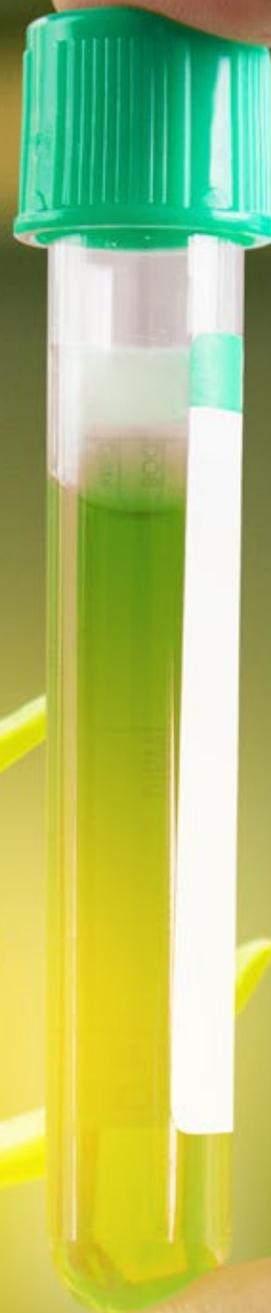


# BOTANICAL IDENTIFICATION SERVICES

Champaign, IL Laboratory





# Botanical Identification Services

Your partner for natural botanical chemistry and botanical chemical analysis.

The use of botanicals (herbs) in alternative medicine, dietary supplements, functional cosmetics and functional foods is becoming more popular. These ingredients are complex in composition and are known to vary among genus, species and regions. Additionally, the processing of ingredient composition adds to the complex nature of botanicals. These complexities can make it challenging to identify and authenticate botanical ingredients, ensure their quality, and validate the quantity present in a product. Yet, manufacturers must undertake this identification and need a trusted partner to do so.

The Dietary Supplement Health and Education Act (DSHEA) requires that natural nutraceutical ingredients be identified and authenticated for dietary supplement manufacturing and distribution. These regulations and laws require products using botanicals to be verified for identity, potency and purity requirements. Additionally, consumer demand

for transparency and quality is growing, adding to the pressure on manufacturers to verify botanical ingredients.

Botanical ingredient identification requires in-depth knowledge of the taxonomy and chemical composition of a botanical, as well as analytical techniques and authenticated reference standards. To accurately assess and verify the identification, potency, purity and safety of botanical ingredients, count on the expertise, capabilities and state-of-the-art technologies employed by Intertek's Champaign Laboratory, the only lab in the Intertek network to offer botanical identification services.

## Intertek Center of Excellence

The Intertek Champaign Laboratory is an Intertek Center of Excellence in botanical chemical analysis. Our state-of-the-art lab is stocked with analytical equipment and technologies to employ the best methodology and platform for botanical identification. With years of experience, our ISO 17025-accredited and cGMP-compliant facility is well equipped to provide accurate results in fast turnaround times to local, regional and international clients.

## Our Approach

There are many approaches for botanical identification that are required collectively to identify diverse botanical ingredients and products. We employ a range of technologies and techniques widely accepted in the industry and by regulatory bodies to achieve conclusive chemical identification of botanical ingredients and products.

# Our Testing Services

With our expertise and experience in chemical identification of botanical ingredients and products, we can meet your testing needs.

These technologies and techniques may include:

- Macroscopic and microscopic characteristic evaluations, for whole herbs and herbal powders
- DNA analysis, for whole herbs and herbal powders
- Mid-infrared (mid-IR) spectroscopy
- Near infrared (NIR) spectroscopy
- High Performance Thin Layer Chromatography (HPTLC), for herbs and herb extracts
- High Performance Liquid Chromatography (HPLC), for herbs, herb extracts, and supplements containing herbs or herb extracts
- Liquid Chromatography-Mass Spectrometry (LC-MS), for herbs, herb extracts, and supplements containing herbs or herb extracts



Our analytical scientists and botanical chemists offer in-depth knowledge and expertise of the microscopic characteristics and chemical composition of a broad range of botanical materials. Employing their vast knowledge and analytical know-how, they use the most suitable technique or a combination of techniques (e.g., HPTLC and HPLC, or HPLC and LC-MS) to 'finger print' the known key chemical ingredient or ingredients, thus arriving at a conclusive identification of the botanical materials. A combination of techniques is important because often no single platform or technique is suitable for all diverse botanical materials for conclusive identification.

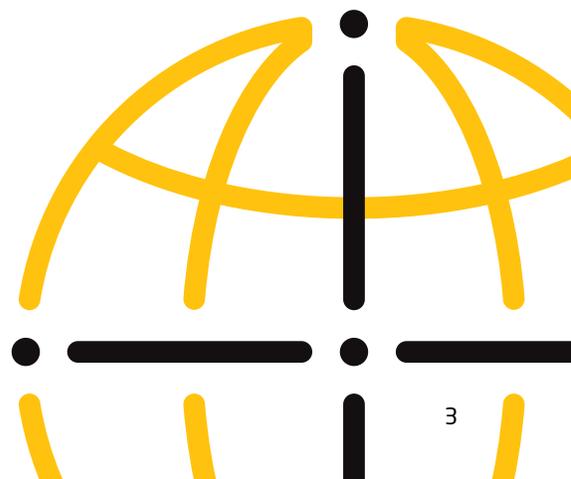
## The Intertek Difference

Drawing upon years of experience and expertise in botanical ingredient analysis supported by diverse state-of-the-art instrumentation, our Intertek Center of Excellence in botanical chemical analysis offers the industry recognized in-depth expertise in botanical chemical analysis. This is supported

by a knowledgeable customer support team and a long track record of regulatory compliance of our ISO 17025 and cGMP-compliant laboratory. Our scientific and technical staff offers close consultation with our clients to ensure the scientific quality and regulatory compliance of the analytical results to help our client's product success and the quality integrity of their botanical material supply chain.

## About Intertek

Intertek is a leading Total Quality Assurance provider to industries worldwide. Our network of more than 1,000 laboratories and offices and over 42,000 people in more than 100 countries, delivers 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, enables our customers to power ahead safely.





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Intertek Champaign Laboratory  
711 Parkland Ave  
Champaign, IL 61821

 +1 800 967 5352

 [icenter@intertek.com](mailto:icenter@intertek.com)

 [intertek.com/food/champaign](http://intertek.com/food/champaign)