

# Botanical adulteration

## 4 steps to ensuring your customers get what they pay for

**Adulteration is a constant challenge for the dietary supplement industry. In order to maintain consumer loyalty, manufacturers need to rely on a strong partner that has complete control over all aspects of the ingredient production process.**

**R**ecent publications have cast doubt on the reliability and authenticity of botanical ingredients used in food supplements. Because consumers' health and trust depend on the quality of these ingredients, choosing a manufacturer who offers premium plant-based ingredients, both in terms of efficacy and quality, is of paramount importance.

### **Step 1: a good ingredient starts at the source with high quality raw materials**

Not all ingredient manufacturers are ready to roll up their sleeves and go down to the field to meet with farmers. "At Naturex, we believe that providing the right ingredient starts by selecting a reliable partner who watches carefully over the raw material and respects the environment," said Serge Sabrier, Chief Procurement Officer and President of the Sustainability Committee. To get closer to its partners, the company has implemented 8 local purchasing offices all around the world. These hubs allow Naturex agronomists to exchange with local people about their good agricultural and collection practices (GACP) and to share technical advice to achieve the best yields. By thoroughly assessing its suppliers and auditing them on a regular basis, the company is developing a full traceability system from field to extract.

### **Step 2: mastering quality control throughout the process**

From the moment raw materials arrive at the factory until the finished products are ready for dispatch, ingredients undergo a series of tests and analyses at key phases of the production process. Naturex is able to perform more than 350 different methods of analysis from macro/micro authentication based on assessment at macroscopic levels by botanists to phytochemical levels involving sophisticated methods like High Performance Thin Layer Chromatography (HPTLC), High Performance Liquid Chromatography (HPLC), and Gas Chromatography (GC).

Besides mastering the complete set of analyses, the core expertise of Naturex's scientists is knowing exactly which type of test is suitable for each botanical. "We use methods at the cutting edge of technology, and our team of experts helps to identify reliable and replicable methods of analysis. These methods are used as references by highly respected organizations that set the standards for plants and dietary supplements," said Antoine Bily, R&D Director. In 2013, Naturex contributed to setting the specifications and methods of analysis of the new USP approved standards for rosemary extracts.

### **Step 3: a whole program of certifications to guarantee the quality of ingredients**

Naturex has implemented and developed a quality assurance system in each of its 15 factories worldwide. All our sites producing and shipping products are certified according to one of the following GMP standards: Global Food Safety Initiative Scheme (FSSC 22000, BRC, IFS), NSF International standard for dietary supplements or GMP (ICH Q7A) according to the pharmaceutical guidelines. This effective quality system certified by independent certification organizations guarantees full traceability throughout the chain and contributes to managing the risk of cross-contamination.

### **Step 4: industrial expertise to ensure consistency and efficacy all year long**

"Each botanical has its particularity and changes throughout the year depending on weather conditions and soil quality, for example," explained Bily. Naturex's expertise and experience lies in its thorough knowledge of botanical fingerprinting and its incorporation in the matrices of finished products. The company has built a solid reputation in terms of botanical identification and a strong background in plant science. For example, Naturex has developed an exclusive method for

distinguishing between Asian and US black cohosh rhizomes. The method is still widely used in the industry to verify the identity of the plant.

Relying on human expertise and implementing rigorous technical methods are two pillars of Naturex's commitment to ensuring high quality and traceability throughout the process. The complementarity between continuous quality management and periodic controls is also an important part of a successful quality program. With global sourcing and many years of industrial experience, Naturex is committed to offering its clients safe, value-added ingredients.

Antoine Bily will investigate the topic of botanical adulteration during Vitafoods Europe in Geneva in a conference session entitled: "Botanical Adulteration: Industry Challenges and Solutions" on May 6th at 11:40 am in the seminar theater.

**About Naturex:**

*Naturex is the global leader in specialty plant-based natural ingredients. Through its dedicated business units, the Group addresses the specific needs of 3 strategic markets: Food & Beverage, Nutrition & Health, and Personal Care. The company offers its customers a full array of high quality ingredients, responsibly sourced from nature for food, pharmaceutical, nutraceutical and cosmetic applications.*

*Naturex's head office is Avignon, France. The company employs more than 1,400 people and benefits from 8 sourcing offices around the world and high-performance manufacturing operations across 15 sites in Europe, Morocco, the United States, Brazil, Australia, and India. It also has a global commercial presence through a dedicated network of sales offices in more than 20 countries.*

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