

INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY

MINUTES OF THE 19TH BUREAU MEETING

held in the premises of the Gesellschaft Deutscher Chemiker, Varrentrapp-
strasse 40-42, Frankfurt am Main, on

Thursday - 24th February 1966
Friday - 25th February 1966

PRESENT:

Prof. W. Klemm, President
Lord Todd, FRS, Past-President
Prof. V.N. Kondratiev, Vice-President
Dr. R. Morf, Secretary General
Prof. J.C. Bailar, Jr., Treasurer

Prof. J.H. de Boer
Prof. V. Deulofeu
Dr. C.O. Gabrielson
Prof. D. Ginsburg
Dr. T.R. Govindachari
Prof. J. Lecomte
Prof. H. Malissa
Prof. L. Marion
Sir Harry Melville

Prof. S. Mizushima
Dr. A.L.G. Rees
Prof. W.M. Sperry
Prof. H.W. Thompson, FRS
Prof. R. Truhaut
Prof. P.E. Verkade
Prof. P.W. West
Prof. F. Weygand
Prof. O. Wichterle

Specially invited representatives of the Divisions:

Prof. J. Bénard
Dr. J. Bushill

Dr. W. Gallay
Prof. M. Rapport

Specially invited by the President for part of the meeting:

Mr. P.M. Arnold (Chairman of the IUPAC Finance Committee).

INDEX TO THE MINUTES OF THE 19TH BUREAU MEETING

<u>Minute</u>	<u>Subject</u>	<u>Page</u>
1.	Minutes of the last meetings - Paris 1965	1
2.	Financial Questions	1
3.	(a) Legal Status of IUPAC (b) Headquarters	4
4.	Company Associates	4
5.	Teaching of Chemistry	5
6.	Co-operation with other International Organizations	5
7.	Dissemination of Tentative Rules	6
8.	Reports of the Division Presidents	7
9.	Problems regarding various Sections and Commissions	9
10.	(a) Association with CITCE (b) Association with Geochemists	10 10
11.	Conference on Industrial Aspects of Chemistry	10
12.	Sponsorship	11
13.	Programmes for the XXIVth Conference of IUPAC and the XXIst Congress of Pure and Applied Chemistry	14
14.	Titular Members	14
15.	Aims and Structure of IUPAC	14
16.	Co-operation with ISO	15
17.	Votes of Thanks	16

oooo0oooo

Appendix

- A. Report of the Finance Committee
- B. Adhering Organizations
- C. Committee on the Teaching of Chemistry
- D. Extract from the first Circular of the XXIst International Congress on Pure and Applied Chemistry
- E. New Titular Members 1965 - 1969
- F. Report to the Bureau of the Liaison Committee
(Taken from the Information Bulletin No. 20)

Minute 1

MINUTES OF THE LAST MEETINGS - Paris 1965

The Minutes of the 17th and 18th Bureau Meetings, held in Paris in July 1965, were approved and accepted.

Minute 2

FINANCIAL QUESTIONS

(a) Report by the Treasurer

The Treasurer pointed out that the report he was about to present was just for information. Only the statutory biennial report would be submitted in written form, for discussion and voting.

He commenced his verbal report by expressing his and the Union's thanks to the Union Bank of Switzerland, Zürich, in particular to Mr. Hanselmann and his staff.

For the financial year 1965, the Treasurer had intimated to the Council (Paris, 1965) that IUPAC would sustain a deficit of \$ 40,000. The actual deficit for 1965 was \$ 26,000, but it should be noted that it was not possible to transfer the statutory \$ 10,000, to the reserves.

1965 was a particularly expensive year for IUPAC. Especially expensive items include

- i) the payment of \$ 7,000 to the organizers of the XXIIIrd Conference (Paris) towards the expenses of the Conference.
- ii) the payment, in a Conference year of subventions to Symposia - \$ 2,800
- iii) the meeting of the Executive Committee in Australia.

Other more general features of the increase in expenditure compared with previous years are the steady extension of IUPAC's activities, and the large number of Titular Members who attended the Conference in Paris. On this latter point it might be noted that an attendance level of 87% was recorded, and that the 13% of Titular Members who did not attend were mainly people who would not have requested high travelling expenses.

However, the deficit would have been far greater (up to \$ 55,000 greater, depending upon the level of attendance at the Conference) had the Conference as well as the Congress been held in Moscow.

On the income side it must be recorded that in 1965 the level of subscriptions was \$ 18,400 higher than in 1964, this being mainly accounted for by the move of the National Adhering Organization of the USA from category A3 to A4.

Royalty income from the sale of publications increased by \$ 3,300. Voluntary contributions amounted to \$ 18,500, i.e. were of the order of those received in previous years.

(b) The Report of the Finance Committee

Mr. Arnold, Chairman of the Finance Committee, introduced the report of the meeting of the Committee that had been held in the premises of the Union Bank of Switzerland, Zürich on 22 February 1966 (see Appendix A).

The Budgets for 1966 and 1967 show deficits of some \$ 36,000 and \$110,000 respectively and it is clear that immediate action is needed to reduce these figures. The recommendations of the Committee are:

- i) the immediate implementation of the proposal for the introduction of a category of adherence to IUPAC for Company Associates.
- ii) the provision of group travel or charter flight possibilities for Titular Members (see Minute 2c).
- iii) the limitation of the number of Commissions allowed to meet at the XXIVth (Prague) and subsequent Conferences; those Commissions not having immediately vital discussions to pursue should be excluded.
- iv) the informing of the National Adhering Organizations of the extent of IUPAC's financial difficulties, together with the requesting of further assistance.
- v) the reassertion of the standing rule that no Symposium held in a Conference year shall receive the financial assistance of IUPAC.
- vi) the limitation of the length of the Comptes Rendus to 200 pages.
- vii) the shouldering by those National Adhering Organizations that find it difficult to increase their annual dues, of a proportion of the travel expenses of their Titular Members.

Mr. Arnold replied to a request for further information about item 7 of the report by explaining that by "proportionately" ("travel funds be reduced proportionately by countries") was meant in a ratio dependant upon annual subscription and number of Titular Members of a given country. A suitable formula would be devised.

The Treasurer informed the meeting that two further ways in which the IUPAC Budget will be brought more nearly into balance are:

- i) Some National Adhering Organizations will increase their annual subscriptions in the near future and other Organizations will try to reduce the expenses of the Union.
- ii) Changing the site of the Headquarters of the Union from France to the Netherlands or Switzerland will result in a tax saving.

Treasurer and Secretary General to act.

