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COMMITTEE OF EXPERTS ON THE DEPOSIT OF MICROORGANISMS FOR THE PURPOSES OF PATENT PROCEDURE

(April 23 to 26, 1974)

POSSIBILITIES OF INTERNATIONAL COOPERATION
WITH RESPECT TO THE DEPOSIT OF
MICROORGANISMS FOR THE PURPOSES OF PATENT PROCEDURE

Report prepared by the International Bureau

SUMMARY

This document considers the nature of the requirement of deposit of microorganisms for the purposes of patent procedure and examines possibilities of avoiding multiple deposit where protection for a microbiological invention is sought in several countries, and of establishing a framework for international cooperation in this field.

Introduction

- 1. Reference is made to document DMO/II/2, which contains the first part of the report prepared by the International Bureau in compliance with the decisions taken by the Paris Union Executive Committee at its eighth ordinary session in 1972 (see paragraph 2 of document DMO/II/2).
- 2. This document contains the second part of that report, namely, a study of the questions raised in the proposal of the United Kingdom (see document P/EC/VIII/8, reproduced in Annex I of document DMO/II/2). It is subdivided into the following Chapters:
 - I. General Considerations Concerning the Requirement of Deposit (paragraphs 3 to 6);
 - II. Possibilities of Avoiding Multiple Deposit (paragraphs 7 to 13);
- III. Technical Requirements (paragraphs 14 to 16);
- IV. Administrative Requirements (paragraphs 17 to 25);
 - V. Differences in Rules Concerning the Requirement and Date of Deposit and the Date and Other Conditions of Release; Possibilities of Harmonization (paragraphs 26 to 30);
- VI. Export and Import Restrictions (paragraph 31);
- VII. International Cooperation (paragraphs 32 and 33);
- VIII. Conclusion (paragraphs 34 and 35).

I. General Considerations Concerning the Requirement of Deposit

- 3. The Industrial Property Offices of a large number of countries require, in cases of certain microbiological inventions, that the applicant "deposit," in a "depository" or a "culture collection," the microorganism whose action is used for such an invention (see document DMO/II/2, paragraph 14). The invention in question may relate either to a process involving the action of a microorganism or to a product of such a process. Microbiological inventions are of growing importance in various fields of technology: in addition to the use of microorganisms in fermentation processes for the production of cheese, beer, wine, tea and tobacco, as well as in the pharmaceutical industry (in particular, for the manufacture of antibiotics), microorganisms are now increasingly being used also for other processes in chemical and related fields of technology (for instance, desulfurization of petroleum or leaching of minerals). In view of the fact that all these inventions are used in industrial production, applied microbiology has been recognized as a subject matter of patent law even where biological processes normally are not patentable (1). In this context, the term "microorganism" is to be understood in a broad sense, including, for instance, fungi, bacteria and viruses (although the latter are not necessarily living organisms).
- 4. The requirement of deposit serves the purposes of <u>disclosure</u> of <u>the invention</u>. Disclosure means that an invention is to be described in a sufficiently clear and complete manner to enable any person skilled in the art to carry it out, or in other words: <u>to repeat the effect of the invention</u>. It is a fundamental principle of any law for the protection of inventions—whether in the form of patents or in the form of inventors' certificates—that only full disclosure of the invention justifies the grant of the title applied for. The usual means of disclosure are a written description and drawings. These means are suitable for reproduction in print, so that the disclosure can easily be made available to anyone interested, without limitations as to place and time.

⁽¹⁾ See Rules 39.1(ii) and 67.1(ii) of the PCT Regulations and Article 53(b) of the European Patent Convention.

