Minutes of the Coblentz Society Meeting held on March 7, 1957, Urban Room, Penn-Sheraton Hotel, Pittsburgh, Pennsylvania.

1. Van Zandt Williams reported for Mr. Harry Bowman on the response to the Speakers Bureau covered in Mailing No. 3. About 35 people had responded offering their services. It was the feeling of the meeting that the Speakers Bureau might well have value and should be pursued. Therefore, Harry Bowman is requested to get in touch with various speakers committees of societies such as ACS, OSA, Federation for Applied Spectroscopy, etc., and inform them that he is maintaining a list of potential speakers as a Coblentz Society activity. Any society wishing a speaker on an infrared subject could apply to Mr. Bowman and he would then provide that society from his listing, speakers who might be available from the point of view of subject matter, geography, etc. The particular society would make direct contact with the potential speaker and the Coblentz Society per se would take no further action.

2. The question of periodic mailing of information (Point #8 in the No. 3 Mailing) had insufficient response from the membership to ensure an editorial board which would provide material for such a periodic mailing. The mailing will, therefore, be sporadic dependent on material available.

(a) The general discussion here raised a point of basic philosophy of the Coblentz Society and it is of value to discuss it here. The primary purpose of the Coblentz Society is to provide a mailing list of people interested in infrared applications whereby members can carry out programs which they think would be of value. Therefore, any member of the Society who believes that a certain program would be of value to the field, should write up the need and a mechanism for accomplishing that need, offering his services to the extent that he feels that he can be of value. This would be submitted to the Executive Board and, if approved, would be brought to the attention of the membership for action through a membership mailing. Experience has shown that the Executive Board is a very busy group of individuals, active in other societies. They do not feel compelled to pursue on their own initiative all suggestions submitted by the membership and will carry out only the few possible within their time available. However, they are very ready to aid a member who not only suggests an action, but also submits a program for carrying out that action including the names of the people who will do it.

It is felt important that the membership realize this philosophy. Several people feel that a more formal system should be formed by which elected officers and standard committees carry out extensive programs. It was the general feeling, however, that there exists, at the present time, a sufficient number of formal societies, publications, etc., that the Coblentz Society should be kept informal as a mechanism through which the members themselves could act, if they so desired.
3. Norman Coggeshall spoke briefly on a recent API project being carried out at Purdue University under Professor Mellon to study the reproducibility of infrared spectrometers in the field. It is being considered that certain simple measurements would be requested of several infrared laboratories to permit a statistical comparison by the Purdue personnel, aimed at measurement of range of instrument variation and reason therefore. This project is just getting started and little action has been taken as yet. Dr. Coggeshall requested the membership of the Coblenz Society to cooperate in this program if and when it gets to a field study stage.

4. Dr. Harvey reported for Dr. Wilkerson on the status of the submission of analytical data. At the present time, 18 analyses have been submitted and it was concluded that 18 more at least would be needed before submission to ANALYTICAL CHEMISTRY. A question was raised concerning the calculation of the spectral slit width entry on the standard form and Dr. Williams agreed to clarify this point. This clarification is included separately with this mailing.

5. Norman Wright volunteered to form a committee to consider for the Society various moves that might be made to aid in the field of infrared analysis. Such a committee could also be of aid to Dr. Wilkerson's Reviewing Committee, if desirable.

6. Mrs. Clara Smith gave a brief report on the data she had collected from those agencies who are now supplying infrared data cards. The material of her excellent report is included as a separate item with these minutes.