(c) Charter Flights

The discussion of the proposals of the Treasurer and the Finance Committee centred round the problem of reducing the amount of money paid by the Union to cover the travelling expenses of its Members. Proposals advanced included the following:

i) Charter flights

Large savings (ca. 55%) could be made if IUPAC organized charter flights, as was so successfully accomplished in the case of the Conference in Montreal (1961), but the scheme implies a large financial risk for IUPAC and a lack of flexibility in the arrangements (110 passengers are required to make the same round trip).

ii) Group travel

The organization of Titular Members into groups of 25 or more for the purposes of travelling will result in substantial savings for IUPAC (ca. 30%), without the financial risk attached to charter flights and with a larger measure of flexibility.

Other schemes were also advanced, but the opinion of the meeting was that the matter should be thoroughly examined by the Executive Committee.

Executive Committee to act.

(d) Budget 1966

On the two points that were still open with regard to the 1966 Budget it was

- Resolved:
- i) That the Commission on Organic Nomenclature be allowed to meet in Bayonne at IUPAC expense.
 - ii) That the Commission on Chemical Taxonomy be allowed to meet in Stockholm at IUPAC expense.

(e) Budget 1967

Because of the many uncertainties with regard to the exact implementation of the proposals of the Finance Committee, the Executive Committee was instructed to prepare a balanced Budget for 1967.

Executive Committee to act.

(f) "Councillors at Large"

In view of IUPAC's current financial situation it was

- Resolved:
- That no "Councillors at Large" be invited to the XXIVth Conference, Prague.

(g) National Adhering Organization of Brazil

The Secretary General informed the Bureau that a letter - written by an official of the Brazilian Embassy in London (UK) - had been received by the Union's Bankers at the time that Brazil's annual dues were received, the contents of which were not quite clear.

Resolved: That the National Adhering Organization of Brazil be approached by the Secretary General in order that the position may be clarified.

Secretary General to act.

Minute 3

A) LEGAL STATUS OF IUPAC

The rapid increase in the magnitude and the importance of the work done by IUPAC makes it imperative for IUPAC to obtain a juridical personality.

Resolved: That the Executive Committee be charged with obtaining a juridical personality for IUPAC.

Prof. Lecomte pointed out that because the Headquarters of IUPAC is currently - although provisionally - in France, IUPAC might temporarily become incorporated in that same country.

Executive Committee to act.

B) HEADQUARTERS

The meeting took due note of the advice of the Finance Committee, and

Resolved: That the President and Secretary General determine in which country IUPAC's tax liability would be least, and present to the Council in 1967 a fully documented case for the transfer of the Union's Headquarters to that country.

President and Secretary General to act.

Minute 4

COMPANY ASSOCIATES

The attention of the meeting was drawn to the circular letter sent by the President and Treasurer to the National Adhering Organizations (see Appendix B). It was proposed by Prof. Sperry, seconded by Prof. Bailar and unanimously

Resolved: That in principle the proposal to create a category of adherence to IUPAC for companies be approved.

Minute 5

TEACHING OF CHEMISTRY

The Report on the Meeting held by the Teaching of Chemistry Committee in London on 14 February 1966 (see Appendix C) was introduced by Prof. Bénard. The Bureau

- Resolved:
- a) That the report of Mr. J. C. Mathews - The Effect of Examinations in Determining the Chemistry Curriculum up to the level of University Entrance - be published in Pure and Applied Chemistry and that 5000 copies be made available for distribution at low cost.
 - b) That a letter be sent to Dr. Sykes expressing the Bureau's regret concerning, but understanding of, his resignation from the position of Secretary to the Committee, and adding the Bureau's heartiest thanks for all that Dr. Sykes had done for the Committee.

Secretary General to act.

Minute 6

COOPERATION WITH OTHER INTERNATIONAL ORGANIZATIONS

Cooperation between IUPAC and other international organizations has recently started to increase rapidly in extent and importance.

Discussion was opened by Prof. Truhaut who reminded Members of the Bureau of the work that was being undertaken with and for other organizations and who asked for guidance on the method of tackling new requests for assistance that had recently been received. It had been pointed out at the meeting of the Division Presidents (Frankfurt am Main, 23 February 1966) that if IUPAC does not act, i.e. if the needs of the international organizations are not met by IUPAC, governments might find it necessary to establish their own Inter-Governmental organization for chemistry.

The rôle of IUPAC was discussed at length and the opinion of the meeting was that the Union should be an efficient and reliable fact-finding and advisory body in the realm of chemistry.

(a) Cooperation with the Communauté Economique Européenne (CEE)

Cooperation between IUPAC and CEE, based on a written agreement, may be regarded as a first experiment in the giving of larger scale assistance to another organization.

CEE has requested from IUPAC some information concerning methods of analysis for the control of purity criteria of food additives, namely for colouring matters, preservatives, anti-oxidants, emulsifiers, stabilisers and similar products.

- Resolved:
- i) That IUPAC be prepared to act in a consultative capacity with CEE in the matter of analytical methods for the control of purity of food additives.
 - ii) That Prof. Truhaut be charged with the negotiations covering cooperation between IUPAC and CEE.

Prof. Truhaut and the Secretary General to act.

(b) Cooperation with the International Union Against Cancer

In answer to the request that IUPAC cooperate with the International Union Against Cancer in sponsoring a Symposium on "Analytical Methods for the Detection of Carcinogens in the Human Environment", towards the holding of which the Bureau declared itself to be very sympathetic, it was

- Resolved: That the International Union Against Cancer be asked to prepare a definite proposal, for consideration by IUPAC's Executive Committee.

Prof. Truhaut to act.

(c) Cooperation with Codex Alimentarius, in particular with the Codex Committee on Methods of Analysis

The FAO/WHO Codex Alimentarius Commission has from the very beginning asked for the advice of IUPAC, in line with the contract signed between WHO and IUPAC. Among many other Committees, the Codex Alimentarius Commission has established a Codex Committee on Methods of Analysis, which Committee has been assigned to Germany.

The first meeting of the Committee on Methods of Analysis was held in Berlin in September 1965, and although the Minutes suggest that all appropriately competent organizations had been invited to the Meeting, no representative of IUPAC had received an invitation. This fact seriously alarmed the Secretary General, who immediately contacted the responsible person within the German government, Mr. Mollenhauer. A meeting was subsequently convened, attended by Mr. Mollenhauer, Prof. Franck and by IUPAC's President and Secretary General.

Concerning future cooperation with the Committee, the great difficulty - regarding which the Secretary General has considerable anxiety - is that any cooperation might result in IUPAC's having to shoulder too much responsibility without receiving any commensurate credit; also, IUPAC's freedom of action might be restricted.

No clear decision was made.

Minute 7

DISSEMINATION OF TENTATIVE RULES

With regard to the dissemination of tentative rules, two philosophies are in

existence. First, there is the well-established tradition that, after their approval by Council, tentative rules are distributed for criticism and review to the National Adhering Organizations and to a restricted number of experts. At the Council meeting following that at which the tentative rules were approved, the competent Commission and Division can submit the amended rules as being final recommendations.