- In the field of microbiological inventions, difficulties arise as regards the requirement of disclosure since a written description of a microorganism, possibly accompanied by drawings (e.g., based on an electron microscopic photograph), in most cases does not suffice to enable an expert to carry out the invention. The reason is that it appears to be extremely difficult to describe a microorganism in a manner which excludes any doubt about its identity. A number of species of microorganisms in particular fields (e.g., certain kinds of bacteria) have, of course, been identified by scientific circles in specialized publications, applying uniform nomenclature (2). New microbiological inventions, however, often use hitherto unknown or unavailable microorganisms which, even if all their characteristic features are precisely indicated in a written description, possibly accompanied by drawings, are thus not made readily available to a person skilled in the art. In order to repeat the effect of the invention, it is necessary, in such cases, not only to understand the description but to possess a strain of the microorganism in question. Therefore, the Industrial Property Offices mentioned in paragraph 3 require that the intellectual act of describing the invention be completed by the physical act of depositing the microorganism used for the invention. The purpose of deposit is to preserve the deposited species of microorganism (e.g., in order to permit proof of identity in case of infringement) and to permit physical access to the deposited microorganism by anyone interested, for the purposes of research, for instance, with a view to making additional inventions, or in order to use the invention in industrial application after the expiration of the patent. Thus the deposit, combined with the obligation of making the deposited microorganism available, is to make sure that the invention can be used by any person skilled in the art so that it can be considered fully disclosed, and included in the "state of the art."
- Those Industrial Property Offices which require deposit of microorganisms for the purposes of patent procedure do not necessarily apply the same standards in determining the cases in which such a deposit is required. Some Offices require deposit if an invention makes use of a microorganism so far "not known and readily available to the public" (see, for example, the Regulations of the US Patent Office) or "not available to the public" (see Rule 28 of the Implementing Regulations to the Convention on the Grant of European Patents in Annex IV to document DMO/II/2). In the Netherlands, it is left to the examiner to decide in each individual case whether deposit is required. On the other hand, in the procedure of the Hungarian National Office of Inventions deposit is necessary for all microbiological inventions, regardless of the question whether the microorganism is known and available or not. In addition to these discrepancies, there exist differences between the various Offices as regards the date on which the deposit has to be made, the consequences of a belated deposit or of termination of the deposit, and the earliest date and conditions of release of the deposited microorganism. These differences in standards--in addition to the fact that some Offices do not, or not yet, require deposit -- have to be borne in mind when examining possibilities of international cooperation.

II. Possibilities of Avoiding Multiple Deposit

In so far as Industrial Property Offices require, in addition to a description of the microbiological invention, the deposit of the microorganism used for the invention, problems arise whenever for one and the same invention protection is sought in several countries. Is it necessary to make a deposit in each country in respect of which protection is sought or can Industrial Property Offices with which subsequent applications are filed relating to the same invention take into account deposits which have been made abroad, for instance for the purposes of the first filing? The proposal of the United Kingdom reproduced in the Annex to document P/EC/VIII/8 (appearing in Annex I to document DMO/II/2) refers to this question, drawing particular attention to the problems which arise if a deposit is required in each country in respect of which protection is sought. It is obvious that such a requirement can cause considerable difficulties to the applicant for a patent or inventor's certificate relating to a microbiological invention: deposit of a microorganism in several countries is burdensome, time consuming and costly; it may even be impossible in view of export and/or import restrictions on microorganisms in certain countries which may prevent the applicant from forwarding the microorganism from one country to another.

Reference is made to such publications in the replies from Czechoslovakia and Sweden; see Annex III to document DMO/II/2.

