

Information Requirements for Botanical Cosmetic Ingredients

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Abstract

The amount of information currently required by cosmetic manufacturers for botanicals can seem quite daunting, especially when a supplier can have over one thousand plants in their product range. The types of information needed are very diverse ranging from geographical origins, traditional properties of plants, actives present, suggestions for the use of plants in different applications, safety and quality information, including the 26 fragrance allergens, analytical information, formulation help, to traceability, environmental and social responsibility, fair trade etc. As a botanical extract manufacturer we are a buyer of plants and in this article I would like to describe first what the drivers are for our customers and how this impacts on the information that we need from our plant suppliers.

There are generally three levels of information requirement for botanicals when used as cosmetic ingredients, ranging from the most basic set to more sophisticated and detailed data:

- Basic
- Fantasy and Trends
- Function and Activity

1. Basic Data Requirements

Let us start by looking at the basic data requirements for all customers which fall into one of the following broad groups:

- Formulation
- Safety
- Environmental and Social Responsibility
- Traceability and Fair Trade

1a. Formulation

Formulators require basic information from their supplier such as:

- Stability
 - Freeze-thaw cycles
 - High & low temperatures / storage recommendations
 - Centrifugation (for emulsions)

- Consistency in certain quality parameters
- Incompatibilities
- Manufacturing recommendations

which allows them to incorporate botanical ingredients into their formulations without problems in manufacturing, transport or product end-use

1b. Safety

The amount of information that is required under the umbrella of safety has increased dramatically in the last 5 years:

- Toxicological information
 - Skin & eye irritation, sensitization
 - Fragrance allergens (Fig. 1 shows an example of a fragrance allergen declaration certificate)
 - Not tested on animals
- Pesticides and heavy metals
- Microbiological specifications
- Long lists of impurities
- GMO (genetically modified) – free certificate

Many plant extracts already have a wealth of toxicological data available for them and the ideal situation would be to do toxicological testing only after a thorough risk assessment and not to repeat tests when data are already available. It also means looking for alternative tests to those on animals when possible. In addition, the arrival of the declaration of fragrance allergens has put extra demands on plant extract manufacturers to produce certificates for all of their extracts – a not insignificant amount of analytical work.

1c. Environmental Responsibility

Sustainability must be the corner stone of sourcing of plants and is information that is requested by customers. Sustainability means that the sourcing of a plant will not affect its future existence and so plants have to be either cultivated, wild harvested under strict controls and not on the CITES list of endangered species unless grown commercially.