A second philosophy that is currently gaining an increased support is based on the facts

a) that in the final analysis there are only a very few fundamental rules which can be considered as final in the strictest sense of the word.

b) that it is impossible to eradicate completely nomenclature systems and expressions that are, or were, extant in the chemical literature before they can, or could, be examined by Nomenclature Commissions.

Basing their opinion on these two facts, especially upon the latter, many scientists now feel that Nomenclature Commissions should deal promptly with any new topics and, in close liaison with the editors of secondary journals, should create without delay rules of a more or less tentative character to which immediate world-wide circulation - and acceptance - can be given.

These two philosophies were discussed by the meeting, and it was

- Resolved:
- a) That only a small number (200-300 copies) of tentative rules be printed and circularized.
 - b) That definitive rules be published in the IUPAC journal "Pure and Applied Chemistry" after their acceptance by the Council.
 - c) That preprints of the more or less definitive rules, for distribution as tentative rules, be produced under the supervision of Messrs Butterworths, thus enabling the maximum proportion of the expensive preparative work to be re-utilized in the journal; economies, for Butterworths and for IUPAC, should thereby result.

Editorial Board to act, in close cooperation with Nomenclature Commissions.

Minute 8

REPORTS OF THE DIVISION PRESIDENTS

The Division Presidents had all submitted written reports.

Division I: Sir Harry Melville, new President of the Division of Physical Chemistry, reported that he had started his study of the specific problems of his Division and will report in 1967.

Division II: Prof. de Boer, President of the Division of Inorganic Chemistry, who at the Conference in Paris (1965) had given a comprehensive report on his Division, will carefully examine the necessity for holding meetings in Prague of the individual Commissions of Division II.

Division III: Prof. Weygand, new President of the Division of Organic Chemistry, drew the attention of the Bureau to the fact that his Division had drawn up a long-term programme of Symposia.

Division IV: The Bureau closely questioned Prof. Sperry, President of the Division of Biological Chemistry, about the activities of the Commission on Clinical Chemistry, and in particular about the suggestion that the Commission might secede from IUPAC in order to become a separate Association or Federation.

Clinical chemistry is without doubt an integral part of IUPAC. It is essential that clinical chemists work not only within IUPAC but also in immediate contact with the various other disciplines represented in the Union, in particular with the Division of Analytical Chemistry.

Division V: Prof. West, new President of the Division on Analytical Chemistry, gave to the meeting a detailed list of the work of the Commissions within his Division, thereby demonstrating again the streamlined way in which the Division conducts its affairs.

The emphasis of his report was on cooperation, together with the Division of Applied Chemistry, with other international organizations. In order that this might be augmented, he proposed that in 1967 the Commission V.1 on Analytical Reactions and Reagents be reconstituted under the name "Commission on Applied Analytical Reagents, Reactions and Methods", and reported that the terms of reference of Commission V.1 had already been appropriately modified in order that cooperation might be effected immediately.

In the execution of this task the Commission will cooperate closely with the Secretary General and with the Division of Applied Chemistry.

Division VI: A very comprehensive report has been published in the Comptes Rendus of the XXIIIrd Conference, not only detailing the past and present situation of the Division of Applied Chemistry but also giving a forecast of its anticipated future work. In the light of this report and of the verbal report given by Prof. Truhaut, President of the Division of Applied Chemistry, it was agreed that strengthening and supporting the Division should be a prime concern of IUPAC.

Minute 9

PROBLEMS REGARDING VARIOUS SECTIONS AND COMMISSIONS

(a) Triple Commission on Spectroscopy

Prof. Thompson informed the meeting of the recent decision of ICSU to take direct responsibility for the Triple Commission on Spectroscopy, the membership of which will comprise four men from each of the three Unions concerned (IUPAC, IUPAP, and the International Astronomical Union (IAU)).

This decision implies

- 1) no change for the IUPAC Commission on Molecular Structure and Spectroscopy.
- 2) that meetings of the Triple Commission, which are to be held not more frequently than triennially, will be financed by ICSU.

(b) Section on Water, Sewage and Industrial Wastes

The decision announced in Paris by the Division on Applied Chemistry, that the Section on Water, Sewage and Industrial Wastes be reconstituted, was reconfirmed by the Bureau, and it was

Resolved: That until the time of the XXIVth Conference in Prague a Working Committee be established, chaired by Mr. Eden of the UK and with Mr. Mercer of the UK as Secretary.

Prof. Truhaut to act.

(c) Section on Pesticides

To the request of the Division of Applied Chemistry to establish two Commissions under the Section on Pesticides, already brought to the attention of the Council in Paris, it was

Resolved:

- i) That two Commissions be established under the IUPAC Section on Pesticides, namely
Commission on Development, Improvement and Standardization of Methods of Pesticide Residue Analysis.
Commission on Chemical Nature of Terminal Residues.
- ii) That the Secretary of the two Commissions be Dr. H. Egan (UK), Titular Member of the IUPAC Section on Pesticides.
- iii) That for the first few years of the Commissions' existence their members be drawn from the Titular Membership of the Section on Pesticides.

Budgetary provision has been made for the years 1966 and 1967 for the Section to meet in Geneva (\$ 1,698) and Prague (\$ 2,025) respectively (the figures refer to travelling expenses).

(d) Commission (s) on High Temperatures

The Bureau

- Resolved:
- i) That the request for formation of a Commission on Plasma Chemistry be examined by the Division on Physical Chemistry, and that a suitable report be prepared for presentation to the Council in 1967.
 - ii) That the requests from Profs. Lewis, Starkman, and Thring for payment in connection with the Symposium on Plasma Chemistry (Moscow, 1965) be not met.

Sir Harry Melville to act.

Minute 10

A) ASSOCIATION WITH CITCE

The meeting was informed of the proposal of the Commission on Electrochemistry to reduce its membership to Chairman and Secretary only, but strong disapproval of the suggestion was voiced. It was felt that IUPAC needs a vigorous Commission of its own in the field of electrochemistry and cannot yield any of its influence to the Comité international de Thermodynamique et de Cinétique électrochimique (CITCE), as was in effect being proposed.

The Bureau charged the President of the Division of Physical Chemistry with the reconstitution of the IUPAC Commission on Electrochemistry in 1967, when all the Titular Members retire.

Sir Harry Melville to act.

B) ASSOCIATION WITH GEOCHEMISTS

The background reasons for the dissolution of the IUPAC Commission on Geochemistry were put before the meeting. To the request that IUPAC should establish a formal means of cooperation with the new International Association of Geochemistry and Cosmochemistry, the Bureau

- Resolved: That until the need for such cooperation becomes apparent nothing should be done.