In the discussion that followed, the membership showed appreciation of having this summary data available, but wanted further study by the Coblenz Society of its members in order to report on the Society attitude towards the usefulness of the data, criticisms, extended use, etc. As a result of this discussion, Mrs. Smith was authorized to continue her work in order to obtain the consensus of the Society concerning this information. Several people volunteered to aid in this regard and, as a result, the following committee has been appointed:

Committee on Infrared Absorption Spectra

Mrs. Clara D. Smith, Chairman
Battelle Memorial Institute
505 King Avenue
Columbus 1, Ohio

Robert O. Crisler
Miami Valley Laboratories
The Procter and Gamble Company
P. O. Box 175
Cincinnati 31, Ohio

Wilbur I. Kaye
Beckman Instruments
Scientific Instruments Division
2500 Fullerton Road
Fullerton, California

George Rappaport
Chemical Section, Eng. Lab.
Inland Manufacturing Division
General Motors Corporation
Dayton 1, Ohio

Abram Davis
Hooker Electro-Chemical Co.
Niagara Falls, New York

Mack Harvey
Celanese Corporation
P. O. Box 8
Clarkwood, Texas
6 - (contd.)

Eugene P. Kozoriz  
General Electric Company  
Capacitor Department  
Hudson Falls, N. Y.

Arthur L. Bridgeman  
General Electric Company  
100 Woodlawn Avenue  
Pittsfield, Mass.

The User Questionnaire of the Coblentz Society Committee on Infrared Absorption Spectra is included in this mailing. Members are requested to fill this out and return it to Mrs. Clara D. Smith, Chairman, Battelle Memorial Institute, 505 King Avenue, Columbus 1, Ohio.

7. During this same discussion, H. W. Thompson reported for the DMS System that their data was being supplied to ASTM for IBM coding. He also felt that there was now a future possibility of a consolidation of effort of the NBC and DMS Systems. Mr. Phillip Sadlter spoke briefly on the status of the Sadlter catalogue. Dr. Wilbur Kaye of Beckman stated that his company is starting to compile pure compound spectra in the near infrared region and would be glad to obtain aid in this regard from members of the Coblentz Society. Anyone interested in this project should write Dr. Kaye directly.

8. The Society wishes to acknowledge the courtesy of Dr. Cyril Cannon of British Nylon Spinners, Ltd., England, who furthered the Coblentz Society activity on the acquisition of infrared analytical data by presenting the scheme to various English societies and getting notice of it in certain English journals.

9. Several members brought up the question of availability of the membership list for use in forming committees, getting opinions, etc. At the present time, it was felt that because of the undue expense involved, additional copies of the membership list would not be printed. The Registrar was authorized to loan the membership list for short periods of time to members who wanted to use this list for Society purposes.

Society members are requested to notify the Registrar of any change in their mailing addresses in order to ensure their receipt of Coblentz Society mailings.

10. In accordance with the By-Laws, the membership of the Society must now elect two new members of the Executive Board. The two members to be elected will replace Howard Cary and Bryce Crawford. The Nominating Committee has nominated the four whose names appear on the attached ballot. Please vote for two and return your ballot within one month from the date of this mailing to Dr. V. Z. Williams, Registrar, c/o The Perkin-Elmer Corporation, Norwalk, Conn. It is necessary for signature to be on the envelope.

Van Zandt Williams  
Registrar

VZW/akr  
enclosures (4)
REPORT TO THE COBLENZ SOCIETY
ON THE
STATUS OF THE DISSEMINATION OF INFRARED SPECTRAL DATA

At the request of Dr. Norman Wright, a questionnaire was sent to all of the groups known to be distributing infrared absorption spectra and coded spectral data cards. This action was taken both to provide the Coblentz Society membership with the summary information promised at the Coblentz Society meeting at Ohio State University in June, 1956, and to provide a basis for action by the Coblentz Society members to expedite the production and distribution of standard reference spectra.

Published Catalogues of Spectra

The results showed that in terms of significant numerical output, there are four major spectral dissemination activities under way: the American Petroleum Institute, Project 44, the Sadler Research Laboratories catalogue, the NRC-NBS system, and the Documentation of Molecular Spectroscopy system. Description of the format used in each system and data on the size, cost, and numerical productivity of each group are presented in the attached tables. More complete descriptions and in some cases samples of the published data can be obtained by writing to the organization indicated.

