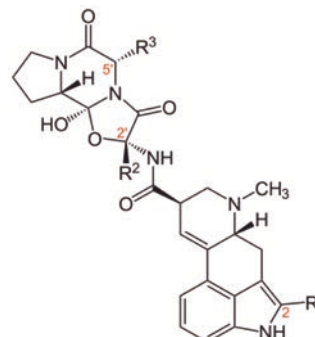


# Ergot Alkaloids



**Ergot alkaloids** are **mycotoxins** produced by fungi of all members of the *Claviceps* species, most important in terms of frequency of occurrence *C. purpurea*. These fungi are able to produce a wintering body, also known as sclerotium. Such structures are mainly found on **rye**, **wheat** and **triticale**. Sclerotia contain different classes of alkaloids, the most prominent being **ergometrine**, **ergotamine**, **α-Ergosine**, **ergocristine**, **α-Ergocryptine** and **ergocornine**.

Available data indicated that **adverse effects** may occur in **agricultural animals** after intake of **feed contaminated with ergot alkaloids**. Ergot alkaloids exert toxic effects in all animal species, and the most prominent symptoms are **feed refusal**, **dizziness**, **insufficient nursing of suckling animals due to agalactia** and **even abortions**.

## General structure of the 6 major ergot alkaloids

Toxin	Toxin Group	R2	R3
Ergocornine	Ergopeptine	CH(CH <sub>3</sub> ) <sub>2</sub>	CH(CH <sub>3</sub> ) <sub>2</sub>
Ergometrine	Lysergic Acid Derivative		
Ergocristine	Ergopeptine	CH(CH <sub>3</sub> ) <sub>2</sub>	CH <sub>2</sub> C <sub>6</sub> H <sub>5</sub>
α-Ergosine	Ergopeptine	CH <sub>3</sub>	CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>
α-Ergocryptine	Ergopeptine	CH(CH <sub>3</sub> ) <sub>2</sub>	CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>
Ergotamine	Ergopeptine	CH <sub>3</sub>	CH <sub>2</sub> C <sub>6</sub> H <sub>5</sub>

Up to the present, there is **no validated analytical method** – in terms of CEN/ISO - **available for the analysis of ergot alkaloids**. A widely used method of analysis is based on a HPLC-FLD method that makes use of an **extensive and time consuming clean-up step** prior to analysis.

In order to alleviate the clean up step, **Romer Labs® has developed a 1-step clean up column for the analysis of ergot alkaloids**. This **MycoSep® 150 Ergot column** contains a specifically designed package of adsorbents that allows for the convenient sample clean up prior to analysis of ergot alkaloids. The **MycoSep®150 Ergot column** was validated for all relevant commodities, like **wheat**, **rye**, **sorghum** and **ryegrass**.



Ergot Alkaloids  
MYCOTOXINS

## 1-step clean up

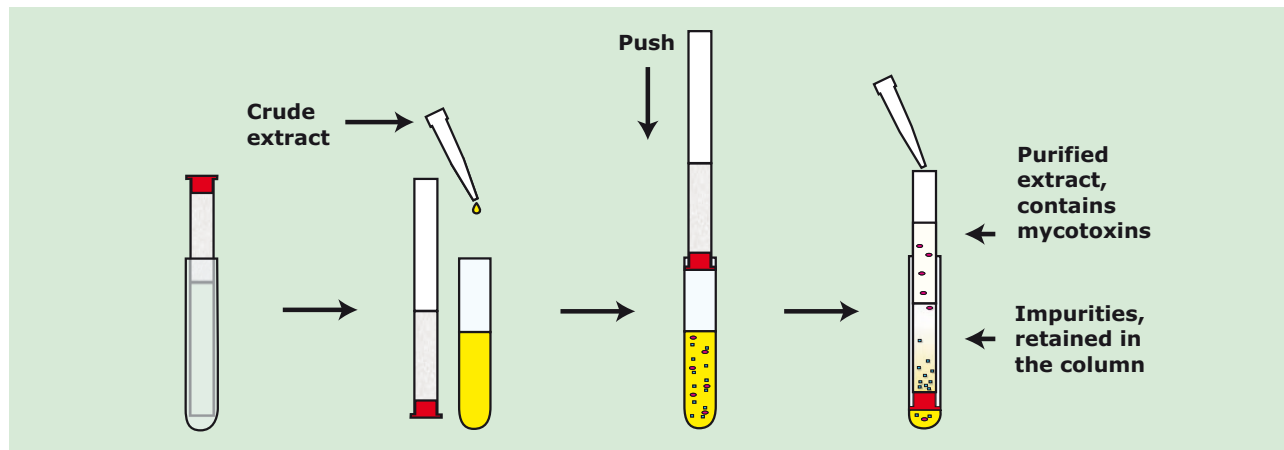


- Time for clean-up: < 30 sec
- Convenient MycoSep® format
- Stability: 18 months
- Recoveries: >90 % for all 6 major ergot alkaloids and their "inine" forms
- Repeatability: <5 %
- For wheat, rye, sorghum and ryegrass



## Procedure for Ergot Alkaloid Clean up

### 1-step MycoSep® clean up principle



## Biopure Reference Materials for Ergot Alkaloids

The use of certified reference material is one of the key issues of **quality assurance** during the **validation process** of an analytical method but also as a measure to **assure the quality** of analytical data during routine analysis.

**Biopure provides a wide range of mycotoxin reference material** which now also includes the 6 major representatives of the ergot alkaloids (ergometrine, ergotamine, ergosine, ergocristine, ergocryptine and ergocornine) + their "-inine" forms.

**All Biopure reference materials are available with a certificate of analysis following ISO guide 31.**

## Order Information:

### Clean up Column

MycoSep®150 Ergot column  
Order No.: COCMY2150, Box of 25

### Biopure Reference Materials:

Ergocornine,	Order No.: 002064
Ergocorninine,	Order No.: 002072
Ergocristine,	Order No.: 002065
Ergocristinine,	Order No.: 002073
Ergocryptine,	Order No.: 002066
Ergocryptinine,	Order No.: 002074
Ergometrine,	Order No.: 002067
Ergometrinine,	Order No.: LMY-090-5ML
Ergosine,	Order No.: 002068
Ergotamine,	Order No.: 002069
Ergotaminine,	Order No.: 002075

### Mycotoxin Calibrant Mixture:

Mix 6 (Ergocornine, Ergocristine, Ergocryptine, Ergometrine, Ergosine, Ergotamine), Order No.: 002070



For further information, please contact:

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