- 8. How could the requirement of multiple deposit be avoided? There seem to exist two main possibilities: either States agree on recognizing deposits of microorganisms in foreign culture collections, or an international culture collection is established in which microorganisms can be deposited for the purposes of patent procedure with the effect that the deposit is recognized by all States participating in the scheme. Between these two possibilities, various intermediate solutions and combinations may be considered.
- 9. Recognition, by Industrial Property Offices, of a deposit made in a foreign culture collection has been suggested in the proposal of the United Kingdom (see paragraph 7 above) as a possibility for solving the problems referred to. In fact, this solution is already being applied by a number of Industrial Property Offices (see document DMO/II/2, paragraph 22). It has the advantage that existing institutions can be used and that applicants can address themselves to the nearest culture collection; the latter aspect may be important even if the Industrial Property Office of the country where the applicant files the first application (usually his country of residence) does not require a deposit.
- 10. If recognition of foreign deposits is considered, a number of questions arise in view of the <u>differences of a technical and administrative nature</u> between the various existing and possible future culture collections. The technical capacity for keeping a deposited strain alive, in so far as possible without modifications, may differ from one collection to the other. There may also be differences as regards the administrative regulations for the acceptance of the deposit, the conditions for maintaining the deposit (including possible annual fees to be paid by the depositor) and the possibility of a decision to be taken by the culture collection to discontinue the maintaining of a deposited microorganism. If Industrial Property Offices rely on deposits of microorganisms made with foreign culture collections, both the Offices and the public in the countries concerned are likely to have an interest in the fulfillment of certain <u>minimum conditions</u> by those culture collections. This question will be further examined in the following Chapters.
- 11. Questions relating to differences of a technical and administrative nature would not arise if an international culture collection were established and if States agreed to recognize, for the purposes of patent procedure, the deposit of microorganisms in that culture collection. In such an institution, there would exist only one technical and administrative standard for the deposit of microorganisms, which would be internationally known and therefore easy for Industrial Property Offices to rely upon. An international culture collection could be established either in a centralized or in a decentralized form; in the latter case, the international culture collection would consist of institutions in various countries which all would be governed by the same technical and administrative standard. The decentralized form would have advantages for depositors since it would avoid possible difficulties in communicating with the international culture collection owing to long distances. The setting up of an international culture collection would not necessarily require the construction of new buildings, etc., since existing institutions could be used for the purpose, in particular, if the decentralized approach were chosen. The possibility could also be considered of adding a new institution or new institutions to the existing ones.
- 12. As regards the <u>administrative framework</u> for the setting up of an international culture collection, various forms could be considered: such an institution could be created either as an administrative unit of an already existing intergovernmental organization, as a "joint venture" between several interested intergovernmental organizations, or as a separate legal entity. In any case the international culture collection would need a governing body which would control its operations, in particular in order to ensure the observation of the uniform technical and administrative standard.
- 13. As an intermediate solution between a decentralized international culture collection and a system of simple recognition of foreign deposit, the establishing of a list of internationally approved culture collections might be considered. Deposit of a microorganism in a culture collection contained in that list would be recognized by the States participating in that scheme. The list could be established by an intergovernmental body, upon the proposal of the States in which culture collections are located, and taking into account certain minimum requirements of a technical and administrative nature (see the following Chapters). Admittedly, the technical and administrative standards of the institutions included in the list might differ from each other, but international recognition would be made acceptable through the observation of certain minimum requirements.

III. Technical Requirements

- 14. Whatever form of international cooperation with respect to the deposit of microorganisms is chosen, some minimum requirements of a technical nature would have to be taken into consideration. One of those conditions would be that the institutions in question must be technically sufficiently equipped to keep deposited microorganisms alive as long as is necessary for the purposes of patent procedure, possibly even for an unlimited period of time. This seems to be essential in view of the purpose of the deposit, namely, to preserve the identity of the microorganism and to make it available at any time. In particular, in a system of international recognition the technical conditions for availability are important, since a number of States would rely on only one deposit. Of course, this does not mean that all deposited microorganisms would have to be kept alive for an unlimited period of time; the latter question would depend on particular factual and legal considerations (see paragraphs 21 to 23 below). It would, however, have to be made sure that there are no technical obstacles -- resulting from insufficient equipment -to keeping the microorganism alive. A special question in this context would concern measures to be taken to avoid, in so far as possible, mutation of deposited microorganisms. On the other hand, it would not be necessary for one institution to deal with all kinds of microorganisms; specialization in particular species, as already practised, would be quite acceptable.
- 15. Further conditions of a technical nature might concern the ability of a culture collection to examine the contents of a deposited ampulla in order to exclude deposits containing several species of microorganisms at the same time or not conforming with certain requirements of purity, to identify a deposited microorganism, and to guide depositors in naming hitherto unknown microorganisms in accordance with internationally recognized systems of nomenclature (see paragraph 20 below). This would mean that the culture collection has to be staffed by experts in the field of microbiology. On the other hand, it does not seem to be necessary that a culture collection should be equipped to test inventions which involve the action of a microorganism. Such tests could be made only if the culture collection had at its disposal staff and equipment in various technological fields; moreover, such tests do not seem to be necessary for the examination of the criteria of patentability before the grant of a patent or inventor's certificate since Industrial Property Offices normally do not examine the question whether an invention really yields the effects claimed.
- 16. The preceding paragraphs give only examples of technical requirements which could be considered. It is clear that these questions need <u>further study</u> in detail.

IV. Administrative Requirements

- 17. International cooperation with respect to the deposit of microorganisms for the purposes of patent procedure—whether by recognition of deposits in internationally approved national or regional culture collections or of deposits in an international culture collection—would in any case necessitate compliance with certain minimum conditions of an administrative nature. If an international culture collection is established, these conditions would form part of the basic regulations. If a list of internationally approved culture collections is set up, these conditions would have to be taken into account when deciding on the inclusion of a particular institution in that list.
- 18. The first condition seems to be that the <u>existence</u> of the <u>institution</u> or <u>institutions</u> in question is <u>guaranteed</u> without limitation in time. This condition is necessary in order to make sure that the availability of a deposited microorganism is not rendered uncertain by the fact that the culture collection with which the deposit has been made has ceased to exist. Such an uncertainty would make it difficult to rely on an institution in international cooperation. In the case of government institutions, continuing existence could be assumed. In the case of private institutions, a kind of government guarantee as to continued existence would seem to be required; moreover, in the latter case, it would have to be made sure that the institution was independent of interested industrial enterprises.

