

# NUTRACEUTICAL & NATURAL PRODUCT

QUALITY AND REGULATORY COMPLIANCE TESTING SERVICES

# Your Regulatory and Quality Testing Service Partner

- Industry leader with global expertise from regulatory consulting to analytical testing
- Over 15 years of in-depth expertise in natural botanical ingredients in various products
- ISO-17025 and cGMP111, 210/211 complied state-ofthe-art laboratory analytical capabilities

Natural nutraceutical ingredients are found in a broad range of products including dietary supplement, functional foods, over-the-counter (OTC) health products and cosmeceuticals. The increasing demand of new ingredients from complex natural materials and their application is supported in part by analytical sciences. Changing regulatory requirements and consumer demand for quality, safety as well as brand protection of manufacturers need strong analytical supports. You can count on the in-depth expertise and capability of Intertek Champaign Laboratories for your regulatory compliance and quality testing needs.



# **The Challenge**

The nutritional and health benefits of natural ingredients are in high demand in dietary supplements, functional foods, cosmeceuticals and OTC health products. However, faced with the complexity of natural ingredients, the evolving understanding of their nutritional and active effects, and changing regulatory requirements, many companies now rely on the in-depth knowledge and analytical capability of external laboratories for their needs.

### **Our Solutions**

Intertek can support your analytical needs throughout your entire product life cycle from ingredients to finished products with our global expertise from over 15 years of focused analytical work in natural ingredients in our state-of-the-art cGMP and ISO-17025 certified laboratories. Our integrated service can also provide you regulatory and scientific consulting services to support your product development and regulatory compliance.

# **CASE STUDY**

# Identification and potency verification of botanical ingredients

A well respected contract formulation and manufacturer of natural dietary supplements changed the source of key blended ingredients. To comply with cGMP and related quality process, the manufacturer had to fully verify the authenticity, identity, potency and safety parameters of the ingredients throughout the manufacturing process. Intertek Champaign Laboratories provided a breadth of expertise on the origin of the ingredients, botanic species, key ingredient marker compounds and analytical methods to enable the authentication and potency tests. This ensured the product quality for regulatory compliance and brand protection for the contract manufacturer and consumers.

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### **CASE STUDY**

#### Product development support

To support a formulation development as part of the clinical study of a new nutraceutical supplement, a client turned to Intertek Champaign Laboratories to develop and validate cGMP analytical methods for clinical study formulation and perform the quality and potency tests. Leveraging our expertise and capability, Intertek successfully developed and validated a suite of methods for the tests, ensuring the formulation met the study and regulatory requirements and the proceeding of the clinical study. To further support the client program, Intertek collaborated with the client in designing and executing the stability study in compliance of cGMP and ICH guidelines.

#### **Our Services**

Intertek Champaign Laboratories, an Intertek Center of Excellence in botanical chemicals analysis, offers a suite of chemical, biochemical and microbial testing support for natural ingredients in raw ingredients and finished products to meet quality, safety and regulatory requirements. Our state-of-the-art laboratories are equipped with analytical technologies such as HPTLC, HPLC, GC/GC-MŠ, LC-MS/MS, ICP, FT-IR, RT-PCR, wet chemistry, biochemical and microbiological analysis for both raw ingredients and finished products. A range of the analytical tests for ingredient identification, potency, trace contaminants, adulteration, dissolution, stability and more are provided in our cGMP laboratories. Our laboratories can provide the analytical tests using either published (e.g., USP, AOAC) or cGMP validated methods in compliance with regulatory and client requirements.

The following are examples of diverse classes of botanical chemicals in raw ingredients and finished products:

#### • **Phenolics** – Phenolics, Phenylpropanoids, Polyphenoles, Tanins



• **Flavonoids** – Flavanones, Flavones, Isoflavonoids, Hydroxyflavones, Methoxyflavones, Anthocyanins

• **Alkaloids** – Indole Alkaloids, Quinoline and Isoquinoline Alkaloids, Pyridine Alkaloids, Pyrrolidine Alkaloids

• **Terpenoids** – Monoterpenes, Sesquiterpenes, Diterpenes, Triterpenes, Sesterterpene

• Triterpenes and Steroids – Squalene, Phytosterols, Ecdysterioids, Polycosanols

• Triterpene Glycosides and Saponins – Steroidal Saponins, Triterpenoid Saponins, Triterpenoid Sapogenins

 Quinones – Benzoquinones, Naphthquinones, Anthraquinones
Stibenoids – Resveratrol,

- Pterostilbene
- Carotenoids and

**Tetraterpenes** – B- or a-Carotene, Lutein, Zeaxanthin, Lycopene, Fucoxanthins

#### Phospholipides, Glycolipids and Fatty Acids

We provide these services with our dedicated client services team and consult with our senior scientific and technical staff when required.

#### The Intertek Advantage

Intertek is a leading Total Quality Assurance provider to industries worldwide. Through our network of more than 1,000 laboratories and offices and over 42,000 people in more than 100 countries, the Group is re-defining the industry with our Total Quality Assurance proposition.

We go beyond physical quality control to provide total peace of mind through our innovative and bespoke Assurance, Testing, Inspection and Certification solutions for our customers' operations and supply chains. Intertek Total Quality Assurance expertise, delivered consistently, with precision, pace and passion, enabling our customers to power ahead safely.

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