

MARYLAND SECTION MEETINGS

The next meeting of the Section will be held on Friday evening, December 15, at 8:30 in Remsen Hall on the Homewood campus of The Johns Hopkins University.

The speaker for this meeting, Dr. Warren M. Sperry, is perhaps most widely known as the editor of the <u>Journal of Biological Chemistry</u>. He is Principal Research Scientist at the New York State Psychiatric Institute, and Associate Professor of Biochemistry, Columbia University. Dr. Sperry has made a number of contributions to the biochemical literature on the metabolism of cholesterol and the lipides. He is a graduate of Cornell University, University of Illinois and the University of Rochester. At the latter institution he earned the first Ph. D. to be granted by that university.

Dr. Sperry is Chairman of the Committee on Clinical Chemistry of the A.C.S. He has made a significant contribution to the establishment of the professional status of clinical chemistry in the current controversy on this subject. Dr. Sperry is a member of the Cardivascular Study Section of the U.S. Public Health Service. Metabolism in relation to mental disease is his principal field of interest. At the December meeting he will speak on certain aspects of the biochemical problems associated with mental disease.

The meeting will be preceded by a dinner in honor of Dr. Sperry. It will be held at the Johns Hopkins Club on the Homewood campus at 6:30. Reservations should be made before noon on Thursday, December 14, with Dr. Charles E. Brambel, Mercy Hospital, Baltimore 2, SAratoga 5400, extension 24. (to page 2

Section Officers

Alsoph H. Corwin, Department of Chemistry, Chairman The Johns Hopkins University, Baltimore 18 Vice-chairman Charles E. Brambel, Mercy Hospital, Baltimore 2

Secretary-treasurer H. H. Lloyd, Goucher College, Baltimore 4

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MARYLAND SECTION OFFICERS FOR 1951

The slate presented by the Nominating Committee for the 1951 officers was elected at the November meeting. The Section will operate under the direction of the following officers for the next calendar year.

Chairman: Charles E. Brambel Vice-chairman: Leslie Hellerman Secretary-treasurer: H. Huntley Lloyd Councillors and alternates:

1951: John C. Krantz, Jr., alternate Giles B. Cooke (final year of three year term)

1951-1952: Duncan MacRae, alternate Winslow H. Hartford

1951-1953: Belle Otto, alternate Sylvan H. Forman 1951: Alsoph H. Corwin, alternate J. H. Ahlberg

(one year term if the Section is alloted four Councillors) Additional members of the Executive Committee:

By election:

George P. Hager, Jr. Stephen S. Hubard

Evans B. Reid John L. Straughn

E. H. Metcalf

As past chairmen, not otherwise listed:

Donald H. Andrews E. Emmet Reid H. A. B. Dunning Wm. F. Reindollar Fitzgerald Dunning C. P. VanGundy Wilton H. Harden Channing W. Wilson John A. Herculson

from page 1) Maryland Section Meetings

The attendance at the Section meetings in October and November completely justified the decision of the Executive Committee to present these somewhat different programs. Maryland chemists are grateful to all those who helped make the Edgewood meeting so successful, particularly Dr. MacRae among the civilians and General Bullene, Colonel Creasy and Colonel Delmore of the military staff. The group meetings and instrument show held in November appeared to be particularly successful, and Dr. Hager and his helpers are to be commended for the results of their efforts. Section officers are particularly anxious to know whether the members would like another such meeting, and will welcome any comments on the matter.

- 3 -CHEMICAL ENGINEERING SYMPOSIUM MEETS IN BALTIMORE

The Division of Industrial and Engineering Chemistry of the A.C.S. will hold its seventeenth Chemical Engineering Symposium at The Johns Hopkins University on December 28 and 29. "Dispersion in Gases" will be the general topic of the meeting. Basic nerosal theory and techniques and the production and application of sprays and aerosols will be discussed. Data will be presented on the performance of equipment in commercial processes.

More detailed information about the program will be mailed to all Maryland Section members. The meetings are open to any who are interested in attending, with a two dollar registration fee for A.C.S. members and a four dollar fee for non-member chemists.

from page 4) Baltimore Refinery, Esso Standard Oil Company ials is in itself a consuming effort. In general, a petroleum analyst covers about as wide a variety of analytical work as any who follows the chemical profession.

