

BOTANICALS

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Methods and Techniques for Quality & Authenticity

EDITED BY

KURT A. REYNERTSON

Johnson & Johnson, New Jersey, USA

KHALID MAHMOOD

Johnson & Johnson, New Jersey, USA



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Preface

Anyone who works with botanicals has at one time or another been confronted with concerns about the quality and authenticity of their materials. The news media fan the flames of these issues; propagating stories of contamination, adulteration, and poor quality; driving apprehension; and seeding doubt in the minds of consumers.

Whether working in academia, government, or industry, at some point in the life cycle of botanical materials, we relinquish some aspect of certainty to others. The concerns are universal and must be addressed by experts, researchers, sourcing managers, and consumers alike.

To that end, the purpose of this book is to compile methods and techniques that can be used to help guide quality and authenticity determinations. Assembling the most current information in one place provides guideposts for method applications and helps point to gaps in this important area of botanical quality assurance.

With the natural trend growing in popularity annually for food, dietary supplements, cosmetics, and personal care products, it was our hope that this volume would serve as a focal point and reference for identifying appropriate quality and authenticity methods specific to the need of the reader.

As new technologies are developed, software and computing power have advanced rapidly to assure that this is an area that will continue to modernize and adapt. The ability to statistically analyze big data sets is emerging as an important aspect, even when applied to more *traditional* chemometric analyses. This edition contains methods which are currently in use as well as methods which are still being developed, with the promise of becoming more routine soon. We deliberately chose to have both the new technologies and more traditional techniques. The authors represent industry, government, and academia. And while we realize that there are as many omissions as inclusions in the topics covered, we have tried to make this first edition as comprehensive as possible. Gaps remain, which future editions may rectify. For that reason, we hope that the readers and users of this book will reach out with their feedback and constructive suggestions.

Kurt A. Reynertson
Johnson & Johnson

Khalid Mahmood
Johnson & Johnson