

PRESCRIPTION

Latest news and updates from the Faculty of Pharmacy



In This Issue:

- Standardisation of herbal extracts: Enhancing product quality and safety of traditional medicine preparation
- Repurposing Segesterone Acetate (Nestorone®) as a Potential Neuroprotective Drug
- The Eco-Enzyme Soap Initiative: A Cross-Border Collaboration between UiTM Malaysia and UIN Indonesia for Environmental Sustainability
- MoU Ceremony Exchange between UiTM and Mayflax SDN. BHD
- Collaboration visit of the Nuclear Medicine Team from Universitas Padjadjaran, Indonesia to Universiti Teknologi MARA
- Dissecting the Malaysian Clinical Practice Guidelines (CPG) 2023 for Heart Failure – What You Should Know?
- Empowering the Elements of Science and Pharmacy at SEDAMAI
- Navigating University Record Management: Guidelines and Best Practices
- Faculty of Pharmacy's Vibrant Hari Raya Celebration Unites Staff in Festive Spirit
- Benchmark Visit of Teaching Innovation Tools in Pharmacy Practice by KIK group
- Innovation for Unmet Patient Needs
- Do You Know What FRIDs Are?
- Achievement
- Upcoming Events

Standardisation of herbal extracts:

Enhancing product quality and safety of traditional medicine preparation

In many cultures and civilisations, herbal preparations have been used as a primary form of healthcare. The herbs derived from plants and plant products offer a rich source of bioactive compounds with potential therapeutic properties. The major factor in the ongoing appeal of herbal medication products is the perception of their natural origin and historical use. Herbal treatments have long been used in many societies to treat a variety of illnesses and enhance general health. Throughout the decades, this traditional knowledge has been passed down through generations, providing important insights into the medicinal qualities of many plant species. Herbal medication products have demonstrated therapeutic potential across various health conditions, including respiratory diseases, chronic pain, digestive issues, and immune system support.

Concerns over efficacy, safety, and quality control are also raised by the rising demand for herbal medicine products. Ensuring the consistent quality and standardisation of herbal products is crucial to guaranteeing their safety, efficacy, and reproducibility. Strict quality control procedures are necessary to safeguard the health and safety of consumers. Herbal medicine products can be made safe for consumption by minimising potential risks such as adulteration, contamination, and the presence of hazardous compounds through the implementation of strict testing and quality assurance protocols.

Quality control in this field faces various difficulties and challenges that demand careful consideration. The considerable variety in product composition and quality resulting from factors such as post-harvest processing, growing conditions, cultivation methods, and geographic variances is one prominent difficulty. This inherent diversity poses a special challenge to the establishment of uniform quality standards for various herbal products.

A thorough evaluation of the raw materials of the herbal products comes first in the quality assessment process. Raw material evaluation protocols include careful inspection of the plant identity, its species authenticity, the ingredient purity, and the quality of the herbs, which involve a combination of tests and analyses to assess the quality and safety of the raw materials used in the production of herbal medication products.

Herbal medicine products must have constant and reliable levels of active chemicals or markers to ensure their quality and safety. The objective of identification and standardisation is to reduce variation between batches and guarantee that every product meets predetermined quality standards. The essential components in this analysis include marker compound identification, quantitative analysis, and reference standards. These standards serve to guarantee consistency across batches and serve as benchmarks for comparison during quality control testing.

Authenticity testing methods are essential in quality control for herbal medication products to ensure the accurate identification and verification of the herbs used. They ensure that the correct herb is being used, as different species or plant parts may have varying therapeutic properties and safety profiles. Herb identification is the process of accurately identifying the botanical species or plant material used in herbal medication products.

Authenticity testing protocols are essential to quality control for herbal medicine products since various species or plant parts may have distinct therapeutic properties and safety profiles. They guarantee accurate identification and verification of the herbs used, ensuring that the right plant is being used. Herb identification is fundamentally crucial to quality control for the botanical species or plant material utilised in herbal medication products.

