This report contains the collective views of an international group of experts and does not necessar'y represent the decisions or the stated policy of the World Health Organization

WHO Technical Report Series

834

WHO EXPERT COMMITTEE ON SPECIFICATIONS FOR PHARMACEUTICAL PREPARATIONS

Thirty-third Report



World Health Organization

Geneva 1993

WHO Library Cataloguing in Publication Data

WHO Expert Committee on Specifications for Pharmaceutical Preparations WHO Expert Committee on Specifications for Pharmaceutical Preparations : thirty-third report.

(WHO technical report series; 834)

1. Drug industry $\,$ 2. Drugs — standards $\,$ 3. Quality control I. Series

ISBN 9241208341 ISSN 0512-3054 (NLM Classification: QV 771)

The World Health Organization welcomes requests for permission to reproduce or translate its publications, in part or in full. Applications and enquiries should be addressed to the Office of Publications, World Health Organization, Geneva, Switzerland, which will be glad to provide the latest information on any changes made to the text, plans for new editions, and reprints and translations already available.

© World Health Organization 1993

Publications of the World Health Organization enjoy copyright protection in accordance with the provisions of Protocol 2 of the Universal Copyright Convention. All rights reserved.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

Printed in Switzerland

93/9592 - Benteli - 6400

Contents

1.	Introduction	7
2.	The international pharmacopoeia and related activities 2.1 Quality specifications for drug substances and dosage forms 2.2 Dissolution test for solid oral dosage forms: paddle method 2.3 Therapeutic equivalence of multisource products 2.4 International nonproprietary names for pharmaceutical substances	1 1 2 2 3
3.	International Chemical Reference Substances and International Infrared Reference Spectra 3.1 Establishment of reference substances 3.2 Infrared reference spectra	3 3 4
4.	Quality control methods for medicinal plant materials	5
5.	The WHO Certification Scheme on the Quality of Pharmaceutical Products Moving in International Commerce	5
6.	Good manufacturing practices for pharmaceutical products 6.1 Biological products 6.2 Herbal medicinal products 6.3 Process validation 6.4 Further developments	5 5 6 6
7.	Development of globally acceptable standards for excipients	6
8.	Stability of dosage forms 8.1 Survey 8.2 Guidelines on stability testing of pharmaceutical products containing	6 6
	established drug substances	7
9.	Simple test methodology	8
10.	Quality assurance in pharmaceutical supply systems	8
11.	Pharmaceutical production in developing countries 11.1 Small-scale preparation of ophthalmic (eye) drops 11.2 Production of hormonal contraceptives	9 9 9
12.	. Training	9
Ac	cknowledgements	10
Re	eferences	11
	nnex 1 st of available International Chemical Reference Substances	13
	nnex 2 st of available International Infrared Reference Spectra	18
	nnex 3 ood manufacturing practices for biological products	20

WHO Expert Committee on Specifications for Pharmaceutical Preparations

Geneva, 30 November - 4 December 1992

Members*

- Professor I. Addae-Mensah, Head, Department of Chemistry, University of Ghana, Legon-Accra, Ghana
- Dr A. Artiges, Deputy Director of Scientific and Technical Affairs, Pharmacy and Drugs Directorate, Ministry of Health, Paris, France
- Dr P. K. Gupta, Pharmaceutical Consultant, New Delhi, India
- Dr Ng Tju Lik, Director, Department of Scientific Services, Institute of Science and Forensic Medicine, Singapore (*Vice-Chairman*)
- Professor T. L. Paál, Director-General, National Institute of Pharmacy, Budapest, Hungary (*Chairman*)
- Miss M. L. Rabouhans, Deputy Secretary, British Pharmacopoeia Commission, London, England (*Rapporteur*)
- Dr M. Rafiee-Tehrani, Associate Professor and Head, Department of Industrial Pharmacy, and Director, Industrial Pharmacy Laboratory, School of Pharmacy, Medical Sciences University, Teheran, Islamic Republic of Iran
- Professor Yang Zhong-Yuan, Director, Research Laboratory, Wuhan Municipal Institute for Drug Control, Wuhan, China

Representatives of other organizations†

- Commonwealth Pharmaceutical Association (CPA) and International Pharmaceutical Federation (FIP)
- Mr M. M. Sesay, Vice President CPA, Government Central Medical Stores, Freetown, Sierra Leone

Council of Europe

- Dr J. Miller, Head, Laboratory, European Pharmacopoeia Commission, Strasbourg, France
- Dr P. J. Schorn, Head, Technical Secretariat, European Pharmacopoeia Commission, Strasbourg, France

International Federation of Pharmaceutical Manufacturers Associations (IFPMA)

Miss M. Cone, Vice-President for Scientific Affairs, Geneva, Switzerland

United Nations Industrial Development Organization (UNIDO)

Mr A. Akpa, Officer-in-Charge, UNIDO Liaison Office, Geneva, Switzerland

World Federation of Proprietary Medicine Manufacturers (WFPMM)

Dr J. A. Reinstein, Director-General, London, England

^{*} Unable to attend: Dr K. Bailey, Director, Bureau of Drug Research, Health Protection Branch, Health and Welfare Canada, Ottawa, Ontario, Canada.

[†] Unable to attend: Commission of the European Communities (CEC), Brussels, Belgium; Pharmaceutical Inspection Convention (PIC), Geneva, Switzerland; United Nations Children's Fund (UNICEF), New York, USA.