- 19. As a second condition, the issuance of a <u>certificate</u> of deposit by the culture collection would seem to be necessary for the purposes of international recognition. This condition has already been established by some of the Industrial Property Offices which have introduced the requirement of deposit; for instance, the Netherlands Patent Office requires a "receipt" from the culture collection keeping the microorganism (for details, see the reply by the Netherlands reproduced in Annex III to document DMO/II/2). The certificate of deposit, in order to be understood in all countries, should be in universally understood languages, for example, English and French; it should indicate, for instance, the name and address of the culture collection, the name of the depositor, the name of the deposited microorganism and the date and file number of the deposit.
- 20. As regards the name of the deposited microorganism, the question of using an internationally accepted nomenclature seems to call for further study. In particular, different names should not be used for one and the same species of microorganism, so as to avoid the situation where seemingly different disclosures could be made and parallel patents could be granted for identical inventions depending on the same microorganism. Moreover, a problem seems to exist with respect to the identity of the microorganism: is the deposited microorganism really the one referred to in the description of the invention? The above questions concern Industrial Property Offices which require deposit; they arise independently of the question of recognition of foreign or international deposits, and the legal consequences of identity of invention despite different descriptions or insufficient disclosure because of divergency between the microorganism described and the microorganism deposited result from the provisions of the law of each country or region in respect of which protection is sought. In so far as recognition of foreign or international deposits is concerned, however, it might be appropriate to study whether it should be an administrative requirement that culture collections should not issue certificates of deposit which indicate as the name of the deposited microorganism a designation that does not, or evidently does not, correspond to the internationally accepted nomenclature.
- 21. A particular problem arises with respect to the <u>duration</u> of the maintenance of the deposit. Should recognition of foreign or international deposits depend on a certain minimum duration of the deposit? Considering the purpose of the deposit, namely, the making available of the deposited microorganism as part of the disclosure, the answer to this question seems to be affirmative. In this context, however, two different periods have to be distinguished: first, the time that elapses from the date of the application until the expiration of the patent and, second, the time elapsing after the expiration of the patent. During the first period, in addition to the interest of the public in the disclosure of the invention, the applicant or patentee, respectively, may be interested in maintaining the deposit if discontinuance of that deposit would result in loss of protection. Whether the latter result is the case under the national laws which require deposit would have to be further studied; in any case, it is interesting to note in this context that some culture collections seem to apply a system of annual fees for the deposit of microorganisms, with the consequence that maintenance of the deposited microorganism may (but not must) be discontinued if the depositor stops paying the annual fees. During the second period, after the expiration of the patent, the patentee normally has no longer any interest in maintaining the deposit; but there may still be a public interest in the maintenance of the deposit if the deposited microorganism is not readily available otherwise. In particular, if deposits in foreign or international culture collections are to be recognized, the public interest in all States which participate in the scheme and which rely on one sole deposit would have to be taken into account. Thus a guarantee should be provided for a certain duration of the maintenance of the deposit.
- 22. How long should the minimum duration of the maintenance of the deposit be? This question is not easy to answer. If all applications for patents or inventors' certificates with respect to microbiological inventions were successful, at least a period corresponding to the normal life of a patent or to the average period of exploitation of inventions covered by inventors' certificates could be required—for instance, twenty years from the date of deposit—and the question of extending that period could even be considered in view of a subsisting public interest in the availability of the microorganism after the expiration of a patent or the above—mentioned relevant period for inventors' certificates. On the other hand, the fact should not be overlooked that a number of applications are withdrawn even before the description is published. In such cases a depositor normally would no longer be interested in maintaining the deposit. Nevertheless, difficulties would arise in a

system of recognition of foreign or international deposits if one could not rely on a certain minimum duration of the deposit. For instance, if a certificate has been issued on deposit, how would it be internationally known that the deposit had been discontinued? It would therefore seem appropriate to require in all cases a minimum duration of, for instance, 20 or 30 years from the date of the deposit. The depositor could be charged a corresponding lump-sum fee for this purpose, and he would have the advantage that the deposit would be recognized by several States. The certificate of deposit could mention the minimum duration.

