



phy | t r a c e[®]
Tracing of Contaminants

PhytoLab – Our Services

PhytoLab is an independent, ISO 17025-accredited and GMP-certified consultancy laboratory for herbal medicinal products, food, animal feed, and cosmetics. Our services include the analysis, development, quality control, and regulatory approval of herbal products at all stages of processing. PhytoLab is your competent partner in the field of analysis of residues and contaminants in plants, herbal products (essential oils, tinctures, extracts), pharmaceutical raw materials, and finished herbal medicinal products. Personal and competent advice tailored to your needs form a trusting partnership. Professional sample preparation, valid and reliable analysis, and document management are our trademarks. As a company in the nature network, we are committed to the highest standards of quality, efficacy and safety of herbal products with our experienced team and state-of-the-art equipment.

Pyrrolizidine alkaloids - scope of analysis

The **testing and monitoring of contaminants** is an integral part of the production chain of food, animal feed, and herbal medicinal products (including homeopathic and anthroposophic preparations). Since the German Federal Institute for Risk Assessment published data on the **occurrence of pyrrolizidine alkaloids (PA) in teas and herbal teas** in 2013, this topic has increasingly come to the fore. PA are a group of structurally diverse secondary plant metabolites, formed by more than 350 plant species as a defense against herbivory by insects and mammals. The **toxicity** of PA depends on their chemical structure and can range from acute and chronic liver damage to genotoxic and carcinogenic effects. **Herbal raw materials can be contaminated with PA** due to the growth of PA-containing weeds near the crop plant and unintentional coharvesting.

PhytoLab is **your partner** for conducting analysis of contamination by pyrrolizidine alkaloids with modern multi-, group or individual methods. With over **30 years of experience** in the phytopharmaceutical, food, animal feed, and cosmetic sectors, we assist you in establishing **risk-based test plans** for your products. Our experts recommend product-specific testing scopes, taking into account geographical origin and plant parts used.

If you are looking for a **competent, fair, and independent partner**, and expect **reliable analytical results** carried out by motivated staff on state-of-the-art laboratory instrumentation, then you should choose PhytoLab. We offer you the best possible support for your risk management. **Everything for successful pesticide and contaminants analysis - today and in the future!**

Analysis of pyrrolizidine alkaloids according to your needs

Foodstuffs and food supplements

Testing for contamination by PA-containing weeds acc. to Commission Regulation (EU) 2023/915 (**35 analytes**).

Herbal medicinal products

Testing for contamination by PA-containing weeds acc. to Ph. Eur. 2.8.26 (**28 analytes**).

PA-containing source plants (e.g. *Borago*, *Eupatorium*, *Petasites*, *Senecio*, *Symphytum*, *Tussilago*, ...) and herbal medicinal products (incl. homeopathic preparations) derived therefrom

Testing for contamination by PA-containing weeds acc. to Ph. Eur. 2.8.26 and quantitative analysis of PA typically occurring in PA-containing medicinal plants (**40 analytes**). Authorization-compliant documentation of the primary reference substances and validation documents available.

Screening

Testing for contamination by PA-containing weeds including scope for phytopharmaceutical products acc. to Ph. Eur. 2.8.26 and for foodstuffs acc. to Commission Regulation (EU) 2023/915 (**42 analytes**). Double certification available.

Extended screening

Extended testing for contamination by PA-containing weeds including all analytes defined in the scope for phytopharmaceutical products acc. to Ph. Eur. 2.8.26, for foodstuffs acc. to Commission Regulation (EU) 2023/915, and further selected PA (**total of 53 analytes in a PhytoLab-exclusive method**).

Analysis of Pyrrolizidine Alkaloids



Regulatory requirements

Maximum levels for 35 PA have been stipulated in the **European Union** in Commission Regulation (EU) 2023/915 with specific limits for different foodstuffs. The **European Pharmacopoeia** specifies in chapter 2.8.26 a range of 28 PA that must be tested in herbal medicinal products. Both regulations have only 21 PA in common. The **USP** gives background information on PA in general chapter 1567 and recommends 28 PA (identical with Ph. Eur.) for monitoring in botanical drugs, dietary ingredients, and supplements.

Legal requirements and **consumer expectations** demand maximum reliability and experience in the analysis of residues and contaminants in herbal products. PhytoLab offers **precise analytical methodology** for products to be examined for PA-contamination by weeds as well as for quantitative analysis of PA-containing drugs (e.g. *Borago*, *Eupatorium*, *Petasites*, *Senecio*, *Symphytum*, *Tussilago*, ...) used for preparing homeopathic mother tinctures, active herbal ingredients, and finished medicinal products derived therefrom.

As an established partner of the pharmaceutical industry and with our expertise in the field of regulatory approval relevant analysis, the associated method validation and documentation, we provide **GMP-compliant** analysis data to our customers. Additionally, we carry out product-specific verifications in compliance with the European Pharmacopoeia.

Industry sectors and analysed products

For **over 30 years**, PhytoLab has been a reliable and renowned **partner for companies in the pharmaceutical, food, feed, and cosmetics industries**, helping to create and secure the success of many. The diversity and complexity of dried herbal matrices **demand particular expertise, care, and experience**. As part of the nature network, we offer a unique wealth of experience and expert support in assessing findings. From professional sample preparation to analysis results, we stand by your side with a trusting partnership and offer competent, personalized, and sustainable advice in analyzing raw materials and finished products. **Our experience ensures your security!**

Animal feed
Animal feed
Pet food
Cosmetics
Essential oils, flavors, fragrances
Herbal extracts
Foodstuffs
Additives, excipients
Baby food
Cereal products, baking agents, cereals
Coffee
Dried fruit
Extracts for food and beverages
Fats and fatty oils
Flavors, essential oils
Food supplements
Herbal and fruit teas
Herbs and spices
Oleoresins
Tea
Herbal medicinal products
Homeopathic remedies
Medicinal tea
Narcotic drugs
Pharmaceutical extracts
Phytopharmaceuticals

Quality and accreditations

The quality of our work is confirmed by **accreditation** in accordance with **DIN EN ISO/IEC 17025** and **GMP certification**. Regular participation in interlaboratory comparisons or proficiency tests from various recognized providers is also an essential part of our quality assurance. Our commitment is also reflected in our collaborations and our involvement in various industry associations and numerous committees, where we regularly exchange views on complex legal issues.

Do you require **holistic consultation** on your products and raw materials for your **risk management**? Are the above-mentioned products, pesticides, or other contaminants your topic and would you like **a personal exchange**?

Please contact us directly!

✉ welcome@phytolab.de

🌐 www.phytolab.com