Minute 11

CONFERENCE ON INDUSTRIAL ASPECTS OF CHEMISTRY

Prof. Thompson reported on discussions which he had recently held with

Sir Ronald Holroyd and his colleagues. It was now proposed to hold a Conference on Industrial Aspects of Chemistry in the UK in September 1967, probably in Nottingham.

The subjects at present planned for discussion at this meeting include:

- a) technical matters dealing with the science of raw materials and energy, the design, operation and improvement of chemical processes and of new products in relation to the needs of Society.
- b) Other matters affecting the relations between science and chemical industry and with chemical education,

Appropriate speakers were being considered.

It seemed desirable, at present, to limit the number of participants to almost 1500, including some 500 from abroad. It was hoped that the participants would include schoolmasters, senior schoolboys, members of Universities, and representatives from industrial laboratories and from governmental institutions.

Prof. Thompson said that the organizing Committee had already obtained the promise of funds to cover the cost of the meeting. It was hoped that the main lectures would be published in a book at no cost to IUPAC, and that copies would be distributed widely.

Prof. Thompson asked for opinions on the best method of selecting participants if the number of applications for registration were too large. Some suggestions were discussed but it was decided to leave this matter to the UK organizing Committee.

The Bureau then

- Resolved:
- i) That the plans outlined above be approved
 - ii) That Sir Ronald Holroyd and the UK Committee be thanked for their work.

Secretary General to act.

Minute 12

SPONSORSHIP

- (i) IVth International Polarographic Congress: July 1966, Prague (Czechoslovakia).

Resolved: That no sponsorship be given to the IVth International Polarographic Congress.

- (ii) IXth International Conference on Coordination Chemistry; September 1966, St. Moritz (Switzerland).

The Swiss organizers of the IXth ICC, with the good case behind them that Alfred Werner was the founder of Helvetica Chimica Acta, insist on the publication of the main lectures of the IXth ICC in Helvetica Chimica Acta. IUPAC was thereby placed in a difficult position with regard to the fulfillment of its contractual obligations to Messrs Butterworths. Therefore, with expression of great regret, the Bureau decided that the IXth ICC can no longer be considered to be sponsored by IUPAC.

- (iii) International Congress on Polarography; September 1966, Kyoto, (Japan).

The Bureau recorded its pleasure at the courteous way in which the subject of possible sponsorship of the Congress by IUPAC had been recorded in the second circular of the Congress and

Resolved: That sponsorship, without financial assistance, be given to the International Congress on Polarography.

- (iv) International Conference on Hyperfine Nuclear Spectroscopy; October 1966, Wellington (New Zealand).

Resolved: That Dr. Rees nominate the IUPAC representative to the International Conference on Hyperfine Nuclear Spectroscopy.

- (v) Symposium on the Chemistry and Internal Structure of Synthetic High Polymers; June 1967, Louvain (Belgium).

Resolved: That the Symposium on the Chemistry and Internal Structure of Synthetic High Polymers be sponsored by IUPAC, without financial assistance.

- (vi) Third International Symposium on Organometallic Chemistry and Symposium on Reactions of Ligands of Organometallic Compounds; August 1967, Munich (Germany).

Resolved: That in confirmation of the resolution made at the 17th Bureau Meeting (Paris), the Third International Symposium on Organometallic Chemistry and the Symposium on Reactions of Ligands of Organometallic Compounds be sponsored by IUPAC, without financial assistance.

- (vii) Symposium on Progress in Chemical Thermodynamics; September 1967, Heidelberg (Germany).

Resolved: That the Symposium on Progress in Chemical Thermodynamics be sponsored by IUPAC, without financial assistance.

(viii) 9th European Spectroscopy Conference; September 1967, Madrid (Spain).

Resolved: That, in confirmation of the resolution made at the 17th Bureau Meeting (Paris), the 9th European Spectroscopy Conference be sponsored by IUPAC, without financial assistance.

(ix) Symposium on the Physico-Chemical Control of the Human Environment; July 1968, Pretoria or Johannesburg (South Africa).

Resolved: That the Symposium on the Physico-Chemical Control of the Human Environment be sponsored by IUPAC, without financial assistance.

(x) Third International Symposium on Fermentation; September 1968, New Brunswick (USA).

Resolved: That sponsorship of the Third International Symposium on Fermentation by IUPAC, without financial assistance, be reconfirmed.

(xi) Vth International Symposium on the Chemistry of Natural Products.

The National Adhering Organizations of Mexico and of the UK had both requested that the Vth International Symposium on the Chemistry of Natural Products be held in their respective countries. The Bureau

Resolved: That sponsorship be given to the Vth International Symposium on the Chemistry of Natural Products, to be held in the UK in 1968, without financial assistance, and

Recommended: That a Symposium on a restricted area in the field of natural products (e.g. steroid chemistry) be organized in Mexico in 1968.

(xii) Symposium on Reactions of Oxygen with Organic Compounds; 1968, USA.

The Bureau approved in principle of IUPAC sponsorship of the Symposium on Reactions of Oxygen with Organic Compounds, but requested the Division of Organic Chemistry to give more details about the Symposium to the Executive Committee.

(xiii) 6th International Symposium on Microchemical Techniques; 1968, Graz (Austria).

Resolved: That the 6th International Symposium on Microchemical Techniques be sponsored by IUPAC, but that the decision as

to whether or not financial assistance can be given to the Symposium be made by the Executive Committee at a later date. It is however, doubtful whether such assistance can be given.

Minute 13

PROGRAMMES FOR THE XXIVTH CONFERENCE OF IUPAC AND THE XXIST CONGRESS ON PURE AND APPLIED CHEMISTRY.

The report of Prof. Wichterle concerning the present state of preparations for the XXIVth Conference and XXIst Congress in Prague in 1967 was received with great interest (see Appendix D for the Congress Programme).

The Bureau noted with great satisfaction the fact that the Congress organizers had found an extremely generous solution for paying the travel expenses of invited lecturers.

The organizers asked whether in view of their special difficulties IUPAC could agree with their unanimous wish not to provide for simultaneous translation. The Bureau agreed to this request, and

Resolved: That warm thanks be expressed to the Czech organizers, in particular to Profs Sorm, Cuta and Wichterle.

Minute 14

TITULAR MEMBERS

Resolved: That the list of new Titular Members (Appendix E) be approved.

Minute 15

AIMS AND STRUCTURE OF IUPAC

The Memorandum of Prof. Kondratiev dated 2 September 1965 was sent out by the Secretary General to all Bureau Members on 31 December 1965, and some time before the Bureau meeting a letter from Prof. Noyes and a memorandum from Prof. Lecomte were also circularized. Through the good offices of Dr. Wolf of the Gesellschaft Deutscher Chemiker, the memorandum of Prof. Klemm was distributed on 23 February 1966.