- 23. In addition, the question arises whether, in the case of a deposit which is to be internationally recognized, the culture collection would be free to decide that the maintenance of the deposited microorganism would be discontinued after the expiration of the minimum duration. Since a number of States would rely on the deposit, an interest in its maintenance may subsist in some of those States. In order to solve this problem, one could, for instance, provide for the obligation on the part of culture collections to notify their intention to discontinue the deposit, and to continue the deposit, at least for a certain period of time, on the request of any interested Government, possibly against reimbursement of the cost of maintaining the deposit. For the latter purpose, the possibility could be envisaged of establishing a uniform international tariff.
- 24. A further condition of recognition of foreign or international deposits seems to be that the deposited microorganism must be $\underline{\text{made}}$ $\underline{\text{available}}$, upon request, $\underline{\text{to}}$ $\underline{\text{Industrial Property Offices}}$, which would be obliged to recognize the deposit, or to institutions designated by them, of those countries in which the depositor has filed subsequent applications. Although an Industrial Property Office, when examining an application relating to an invention involving a microorganism, normally does not examine the effect of an invention using the microorganism itself, it might nevertheless be appropriate not to exclude access by the Industrial Property Office, or by an institution designated by it, to the deposited microorganism, even before the microorganism is to be made generally available, in particular, before publication of the description of the invention in question.
- 25. The last condition would be that the deposited microorganism must be made available to interested persons and entities in accordance with the provisions of any country in respect of which the depositor has sought protection and in which the deposit is to be recognized. This seems to be a delicate question, since in many cases the availability of the microorganism permits immediate exploitation of the invention depending on its use. Availability is, however, a logical consequence of the requirement of deposit; without availability full disclosure would not be guaranteed. Moreover, it appears that a restriction of the availability to the country where the culture collection is located would establish two different disclosures: full disclosure inside the country and partial disclosure as regards other countries; as a consequence, Industrial Property Offices in other countries to which the deposited microorganism is not made available might not consider that the invention is contained in the state of the art, with the result that another applicant could be granted a valid patent for it. The questions when, to whom and under what conditions a deposited microorganism has to be made available have been regulated already for some Industrial Property Offices in a detailed manner (see, in particular, Rule 28 of the Implementing Regulations to the Convention on the Grant of European Patents, reproduced in Annex IV to document DMO/II/2). The impact of such questions on possible schemes of recognition of foreign or international deposits will be examined in the following Chapter.

V. <u>Differences in Rules Concerning the Requirement and Date of Deposit and the Date and Other Conditions of Release: Possibilities of Harmonization</u>

26. As already indicated (see paragraph 6 above), the acceptance of the principle that foreign or international deposits are to be recognized does not yet solve the problems raised by the differences which exist in the rules of the various Industrial Property Offices as regards the requirement and date of deposit and the date and other conditions of release. A simple solution to those problems would be to conclude an <u>international agreement on all those rules</u> so that there would not be any differences. A strong argument for the suggested solution appears to be that at the present stage there still seems to exist a certain flexibility in view of the fact that only very recently Industrial Property Offices have started to deal with the problems raised by deposit of microorganisms for the purposes of patent procedure. On the other hand, some Offices have already adopted divergent positions and, in general, unification of substantive rules of patent procedure on a worldwide level, even in a limited field, is a task which might require considerable time. Therefore, in addition to further study of the question of worldwide unification of those rules, it might be appropriate, as a first step, to examine whether a scheme providing for the recognition of foreign deposits could be made workable, taking into account the existing differences of the nature indicated.