Spectral Indexing Systems

There is a common meeting ground for all four of these catalogue systems. This is the ASTM publication of IBM spectral data cards. The ASTM-IBM decks cover published spectra from these four catalogues plus spectra published in technical journals. These spectra are coded by volunteer spectroscopists under the auspices of ASTM Committee E-13 on Absorption Spectroscopy. Chairman of this committee is Dr. E. J. Rosenbaum, Sun Oil Company, Norwood, Pennsylvania. The coding system used is the one developed by Dr. L. E. Keuntzel of Wyandotte Chemicals Corporation.

The current infrared spectra deck totals 12,766 cards and costs $160. The current ultraviolet spectra deck totals 7,066 cards and costs $90. These cards carry a numerical code which permits the user to find the compound name from lists available from each supplier of the spectra. Inquiries about these decks of coded IBM spectral data cards should be addressed to Mr. M. D. Huber, American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pennsylvania.

In addition to the IBM card index, two of the systems have edge-punched cards to permit needle sorting. These are the NRC-NBS systems and the DMS system. Both systems include coded cards for both spectra and bibliography.

There is also an ASTM Empirical Formula-Name Index card for infrared and related spectral data. This deck of 13,899 cards (price $195.) is designed "to enable one to make a search of the index (by mechanical sorter or by hand) to determine whether there is a published curve of a specific organic or inorganic compound." These cards do not carry any absorption spectral data. Inquiries regarding this deck should also be addressed to Mr. Huber of the ASTM.

Special Collections of Spectral Data

Dr. Carl Clark of the Aviation Medical Acceleration Laboratory, U. S. Naval Air Development Center, Johnsville, Pennsylvania, is anxious to collect in one place all of the available biochemical spectra. He would appreciate cooperation from anyone else interested in this activity.
Status of The Dissemination of Infrared Spectral Data - (contd.)

The Manufacturing Chemists Association is undertaking a program under the direction of Frederick D. Rossini to publish standard data including spectra "in a manner similar to those issued by the API Research Project 44. The spectral data to be so issued would cover all chemical compounds." The Advisory Committee for the MCA Research Project is at present working on plans for this program.

In SCIENCE 125, 152 (1957) it is reported that M. J. Kamlet and H. E. Unguade plan to collect all spectrophotometric data in 60 journals for the period 1946-1956.

It is hoped that this summary will serve as a guide to the available spectral data systems. Plans are now underway to provide a Coblentz Society membership evaluation of the usefulness of these systems. A questionnaire will be sent out to all members in the next few weeks to obtain information about how the laboratories are actually using the available data systems. It is anticipated that this information from the membership will form a basis for discussion and constructive action at the next Coblentz Society meeting.

Respectfully submitted,

/s/

Clara D. Smith
Chairman, The Coblentz Society
Committee on Infrared Absorption Spectra
### Status of the Dissemination of Infrared Spectral Data