The topic had been previously discussed at the Meeting of the Division Presidents (23 February 1966), and the outcome of the discussion was the firm conviction that it is necessary to strengthen the Division of Applied Chemistry and not to split or weaken it in any way.

In the Bureau meeting the memoranda were introduced by their authors, after which introductions a discussion ensued. The main conclusions of the meeting were the following:

a) There are no longer - if it can be accepted that there ever were - strict borderlines between the various scientific disciplines. The rapid development of science and technology is such that the classical separation into various branches no longer agrees with reality. Furthermore, there are virtually no "pure" scientific discoveries which sooner or later do not become part of "applied" science.

In particular, there are now no problems in chemistry which can be described as being 100% inorganic or 100% biological, etc., and which therefore can be channeled by IUPAC into one or other pure Division. Problems will be tackled best by a strong Applied Division's receiving advice from the appropriate pure Divisions. IUPAC's difficulties will certainly not be solved by splitting the Division of Applied Chemistry between the pure Divisions; difficulties - and costs - would only be increased.

b) The best method for interesting industry in the affairs of IUPAC is to involve industry more directly in the work of IUPAC, i.e. to elect - in the case of all the Divisions - more Titular Members from industry, which will give IUPAC a closer contact with the real needs of industry and may lead to economies. This is in fact the main conclusion of the Committee chaired by Dr. Connor which studied the relationships between IUPAC and industry.

c) It was decided that a Committee to review the structure of IUPAC is not needed and should not be established.

d) It was again agreed, eleven years after the topic was first raised at the Conference in Zürich, that the central Secretariat of IUPAC needs to be strengthened and expanded. A permanent and strong Secretariat is needed as a focal point for the Union, as described in Lord Todd's "President's Report on the State of the Union, 1965".

Minute 16

COOPERATION WITH ISO

Dr. Bushill presented a report on the ISO meeting of an ad hoc Group for Liaison between ISO/TC 47 (the Technical Committee for Chemistry of the International Organization for Standardization) and IUPAC, which took place in London in October 1965. The outcome of the meeting, at which IUPAC was represented by one observer (Dr. Bushill) was a resolution stating that "The (ISO) delegations consider it very urgent that a contact group comprising the mandated representatives of IUPAC and ISO/TC 47 should effect a permanent and constructive contact between the two organisations. In the framework of this arrangement this group will establish its own programme of work and methods of operation".

It was pointed out by the Bureau, however, that IUPAC's representatives on the 'contact group' (it was suggested that ISO and IUPAC should each supply four representatives) could not possibly cover the whole of the subject of Chemistry. It was agreed that a much more acceptable procedure

for cooperation between the two organizations was that advanced by the Liaison Committee (see Appendix F). Contact should be at the level of the Secretary General, who should transmit the problems to appropriate Commissions or individual experts.

The Bureau

- Resolved: a) That no 'contact group' be established.
- b) That the procedure advanced by the Liaison Committee which met with the officers of ISO in Paris in October 1963 be reconfirmed as that by which IUPAC wishes to cooperate with other organizations.

Minute 16

ANY OTHER BUSINESS

(a) Prefixes "femto" and "atto" for 10^{-15} and 10^{-18} respectively

- Resolved: (i) That the prefixes "femto" and "atto" for 10^{-15} and 10^{-18} respectively be approved.
- (ii) That the use of these prefixes by chemists be recommended.

(b) Category of Adherence to IUPAC of Cuba.

- Resolved: That the Council decision that Cuba should adhere to IUPAC in category D be reconfirmed.

(c) Report on the ICSU Meeting, Bombay (India).

The President, making his report on the ICSU Meeting held in Bombay (India) in January 1966, informed the meeting that

- (i) The International Union of Nutritional Science (IUNS) had not been accepted as a member of ICSU.
- (ii) An ICSU Committee on Data for Science and Technology has been established in order to determine the viability of a possible world scientific information service.

Minute 17

VOTES OF THANKS

The Secretary General and Treasurer expressed IUPAC's gratitude for the hospitality of the Gesellschaft Deutscher Chemiker and for the secretarial

assistance that had been supplied, which votes of thanks were approved with acclamation.

A handwritten signature in cursive script, appearing to read 'Klemm', written in dark ink.

Prof. W. Klemm
President

Dr. Rudolf Morf
Secretary General

APPENDIX (A)

REPORT OF THE FINANCE COMMITTEE

Zürich, Switzerland - February 22 1966

The Finance Committee met in Zürich, Switzerland, on February 22, 1966, together with the Treasurer.

The Committee reviewed the financial statements for 1965 and the budget for 1966 as presented by the Treasurer. The Committee recommends no changes in the investments of the Union's funds at this time.

Although the income of the Union has gradually increased, expenses have also risen. A small deficit is forecast for 1966 and a very large deficit for 1967. To maintain a sound financial position, further action to increase income and to control expense is essential. The Committee makes the following recommendations:

1. Adoption of a plan for "company associates" of the Union is urged as the best means to increase the income quickly. (This item is on the agenda of the Bureau meeting to be held in Frankfurt/M., Feb 24, 1966).
2. Many persons have not used the group travel plans or charter flights that have been arranged for conferences in the past. As a result, travel expenses for conference attendance have been much higher than necessary. Large savings can be made if the Bureau will resolve that, if group travel or a charter flight is arranged for a conference, an attendee must use this service or pay his own travel expense.
3. Some Commissions may not have business important enough to justify the cost of a meeting at the time of the next conference. It is proposed that the Bureau ask the Division Presidents to consider carefully the business of each of their Commissions, and that they authorize only those meetings important enough to justify the cost.
4. In some cases the national adhering bodies may not be fully aware of the difficult financial situation of the Union. The Finance Committee believes that considerable reduction of Union expense might result if the member countries were asked to pay, if possible, the travel expenses of titular members residing in their countries.
5. The sponsorship of symposia and the encouragement of them by subsidy is a valuable and important activity of the Union. Nevertheless, considering the limited income of the Union, it is recommended that the Bureau resolve not to subsidize symposia in conference years.
6. The printing and mailing costs of the Comptes Rendus are rising.

The importance and value of scientific papers, commission reports, and other documents is not to be judged by their length.

Some reduction in expense can be expected if the length of material printed in the Comptes Rendus is judiciously controlled. It is recommended that the Bureau authorize the Secretary-General to take appropriate action to limit each issue of the Comptes Rendus to approximately 200 pages.

7. The deficit estimated for 1967 is so large that it would consume a major part of the reserve funds if no action is taken. The Finance Committee recommends that, after caring for the essential administration of the Union, the funds available for travel expense in 1967 be estimated, and that travel funds be reduced proportionately by countries. Each adhering body can then determine if it should defray a larger proportion of the travel costs of persons residing in its country, or if it should send a smaller number of people to the conference.

