ink manufacturers would bring their troubles out in the open. Most of them, though not all, surround themselves with mystery and do not make much effort to