To ensure the authenticity of the herbs used in the products, advanced techniques such as chromatographic profiling, spectroscopic fingerprinting, and DNA barcoding can be employed. These approaches offer accurate species identification and enable the detection of adulterants or contaminants. Apart from that, regular data gathering on environmental conditions is made possible by constant monitoring along the herbal supply chain, which guarantees the preservation of botanical integrity and product quality.

Ensuring the effectiveness and safety of herbal medication products through quality control is crucial for protecting consumer health, providing reliable treatment alternatives, adhering to regulatory requirements, and promoting the growth of the herbal medicine industry. The presence and concentration of active substances determine the effectiveness of herbal medicines. Quality control processes should focus on establishing standardised procedures for sourcing, processing, and formulating herbal ingredients. Furthermore, several measures are frequently monitored to guarantee safety and efficacy, including frequent monitoring of raw materials and completed products, quantitative analysis of these compounds to ensure consistent therapeutic effects, thorough testing for potential contaminants, application of GMP principles in the production process, and post-market surveillance. With continuous quality control measures in place, any issues related to product quality or safety can be identified and addressed promptly.

By accepting these improvements, the landscape of the herbal medicine industry will transform and instill confidence in consumers looking for natural therapies. By combining a thorough grasp of the opportunities and problems in the field of quality control for herbal medicines, product manufacturers can maintain consistency in active ingredients, dosage forms, and potency while enhancing the fundamental GMP components of documentation, cleanliness, staff training, and equipment upkeep. With this knowledge, product manufacturers can perform thorough quality assessments prior to products being released onto the market. By being proactive, the likelihood of massive product recalls or adverse events is reduced.

In conclusion, the process of standardising herbal extract for the manufacturing of traditional medicine is a crucial aspect of quality control in herbal pharmaceutical products. Its relevance lies in ensuring both effectiveness and safety. Strong quality control techniques guarantee the efficacy and legitimacy of herbal medicines, building consumer confidence and encouraging the ethical incorporation of herbal medicine into modern healthcare practices. Ongoing research and collaboration between traditional knowledge and modern science will surely improve the quality and acceptability of herbal pharmaceutical products, further benefiting public health and well-being.

About the Author

Dr. Nurhuda Manshoor is an Associate Professor at the Department of Pharmaceutical Chemistry, Faculty of Pharmacy, UiTM. She holds a BSc (Chemistry) from Universiti Malaya, an MSc (Phytochemistry) from Universiti Kebangsaan Malaysia, and a PhD (Natural Products Chemistry) from UiTM. Her primary research interest is the chemistry of Dipterocarpaceous plants: oligostilbenes and other phenolic compounds.



PRESCRIPTION

Latest news and updates from the Faculty of Pharmacy



CONTACT US

 @pharmacyuitm



 @pharmacy_uitm




 Faculty of Pharmacy UiTM



 <https://pharmacy.uitm.edu.my/>



 +603-3258 4645

 korporatff@uitm.edu.my

NEWSLETTER EDITORIAL TEAM

Editorial Advisor:

Prof. Dato' Dr. Abu Bakar Abdul Majeed

Authors:

Assoc. Prof. Dr. Nurhuda Manshoor, Dr. Gurmeet Kaur Surindar Singh, Dr. Siti Alwani Ariffin, Dr. Muhamad Faiz Othman, Ms. Nurulfalahin Daud @ Ibrahim, Dr. Hanis Hanum Zulkifly, Mdm. Azlinda Mohamad Nor, Dr. Nur Wahida Zulkifli, Dr. June Choon Wai Yee, Ms. Zakiah Mohd Noordin, Mdm Nor Azliana Norli, Mr. Mohd Shah Rezan bin Hamzah

Illustrator:

Ms. Norazua Ahmad

Editors:

Associate Prof. Dr. Mahmathi Karuppattan
Dr. Gurmeet Kaur Surindar Singh

PRESCRIPTION

Faculty of Pharmacy,
Universiti Teknologi MARA,
Kampus Puncak Alam,
42300 Bandar Puncak Alam, Selangor.