APPENDIX (B)

Basle, 3 September 1965

ADHERING ORGANIZATIONS

Dear Sirs,

As a result of the great increase in its activities during the past ten years IUPAC has undoubtedly become a much more significant factor in international scientific affairs than it was in the past. This increase has necessarily involved a very substantial expansion of the administrative and secretarial section of the Union and the cost of this expansion could not possibly have been met without the generous support of a small group of Swiss chemical companies which have provided staff and facilities for the Union secretariat equivalent to a large financial contribution. It is, however, recognised by the Executive Committee and the Bureau that this assistance from the Swiss Industry had its origin in the rather special circumstances associated with the tenure of the Presidency by Prof. Stoll ten years ago and that it cannot continue indefinitely - not indeed should its continuation be expected. It is clearly necessary that the Union take steps at the earliest possible date to establish an independent secretariat; the estimated cost of such a secretariat would be approximately \$ 60,000.- per annum. This sum the Union cannot at present afford unless it sacrifices most of its other activities and it is therefore necessary to seek support of this order from some outside source.

The Union's Finance Committee has considered this problem thoroughly and has concluded that the only likely source of support on this scale is industry. Union dues from national adhering bodies have already been substantially increased and the income from this source is already fully committed to the maintenance of the work of Divisions, Sections and Commissions and in the sponsorship of international conferences and symposia. The importance of the Union's activities to the development not only of the chemical industry, but to the wide range of other industries employing chemists, however, warrants the belief that support from industry could justifiably be sought on a world-wide basis.

The Union is already greatly indebted to industry for generous financial help. But such help has been given essentially by occasional donations and has rarely been on any permanent basis. In order to maintain an adequate secretariat and ensure continued efficiency in the Union's work some more permanent form of support is necessary. With this end in view the Finance Committee has brought forward a proposal that the Union should establish an auxiliary body under Clause IX D.1. of the Statutes to be known as "Associates of IUPAC" to which chemical and other industrial organizations employing chemists could belong either singly, in groups, or through national agencies which they operate. To allow both small and large chemical industrial undertakings to become Associates it has been suggested that the subscription could be levied on a unit basis, the basic unit subscription being, say, \$ 250.- (US); companies could subscribe one or more units according to size. In return for the basic unit subscription each Associate might receive

- 1) One copy of all Union publications, i.e. Pure and Applied Chemistry, Comptes -Rendus, Information Bulletin, Commission Reports, etc. .
 - 2) Advance notices of all IUPAC and IUPAC sponsored activities
-
- 3) Admission of two delegates as observers to Union Congresses and Symposia
 - 4) Use of any group travel facilities which may be arranged for IUPAC meetings, symposia, etc..

Associates paying multiple unit subscriptions would, of course, be entitled to multiple privileges.

The Executive Committee believes that a scheme along these lines might provide a solution to the Union's financial problems, especially if in presenting it to industry a fully documented case were presented indicating the case for the secretariat and a comprehensive statement on the activities of the Union and their significance to industry. It recognises, of course, that the scheme represents an entirely new departure for the Union and also that circumstances such as tax liability on subscriptions and donations vary from country to country; equally it may be that under such a scheme subscriptions in some countries might be best collected through national bodies and in others by direct contribution to the Union.

For these reasons we have been asked by the Executive Committee to send this letter to you and to all other National Adhering Bodies asking you to consider the proposals outlined in it. We should be glad to know whether this proposal meets with your general approval and whether there are any features in it which you believe would require modification to meet the situation of industry in your own country.

We look forward to receiving your reply at the earliest possible date and in any case before 1st December 1965. Also every other proposal which might increase the efficiency of IUPAC is highly appreciated.

Yours faithfully,

(signed) Prof. W. Klemm Prof. J. C. Bailar, Jr

APPENDIX (C)

COMMITTEE ON THE TEACHING OF CHEMISTRY

Minutes of the Meeting held in London on 14th February, 1966

Present: Prof. R.S. Nyholm (Chairman)
Dr. P. Sykes (Secretary)
Prof. J. Bénard
Prof. J.A. Campbell
Prof. W.A. Noyes, Jr.
Prof. M. Oki
Prof. G.M. Schwab
Dr. Rudolf Morf

Apology for absence: Prof. O.A. Reutov

1.- The Minutes of the Meeting held in Paris on 26th April, 1965, were confirmed.

2.- Report of Secretary:

(a) The postgraduate course arranged by Prof. Zyka in Prague, the holding of which had been approved in principle by the IUPAC Committee (Minute 2 (a), Paris), began on 1st February. It was hoped that one or more Committee Members might be able to visit it, in his private capacity and at UNESCO's invitation, before it closed on 16th December 1966.

(b) The manuscript of the UNESCO Yearbook 'New Trends in the Teaching of Chemistry' is expected in Paris very shortly. Members were requested to send to Dr. Maybury at UNESCO the names of any persons whom they suggest should receive copies.

(c) Prof. Oki reported on a visit he had made, in his private capacity, to the UNESCO Pilot Project for Chemistry Teaching in Asia, at Bangkok. Prof. Campbell was also to visit Bangkok, in his private capacity, on his return from the present Meeting.

(d) Prof. Campbell reported that he had as yet heard no more of the Report on the Teaching of Analytical Chemistry being compiled by Prof. D.N. Hume of MIT.

(e) A communication from Mr. D.G. Chisman (late Secretary of the British Committee on the Teaching of Chemistry), Science Education Officer of the British Council, outlining the Council's future plans in this field was handed round the table.

(f) The Chairman had received copies of two draft Reports from UNESCO on their future plans. UNESCO had been asked to dispatch copies directly to individual Members of the Committee and any comments should be sent to Dr. Maybury.

3. - (a) / (b) Mr. J.C. Mathews' Report on 'The Effect of Examinations in Determining the Chemistry Curriculum up to the level of University Entrance' was discussed at length and it was decided that :

(i) The Secretary should formally communicate the Committee's congratulations and thanks to Mr. Mathews.

(ii) The report should be published in full, including Appendices, without editing but with a short Foreword explaining the Committee's reasons for commissioning it.

(iii) That the Report should be offered to Prof. B.C.L. Weedon for publication in 'Pure and Applied Chemistry', with the request that a considerable number of reprints (probably as many as 5,000) should be provided for sale at as low a price as possible compatible with covering the cost of these.

(iv) That arising out of the Report certain general recommendations should be made by the Committee. These will be drafted by the Chairman in collaboration with Dr. Sykes and when agreed by the whole Committee forwarded for printing as an Appendix to the Mathews Report.

(v) That a further Report of a similar nature should be commissioned dealing with countries whose educational system was essentially different from those considered in the Mathews Report, e.g. France, Italy, Spain, Portugal, South America, etc. Prof. Bénard agreed to endeavour to find a suitable author.