- 27. As regards the requirement and date of deposit, no serious problem seems to exist: the applicant would have to make sure that he meets the requirements of all countries in respect of which he seeks protection. This means that, if the Office of the first filing does not require deposit of the microorganism in question, or if it requires deposit not at the time of filing but only at a later date, the applicant would nevertheless have an interest in making sure that the microorganism has been deposited on the date required by the Offices with which he intends to file subsequent applications. A particular question arises in this context with respect to the Paris Union priority: if, at the time of the first filing, the microorganism has not yet been deposited, does it make a difference, for the purposes of the Paris Union priority, whether the Office with which the first filing has been made does or does not require the deposit of microorganisms? In considering this question, Article 4A(3) of the Paris Convention is to be taken into account: the question would have to be examined whether the first filing was "regular" in the sense of that provision and could therefore serve as a basis for the priority claim so that the Office of the subsequent filing could require the deposit only on the date of the subsequent filing.
- 28. As regards the date and other conditions of release, here, too, the rules governing the procedure before each Industrial Property Office with which the depositor has filed an application would have to be applied. The question is whether this principle could be applied in a system of recognition of foreign de-It could be argued that the rules on release are so different in the various countries that the depositor might be exposed to the risk of a "premature" release. To this argument it could be replied that, if it was only the provisions applicable in Offices with which the depositor had filed subsequent applications that had to be applied, the depositor himself could control under what conditions the deposited microorganism would have to be released. In other words, he could avoid filing with Offices in which he considered the applicable provisions on release to be "too liberal." In this respect, the introduction of a system of recognition of foreign or international deposits would not change the present situation. It would, however, have to be made sure that the culture collection would release the deposited microorganism only under the conditions provided for in the rules applicable in those Offices which would have to recognize the deposit and with which the depositor would have filed an application. Moreover, it could be required that any request for release be accompanied by proof that the conditions of the law on which the request for release is based are fulfilled.
- 29. As regards proof of fulfillment of the legal conditions of release, a certain standardization could be envisaged. Industrial Property Offices could be required to issue certificates to persons or enterprises interested in release, stating that the conditions of release have been fulfilled, and culture collections could be obliged to accept such standardized certificates. In any case, these questions seem to require further study.
- 30. In order to avoid the application of "too liberal" conditions resulting from the principle outlined in paragraph 28, certain minimum safeguards concerning the release of deposited microorganisms could be envisaged. In particular, the requirement that the deposited microorganisms may in any case be released only after the publication of the description of the related invention could be considered such a minimum safeguard. As further minimum safeguards it could be required that the name and address of the person requesting the release be communicated to the depositor and that the person subscribe to an obligation not to make the released microorganism available to any other person.

VI. Export and Import Restrictions

31. If a system of international recognition of deposit of microorganisms is combined with the principle of availability of a deposited microorganism in all countries in which the depositor has filed patent applications, practical difficulties may arise in view of possible existing export and/or import restrictions with respect to particular kinds of microorganisms, for instance, bacteria which are dangerous for health. To what extent such restrictions exist is a question that would require further study. Another question that would also have to be studied is whether it would be appropriate to make exceptions from such restrictions in the case of microorganisms deposited for the purposes of patent procedure.

VII. International Cooperation

- 32. At present, a number of Industrial Property Offices recognize the deposit of a microorganism in a foreign culture collection; but some of them do so only if reciprocity is granted (see document DMO/II/2, paragraphs 22 and 23). Such recognition is, however, entirely voluntary. It can be discontinued, or the conditions under which it operates may be modified, at any time, with the risk for the applicant and the patentee, as well as for the public, that such discontinuance or changes necessarily entail. Such uncertainties could be avoided only through the conclusion of an international agreement by which States would undertake to recognize deposits of microorganisms in certain foreign culture collections or in an international culture collection. A mere recommendation, adopted by an intergovernmental body such as the Paris Union Assembly, to the effect that national laws should provide for the recognition of deposits in certain foreign culture collections or in an international culture collection could not be expected to have the same effect as a binding agreement. The latter would, in particular, have the advantage that applicants could rely on the fact that certain Industrial Property Offices would be obliged to recognize the deposit of a microorganism in a foreign or international culture collection.
- 33. The basic provisions of such an international agreement would concern the obligation to recognize certain deposits (to be specified); other provisions would have to deal with the setting up of an international culture collection or with the establishing of a list (modifiable through mutual agreement) of internationally approved culture collections; in the latter context the conditions referred to in paragraphs 14 to 25 above should be taken into account; in addition, the agreement would have to contain provisions on exemptions from export and/or import restrictions and on the issuance of certificates relating to the fulfillment of conditions concerning the release of the deposited microorganism.

VIII. Conclusion

- 34. International cooperation with respect to the deposit of microorganisms for the purposes of patent procedure appears to be desirable and feasible. The details of the possible implementation of such cooperation require further study. As an administrative framework for cooperation, an international agreement could be envisaged by which Contracting States would undertake to recognize, for the purposes of patent procedure, deposits of microorganisms effected with internationally approved culture collections of other Contracting States or with an international culture collection.
- 35. In any case, the question of establishing international rules for a uniform nomenclature for microorganisms should be further studied.
 - 36. The Committee of Experts is invited to express its views on the questions raised in this document.

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