In recent years, technology has developed spectrophotometers to a point that they are applied on a routine basis for analysis of the various isomers of the light hydrocarbons. The efficient operation of a petroleum refinery would be very cumbersome, if not impossible, without application of such analytical equipment. The infra-red and ultra-violet spectrophotometers are normally used in conjunction with four semi-automatic low temperature distillation units. Such testing is required in order to control the operation of equipment used for recovery and conversion of gases into liquid fuels.

The octane testing section operates four combustion engines which test the octane quality of all motor and aviation gasolines. Here again the laboratory must not only be responsible for the quality of the finished product but must also supply the data which control the intermediate processing steps.

In addition to these testing operations, the laboratory conducts a small amount of experimental and control activity. This effort is directed toward the development of more efficient process operations and control of existing operations in order to relieve spot difficulties which occasionally occur. The raw distillates from various crude oils each present an individual problem in respect to development of the optimum chemical finishing methods. Identification and subsequent elimination of causes of troublesome scales, cokes and sludges from the operating equipment are a vital part of the laboratory activities.

The major portion of the development work for Esso is conducted by the Standard Oil Development Company which operates a large research organization with headquarters in Linden, New Jersey. This is one of the outstanding research organizations in the petroleum industry. Its primary purpose is the development of higher grade petroleum products at minimum cost. The Standard Oil Development Company carries the main load of this type of research for all of the refineries.

AMERICAN CHEMICAL SOCIETY MARYLAND SECTION - 4 -TIME 8:30 P. M NEXT MEETING Friday, December 15 PLACE Room 101, Remsen Hall, The Johns Hopkins University Charles & 34th Streets, Baltimore Dr. Warren M. Sperry SPEAKER SUBJECT Biochemical Problems Associated with Mental Disease Johns Hopkins Club, The Johns Hopkins University. DINNER Charles & 34th Streets, Baltimore The meeting is open to anyone who is interested in attending. The dinner is open to members of the Section and their quests. GETTING ACQUAINTED WITH CHESAPEAKE CHEMISTRY BALTIMORE REFINERY, ESSO STANDARD OIL COMPANY H. Fred Whitney, Jr., Assistant Chief Chemist

The Esso Standard Oil Company is the principal manufacturing and marketing subsidiary of the Standard Oil Company (New Jersey). Its refineries are located at Everett, Massachusetts, Bayonne and Linden, New Jersey, Charleston, South Carolina, Baton Rouge, Louisiana, and Baltimore. Manufacturing at the local refinery was started in 1860 with the production of coal oil. Since then, operations have expanded in keeping with consumer demand until today the list of products ranges from liquid gas and gasoline to asphalt and greases. Distillation, cracking, chemical treating and compounding are a few of the major operations now employed.

An oil refinery uses hundreds of tons of chemicals each day. Among those consumed in largest quantity are sulfuric acid, used in treating for stability in gasolines, sodium hydroxide, used in extraction to remove certain sulfur compounds, and catalysts for cracking and polymerization reactions.

Chemical and testing work in an oil refinery covers a wide field of activity. Its purposes are simple but most important. It must control refinery operations so that the manufacturer can most economically produce the best products, and assure the public that the products which are supplied meet all specifications.

In the physical testing section of the laboratory, 70 different tests are conducted on a daily basis. Examples of these tests are those for specific gravity, volatility and corrosion of gasoline, kerosene and diesel fuels, viscosity and pour characteristics of lubricating oils and fuel oils, and melting point and hardness of asphalts.

In the chemical testing section, the required analyses cover a large part of the wide field of chemistry. Analyses for such elements as sulfur, carbon, nitrogen, lead and chlorides are a daily occurrence. Organic compounds such as esters, soaps, fats, acids and mercaptans also require quantitative determination on a routine basis. This portion of the laboratory also conducts tests for the oxidation stability characteristics of fuels and for breakdown resistance of certain lubricants. Because of the vast quantity of chemicals used each day, analysis of new and spent materity of chemicals used each day, analysis of new and spent materity page 3