4. - (a) The Chairman reported on correspondence with Prof. O' Connor (Wisconsin) on the Report the latter had been commissioned to make. No delivery date could yet be settled.

(b) (i) The Secretary reported on correspondence with Foundations over financing a Report on comparison of the way that the major curriculum reform projects were working out in practice in the hands of the average teacher. The Ford Foundation had seemed prepared to support such a project and a potential author had been approached. It was felt advisable to delay further action for approximately twelve months until the Nuffield materials were in wider use in the United Kingdom.

(ii) The Secretary reported that Mr. N.N. Gilpin (Senior Chemistry Master of the Methodist College, Belfast, Northern Ireland) was on leave as a Fellow Commoner at Balliol College, Oxford, during the present term in order to make a comparison of the content and approach of new curriculum studies. If anything came out of this work he would make a Report to the Committee.

(iii) Other projects were reviewed and it was decided to commission further reports as suitably qualified authors could be found to undertake them.

- 5.- (a) Dr. Morf reported that he had received only half the sum due in respect of the contract with UNESCO for 1965 and, as yet, no draft contract for 1966. Further representations were to be made. Consideration was given to the possibility of obtaining funds from alternative sources.
- (b) Dr. Morf reported that he had been appointed to Switzerland's Official Delegation to UNESCO. It was hoped that any Committee Members who had access to their country's Delegations would emphasise the need for UNESCO to devote more of its resources to fact-finding activities.
- 6.- Dr. Sykes' resignation of the Secretaryship (previously communicated to Members) was accepted with regret by the Committee, and Dr. Sykes was asked to continue as an ordinary Member of the Committee. The Chairman reported that he had made an informal approach to Mr. D.G. Chisman, Science Education Officer of the British Council, who was willing to consider becoming Secretary of the Committee. The Chairman's action was confirmed with thanks.
- 7.- It was agreed that the Chairman should call the next Meeting of the Committee when business required it. Prof. Schwab invited the Members to hold their next Meeting in Munich. Consideration was given to inviting a representative of a developing country to attend the next meeting as an Observer.

APPENDIX (D)

Extract from the first Circular of the XXIst International Congress on Pure and Applied Chemistry.

Scientific Programme.

Three topical subjects have been selected which will be dealt with in three separate Sections at the Congress. In each Section, several Plenary Lectures will be given in addition to contributed papers.

1.- Automation in Analytical Chemistry

Papers should show the contribution which automation can make to the study of chemical reactions and other phenomena with particular reference to analytical chemistry but without emphasizing instrumental aspects. Among the eminent scientists invited to give Plenary Lectures the following have accepted to date: W. J. Braedel (U.S.A.), A.I.M. Leulemans (Holland), W. Koch (Germany), H. Malissa (Austria), L. Meites (U.S.A.), J. Mitchell, Jr. (U.S.A.), and W. Simon (Switzerland).

The discussions will be held under the following headings: Automation of analytical methods based on a) electrical measurements, b) thermography, c) spectrochemical measurements at all wavelengths, d) separation methods, and e) radiochemical methods, together with f) automation and regulation of chemical processes based on analytical methods.

2.- Toxicological Chemistry

The work of this Section will be directed towards industrial, forensic, and clinical toxicology and will cover the analytical chemistry and biochemistry of industrial poisons and of toxicologically important drugs.

One group of papers will deal with the isolation, detection, and quantitative determination of such compounds and of their metabolites in blood, urine, and other biological materials. Plenary Lectures will be given by R. Truhaut (France), and A. Singerman (Argentina).

A second group of papers, which will be introduced by H.B. Elkins (U.S.A.), R.T. Williams (U.K.), will be concerned with the metabolism of industrial poisons, the kinetics of excretion of these substances and their metabolites, exposure tests and their evaluation; and analogously with the biotransformations of toxicologically important drugs, their absorption, distribution, and excretion. Several additional speakers have been invited to present Plenary Lectures.

3.- Chemistry of Nucleic Acid Components

Papers should show the present state of the chemistry and physical chemistry of the purine and pyrimidine bases, their nucleosides and nucleotides. Plenary Lectures will be delivered by the following eminent chemists: D.M. Brown (U.K.), J.J. Fox (U.S.A.), H. G. Khorana (U.S.A.), and N.K. Kochetkov

(U.S.S.R.). Papers will be presented under the following headings:

- a) Pyrimidine and purine bases and their analogues; papers dealing with new synthetic procedures and new types of heterocyclic analogues of the naturally occurring bases will be given preference.
- b) Natural and anomalous nucleosides; papers are invited on chemical and enzymatic methods for the synthesis of nucleoside bonds and on structural studies of nucleoside antibiotics.
- c) Nucleotides and oligonucleotides; papers should deal with syntheses of internucleotidic bonds and oligonucleotide chains and with the application of defined oligonucleotides to problems of molecular biology.

Congress Languages

Papers may be presented in any language but the Organizing Committee hopes that speakers will use a language that is widely understood by the participants, preferably English. No arrangements will in general be made for simultaneous translation. As far as possible translations into English will be projected during Plenary Lectures given in other languages.

The Congress literature and materials will be published in English.

Scientific Contributions

Authors intending to take part in the Congress and to present papers are requested to indicate this on the enclosed application form,* showing the section in which they wish their contribution to be included. This form must be returned not later than September 1st, 1966. An abstract of the paper will be required with the final registration.

Only papers strictly relevant to the Section topics can be accepted. The final decision about the acceptance of papers lies with the Scientific Committee.

The Organizing Committee anticipates that it will not be possible to present all the contributions as full papers; it therefore reserves the right to publish some of the contributions as Abstracts only. Abstracts will be published in a separate volume for each Section in view of the expected size.

The Plenary Lectures will be published in Pure and Applied Chemistry, the official journal of IUPAC. A discount of 20% will be allowed on all orders for this reprint received by the Organizing Committee before the end of the meeting.

* Application forms have been sent out with the first circulars of the Congress, but have not been reproduced here.