Secretariat

- Dr J. F. Dunne, Director, Division of Drug Management and Policies, WHO, Geneva, Switzerland
- Professor G. Folkers, Pharmaceutical Institute, Swiss Federal Institute of Technology, Zurich, Switzerland (*Temporary Adviser*)
- Mr J. A. Halperin, Executive Director, The United States Pharmacopeial Convention Inc., Rockville, MD, USA (*Temporary Adviser*)
- Mr D. Jäkel, Head, Quality Control of Excipients, Ciba-Geigy Ltd, Basel, Switzerland (*Temporary Adviser*)
- Dr A. Mechkovski, Chief, Quality Assurance, Division of Drug Management and Policies, WHO, Geneva, Switzerland (*Co-Secretary*)
- Dr E. Njau, General Manager, Tanzania Pharmaceutical Industries Ltd, Arusha, United Republic of Tanzania (*Temporary Adviser*)
- Dr M. Uchiyama, Director-General, National Institute of Hygienic Sciences, Tokyo, Japan (*Temporary Adviser*)
- Ms A. Wehrli, Chief, Regulatory Support, Division of Drug Management and Policies, WHO, Geneva, Switzerland (*Co-Secretary*)
- Mrs M. Westermark, Director, WHO Collaborating Centre for Chemical Reference Substances, Central Laboratory, National Corporation of Swedish Pharmacies, Stockholm, Sweden (*Temporary Adviser*)

Introduction

The WHO Expert Committee on Specifications for Pharmaceutical Preparations met in Geneva from 30 November to 4 December 1992. The meeting was opened on behalf of the Director-General by Dr J.F. Dunne, Director, Division of Drug Management and Policies, who drew attention to some of the major aspects of the Expert Committee's work over the previous 10 years. In so doing, he suggested that the overall objective of this work was to provide a solid foundation on which all interested Member States could build a comprehensive approach to quality assurance of pharmaceutical products. Since the previous meeting of the Committee, important changes had occurred in the world, especially in Europe. New independent states had emerged and many had joined the Organization. Dr Dunne asked the Expert Committee to bear the needs of these Member States in mind during its discussions and in recommending future action.

In May 1992, the World Health Assembly adopted resolution WHA 45.28, which requested the Director-General, *inter alia*, "to further the international harmonization of drug regulatory regimes". Dr Dunne suggested that the aim should be to build on the results of current initiatives involving the countries of the European Communities, Japan and the United States of America to the advantage of the broader constituency of WHO's Member States. He informed the Expert Committee that the administrative structure of the Division of Drug Management and Policies had been modified so as to make it better able to meet the challenges of the times. He was confident that it could provide the help needed by countries in establishing and maintaining appropriate drug regulatory systems.

2. The international pharmacopoeia and related activities

2.1. Quality specifications for drug substances and dosage forms

The Committee was pleased to note that publication of Volume 4 of *The international pharmacopoeia*, containing additional monographs on pharmaceutical substances, excipients and dosage forms together with supporting test methods and general requirements, was expected in 1993.

The Committee considered, and recommended for inclusion in a future publication, monographs on ophthalmic drops and ointments and on suppositories, and test methods for the disintegration of suppositories and for the sterility of non-injectable preparations. It noted the progress made jointly with experts from the European Pharmacopoeia Commission on developing a test for visible particulate matter in injectable preparations.

The Committee confirmed that the requirements of *The international pharmacopoeia* should continue to be based on reliable methods widely available in small control laboratories. Such a policy is consistent with the

unique role of *The international pharmacopoeia*. However, in some circumstances, the provision of more complex methods as alternatives might be considered.

It was suggested that it would be helpful for WHO to obtain information about users of *The international pharmacopoeia* in order to ascertain more precisely by whom and for what purposes it is currently used.

2.2 Dissolution test for solid oral dosage forms: paddle method

It was agreed that, since the paddle method had been recommended for inclusion in *The international pharmacopoeia* (2), it would be helpful to supplement the description of the method (which has been harmonized with that already published in other pharmacopoeias) with additional information, especially on validation. Consultation on a draft text incorporating such information was recommended before finalization for publication in *The international pharmacopoeia*. Inclusion of other methods might be considered in the future if needed for a particular application.

Meanwhile, publication of the paddle method would permit establishment of dissolution requirements for those preparations included in the WHO Model List of Essential Drugs (1) that had been singled out previously (2) as being of particularly high priority since they were widely considered to present bioavailability problems. It was agreed that the test conditions and the criteria for the acceptance of these preparations would be specified in the relevant monographs. The conditions and criteria would initially be based on existing pharmacopoeial specifications.

2.3 Therapeutic equivalence of multisource products

While the inclusion of dissolution requirements in *The international pharmacopoeia* was considered to be an important step forward, it was recognized that an *in vitro* dissolution test was only one stage in the procedure for ensuring that multisource products were therapeutically equivalent. Information on the interchangeability of conventional-release solid dosage forms from a wide range of sources, all containing the same quantity of the same active ingredient, was essential for those responsible for approving the registration of products.

It was recognized that existing national regulatory requirements varied with respect to multisource products and that a need therefore existed for global guidelines. It was suggested that WHO, among other appropriate activities, might:

 undertake a survey of national legislation and practices with regard to registration requirements, and the prescribing and dispensing in retail pharmacies of multisource products;

预览已结束,完整报告链接和二维码如下

https://www.yunbaogao.cn/report/index/report?reportId=5 30723