<table>
<thead>
<tr>
<th>Company or Group</th>
<th>Description of Data Published</th>
<th>Price per Spectrum on Subscription Basis</th>
<th>Number of Years of Spectrum Publication</th>
<th>Total Spectrum Production as of March, 1957</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Petroleum Institute Project ***</td>
<td>8-1/2&quot; x 11&quot; loose-leaf data sheets of critically selected spectra; 2 - 15 micron - spectrum size is about 2.4 x 16&quot;; position of absorption peaks tabulated.</td>
<td>10 cents</td>
<td>14</td>
<td>1,848</td>
</tr>
<tr>
<td>Frederick D. Rossini, Director Carnegie Institute of Technology Pittsburgh, Pennsylvania</td>
<td>Standard spectra are on cards with spectrum size 5&quot; x 16.7&quot;.</td>
<td>40 cents through 1956 25 cents for 1957 subscription</td>
<td>11</td>
<td>10,150</td>
</tr>
<tr>
<td>Samuel P. Sadtler &amp; Son, Inc. Research Laboratories 1517 Vine Street Philadelphia 2, Pennsylvania</td>
<td>Midget spectra are 3 per sheet on 8-1/2&quot; x 11&quot; loose-leaf sheets; peaks not tabulated.</td>
<td>10 cents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NBC-NBS Mr. E. Carroll Creitz, Secretary National Bureau of Standards Washington 25, D.C.</td>
<td>8-1/2&quot; x 11&quot; loose-leaf data sheets with spectrum size 1.6&quot; x 5.6&quot; or edge-punched cards</td>
<td>10 cents</td>
<td>5</td>
<td>727</td>
</tr>
<tr>
<td>Documentation of Molecular Spectroscopy Buttersworths Scientific Publications 88 Kingsway, London, W.C. 2, England</td>
<td>On 5.8&quot; x 8.3&quot; edge-punched cards; spectrum size of 2 - 15 micron spectrum is 1.5&quot; x 5.4&quot;; position of absorption peaks tabulated.</td>
<td>9.1 - 11.4 cents Depending upon whether yearly subscription price of $182 is calculated per spectrum (1600) or per card (2000 - 400 bibliography cards).</td>
<td>1</td>
<td>1,600</td>
</tr>
</tbody>
</table>
### Status of the Dissemination of Infrared Spectral Data (Continued)

| Company or Group       | Quality Control Used                                                                                                                                                                                                 | Plans for the future and direct answer to the question, "Is there any way in which you believe assistance from Coblentz Society members or a Coblentz Society committee could expedite your operation?"
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------
| American Petroleum Institute | Multiple contributions from participating laboratories permits cross-comparison before publication, and continued review after publication. | No comment received.                                                                                                                                  |
| Samuel P. Sadler & Son, Inc. | Philip Sadler is initiating a policy of review before publication by anonymous practicing spectroscopists. Correction notes and lists of verified spectra are planned. | Plans to publish 1800 spectra per year. "There is a possible increase . . . by publishing submitted spectrograms as an additional service." "The Coblentz Society Committee could expedite this work by supplying members who would act as a Board of Review before publication." |
| NRC-NBS                | Comparison among multiple contributions before publication. Errata sheets are issued wherever needed.                                                                                                             | No comment available.                                                                                                                                 |
| DMS                    | "Data are passed on by an advisory committee of scientists, of which Dr. H. W. Thompson, F.R.S., is chairman. The other members at present are Professor H. Price and Dr. N. Sheppard." | Plans to publish 1600 spectra and 400 bibliography cards per year. "It would help our operation if the Coblentz Society could organize a collecting center for spectra in the U.S.A." |
## Output of Agencies Disseminating Infrared Spectral Data

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Number of Spectra</th>
<th>Percent Produced by Each Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>API</td>
</tr>
<tr>
<td>1943</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>1944</td>
<td>96</td>
<td>100</td>
</tr>
<tr>
<td>1945</td>
<td>212</td>
<td>100</td>
</tr>
<tr>
<td>1946</td>
<td>244</td>
<td>100</td>
</tr>
<tr>
<td>1947</td>
<td>208</td>
<td>78</td>
</tr>
<tr>
<td>1948</td>
<td>360</td>
<td>43</td>
</tr>
<tr>
<td>1949</td>
<td>801</td>
<td>27</td>
</tr>
<tr>
<td>1950</td>
<td>979</td>
<td>21</td>
</tr>
<tr>
<td>1951</td>
<td>856</td>
<td>21</td>
</tr>
<tr>
<td>1952</td>
<td>1548</td>
<td>15</td>
</tr>
<tr>
<td>1953</td>
<td>1894</td>
<td>13</td>
</tr>
<tr>
<td>1954</td>
<td>1662</td>
<td>2</td>
</tr>
<tr>
<td>1955</td>
<td>2042</td>
<td>6</td>
</tr>
<tr>
<td>1956</td>
<td>3662</td>
<td>3</td>
</tr>
</tbody>
</table>

* Since exact figures were not submitted, the total catalogue published, including January 1957 shipment, was divided evenly among the 5 years of full-scale operation.