APPENDIX (E)

NEW TITULAR MEMBERS 1965 - 1969

			<u>Agreement of the respective National Adhering Organizations</u>
Arima	Japan	VI. 2	received 4. 9. 65
Astachov	USSR	I. 1	
Bate-Smith	UK	III. 2	received 22. 9. 65
Beck	Hungary	V. 6	received 3. 11. 65
Benoit	France	I. 4	received 15. 11. 65
Biedermann	Sweden	V. 6	received 27. 10. 65
Brown	Australia	I. 5	received 27. 8. 65
Cole	Australia	I. 6	received 27. 8. 65
Collongues	France	II. /II. 3	received 24. 8. 65
Cook	Austria	V. 7	
Crespi	Argentina	V. 7	
Cross	UK	III. 1	received 23. 12. 65
Egan	UK	VI. 6	received 13. 1. 66
Elyashevich	USSR	I. 6	received 11. 2. 66
Favarger	Switzerland	IV.	received 23. 9. 65
Flaschka	USA	V. 2	received 20. 9. 65
Förster	Germany	I.	received 5. 10. 65
Freyschuss	Sweden	VI. 4	received 27. 8. 65
Fujinaga	Japan	V.	received 4. 9. 65
Gee	UK	I. 4	received 28. 10. 65
Hegnauer	Netherlands	III. 2	
Herout	Czechoslovakia	III	received 27. 8. 65
Hoffmann-Ostenhof	Austria	IV.	received 13. 8. 65
Horton	USA	II. 3	received 20. 9. 65
Hume	USA	V.	received 14. 5. 65
Koch	Germany	V. 2	received 5. 10. 65
Koryta	Czechoslovakia	I. 3	received 27. 8. 65
Langlykke	USA	VI. 2	received 20. 9. 65

Leussing	USA	V. 6	received 1.11.65
Loening	USA	III. 1	received 10.1.66
Medvedev	USSR	I. 4	received 1957
Meinke	USA	I. 5/V. 7	received 20.9.65
Metrico	Italy	VI. 5	received 27.12.65
Minczewski	Poland	V. 7	
Morino	Japan	I. 6	received 4.9.65
Overberger	USA	I. 4	received 15.11.65
Prettre	France	I	received 24.8.65
Price	Australia	III. 2	received 27.8.65
Reith	Netherlands	VI. 3	
Rodeyns	Belgium	VI. 7	received 22.11.65
Rogers	USA	V. 6	agreed 1.11.65
Rogovin	USSR	VI. 9	agreed 24.11.65
Rossotti	UK	V. 6	received 19.10.65
Rutkowski	Poland	VI. 3	
Sartori	Italy	II.	received 4.10.65
Saurel	France	I. 2	letter Givaudon 16.11.65
Smets	Belgium	I. 4	received 22.11.65
Swain	UK	III. 2	received 22.9.65
Yamasaki	Japan	V. 6	received 8.12.65
Zollinger	Switzerland	III.	received 23.9.65

APPENDIX (F)

Report to the Bureau of the Liaison Committee

(Taken from the Information Bulletin No 20)

During the past few years, an increasing number of questions of chemical nature have been submitted to IUPAC by international bodies like ISO, WHO, FAO, IAEA and others. The questions to what extent and by what mechanism such inquiries should be handled within IUPAC, is an important one. As a first experiment and for information, an observer delegation - Secretary General and the Presidents of the Divisions of Physical, Analytical and Applied Chemistry - was present during the Meeting of the International Standards Organizations ISO in Paris, from 7 to 11 October, 1963.

During a joint session of this Committee, the Committee ISO on chemistry (ISO TC 47) and the meeting of the said Presidents and Secretary General, the following results have emerged which are submitted to the Bureau.

Dr. Morf, Dr. Bushill, Prof. Malissa, Prof. Schwab and Prof. Truhaut were present at the ISO TC 47 Meeting in Paris, 7-11 October, 1963.

(1) After having heard the exposé of the IUPAC representatives on the IUPAC Organization, ISO TC 47 decided (ISO document 329):

(a) that IUPAC be invited to keep the ISO technical committees with which it is in liaison informed of the progress of its work related to their own field; and for this purpose should circulate the relevant documents to addresses selected by the secretariats of those ISO committees.

And accordingly:

(b) that the ISO member bodies holding the secretariat of technical committees in liaison with IUPAC be invited to provide the Secretary General of IUPAC with the names and addresses to which the various documents in question should be sent;

(c) that IUPAC be invited to reconstitute its Committee on Reagents and to request the latter to proceed with all possible speed with the preparation of standard specifications for the most common analytical reagents, with a view to these specifications being then transmitted to ISO/TC 47 for the purpose of their translation into ISO recommendations

(d) that IUPAC be invited to send, or to delegate, experts to meetings of TC 47 Working Groups where such action will contribute usefully to avoid, through this liaison, the risk of wasteful duplication in the work of ISO and of IUPAC, and/or to the technical expertise available at the meetings in question.

(2) The groups of ISO which come into account in this respect are: TC 12 (Symbols), TC 34 (Agriculture and alimentaries), TC 37 (Terminology), TC 47 (Chemistry), TC 48 (Laboratory glass ware), TC 61 (Plastics), TC 69 (Statistical treatment of observations), TC 91 (Surface active substances), TC 81 (Pesticides). It has been pointed out that contacts should go on the side of IUPAC through the Secretary General, on the side of ISO however through the single addresses of national secretaries being in charge of the different groups. These addresses should be sent to the Secretary General of IUPAC by the secretary of ISO.

(3) The Liaison Committee makes the following proposal for the collaboration with other international bodies like FAO, WHO, etc. : when questions from international organizations are addressed to the Secretary General, four different cases are discerned :

(a) it is clear which commission of IUPAC is competent. In this case the question will be conducted through the Division President to the respective commission. The answer goes through the Division President to the Secretary General and from there to the international organization;

(b) it is not clear which commission is competent. In this case the Secretary General asks the six Division Presidents and conducts the question according to their answer;

(c) in the present structure of IUPAC no commission is competent. In this case the Division Presidents are asked, as before; however the answer should then be given by a competent person or laboratory designated by Division Presidents or contained in a list of competent people and laboratories, which must exist in the office of the Secretary General. The answer again goes through one of the Division Presidents;

(d) the question of competence is so important that the Bureau must decide whether and by whom the question should be answered or not;

(d1) IUPAC proposes to ISO, etc., a competent person or laboratory. Eventually ISO, etc., have to pay for experimental work on this question;

(d2) the Bureau decides because of the importance of the question for IUPAC itself, that IUPAC itself would be prepared to pay for experimental work.

In all cases the questions directed to a competent commission, person or laboratory should contain the question of a dead-line for the answer and should eventually indicate such.

(4) In order to deal with cases (c) and (d) the Secretary General must possess a list of competent persons or laboratories for all questions which might come up. This list should be prepared as soon as possible by a circular going to all the commissions in which all the single questions and

fields of interest (compare sub 2) are enumerated.

(5) All communications and answers to questions going from IUPAC to ISO which are supposed to be translated into ISO recommendations, should contain a note indicating the contribution of IUPAC,

(a) in order to increase the confidence in this recommendation,

(b) in order to emphasize the competence of IUPAC. The same applies to information given to other international organizations.

(6) The divisions of analytical chemistry and of applied chemistry will be asked to reconstitute their joined commission on standardization of the most common analytical reagents.

The President of the Division of Physical
Chemistry:

Prof. Dr. G.-M. SCHWAB