# Hong Kong Chinese Materia Medica Standards

Department of Health
Hong Kong Special Administrative Region
The People's Republic of China

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# PREFACE

Since ancient times when Shen-nong tasted hundreds of herbs to test their medicinal value, Chinese medicine has become a treasure of mankind. With the rapid development of technology, we must, building upon our foundation, face up to the challenges of developing Chinese medicine and demonstrating its potential in health care.

The Government of the Hong Kong Special Administrative Region (HKSAR) formulated the policy for the development of Chinese medicine and enacted the Chinese Medicine Ordinance in July 1999. Since the implementation of the Chinese Medicine Ordinance, Hong Kong has made significant progress in developing Chinese medicine in the areas of regulatory control, education, scientific research and health care.

Chinese medicine has been widely accepted by the Hong Kong community and there is an increasing use of Chinese Materia Medica (CMM) and proprietary Chinese medicines. As CMM are the raw materials for proprietary Chinese medicines, a well-established standard for CMM with international recognition will ensure the safe use of CMM and enhance the quality of proprietary Chinese medicine. It is also the cornerstone of scientific research in Chinese medicine.

In 2001, the Department of Health set up the Hong Kong Chinese Materia Medica (HKCMM) Standards Office under its Chinese Medicine Division to co-ordinate the development of standards for CMM commonly used in Hong Kong. An International Advisory Board (IAB) was established in early 2002 to advise on the principles, methodologies, parameters and analytical methods for the "HKCMM Standards". The IAB is responsible for setting out the contents of the "HKCMM Standards", selecting the CMM and the research institutions to conduct research and laboratory work, as well as evaluating and endorsing the research results. In addition, a Scientific Committee, consisting of visiting IAB members, and representatives of the participating universities and Government departments, was set up to monitor the progress of the research work. The Committee is also tasked to resolve various technical issues encountered in the process and examine the research results.

"HKCMM Standards" Project covers 60 CMM commonly used in the local community and the project is divided into three phases. The standards for 8 CMM covered in phase I were published in "HKCMM Standards Volume 1" in July 2005. Since its publication, the trade has been encouraged to adopt the "HKCMM Standards". In phase II, The University of Hong Kong, The Chinese University of Hong Kong, The Hong Kong University of Science and Technology and Hong Kong Baptist University have already completed the development of standards for 24 CMM. Inter-laboratory verification studies have also been conducted by the Government Laboratory of the HKSAR. The findings are now compiled as "HKCMM Standards Volume 2". The research work for phase III is underway.


On the development of the "HKCMM Standards", the State Food and Drug Administration and the local universities have rendered assistance in collecting authentic CMM samples from both the Mainland and local market. With the aim of safeguarding the authenticity, safety and quality of CMM, the content of "HKCMM Standards" includes the name, source, description, identification, test, extractive and assay of the CMM.

The "HKCMM Standards" adopts various approaches including macroscopic and microscopic examinations, physicochemical identification and thin-layer chromatography to authenticate the CMM. To enhance user-friendliness of the "HKCMM Standards", the results of macroscopic and microscopic examinations are illustrated with photographs. In phase II, high-performance liquid chromatographic (HPLC) fingerprinting is also established to identify different markers in the CMM for more precise authentication.

On the safety of CMM, the "HKCMM Standards" contains recommended limits for monitoring heavy metals, pesticide residues and mycotoxins (aflatoxins) in the herbs. Specific requirements have also been set for certain CMM covered in phase II to ensure their safety. For example, aristolochic acid I should not be detected in Caulis Clematidis Armandii in order to prevent adulteration with prohibited plant called Caulis Aristolochiae Manshuriensis.

On the quality of CMM, the limits of foreign matter, ash, water content, extractives and assay of CMM are also included in the "HKCMM Standards". Of the 24 CMM covered in this publication, eight have two or more active ingredients or markers analysed quantitatively. The determination of multiple active ingredients or markers in the assay instead of a single one will enhance the quality control of the CMM.

I would like to thank all members of the IAB, the Scientific Committee and the Editorial Board, as well as the research teams of the four participating universities in Hong Kong for their tremendous support and valuable contributions to the project. I am also grateful to the State Food and Drug Administration for their assistance in collecting CMM samples, the State Administration of Traditional Chinese Medicine of the People's Republic of China and many experts in the Mainland for their assistance and professional advice, and the Chinese Pharmacopoeia Commission of the People's Republic of China for allowing us to use the information of the Chinese Pharmacopoeia. We also indebted to the Government Laboratory of the HKSAR for its contribution.

Dr P Y LAM
Director of Health
July 2008


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