ZeaCLEAN SMART

Mycotoxins

Affinity Columns for Zearalenone

The affinity columns ZeaCLEAN SMART are available in a small 3 cm polypropylene format, which is especially developed for high sample throughput in food and feed analysis by HPLC with fluorescence detection and LC-MS.

Advantages at a Glance

- Size: only 3 cm
- Rapid processing
- Loading capacity: 2000 ng zearalenone
- Recoveries: > 90%
- Shelf life: 12 months by dry storage at 8 - 30 °C
- Also applicable for oils
- Suitable for manual and fully automated processing via FREESTYLE ThermELUTE™
Application Fields and Functionality
The columns are suitable for all cereal matrices like flour, corn, cereals, bread, pastries, noodles, millet, soya beans, animal feed and even oils. The column bed is especially developed for this field of application. Thus ensures optimal results for different matrices. With a loading capacity of 2000 ng zearalenone, they are AOAC compliant. The minimum shelf life of the columns is 12 months at a storage temperature between 8 - 30°C. Clean-up with ZeaCLEAN SMART can be done either manually or fully automated with the robotic system FREESTYLE ThermELUTE™.

The working mode is based on the principles of affinity. The low sample volume and the concentration on the column allows the verification of zearalenon even in the application field of baby food without significant efforts. The material binds zearalenone and derivatives highly specific and facilitate an efficient removal of impurities. Upon application of a raw extract onto the column, the zearalenone is retained, whereas the remaining matrix components pass through the column.

Quality is important to us!
To guarantee a persistent quality all materials are intensely tested over the whole production process. LCTech meets the high demands of european and international legal requirements concerning mycotoxin analysis and controls every single production step. A detailed quality certificate is included in each pack.

Recovery Rates
Exemplary recovery rates of various matrices, cleaned up via the affinity columns ZeaCLEAN SMART, are shown in the following table (all matrices are spiked with 100 ppb, maize oil is spiked with 400 ppb):

<table>
<thead>
<tr>
<th>Matrix</th>
<th>ZEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>91</td>
</tr>
<tr>
<td>Corn</td>
<td>92</td>
</tr>
<tr>
<td>Rye</td>
<td>107</td>
</tr>
<tr>
<td>Chicken Feed</td>
<td>93</td>
</tr>
<tr>
<td>Spelt</td>
<td>108</td>
</tr>
<tr>
<td>Maize Oil (refined)</td>
<td>91</td>
</tr>
</tbody>
</table>
Chromatograms

In the following some exemplary chromatograms are shown, which were obtained by using ZeaCLEAN SMART columns:

Corn, spiked with 100 ppb zearalenone, processed with standard procedure

Rye, spiked with 100 ppb zearalenone, processed with standard procedure

Please contact us
FREESTYLE ThermELUTE™

Read more about fully automated processing via the robotic system FREESTYLE ThermELUTE™

Video

Watch our FREESTYLE ThermELUTE™ video

Poster presentation

Fully automated mycotoxin analysis from extract to chromatogram (pdf | 1.5 MB)

More SMART columns

AflaCLEAN SMART
AflaCLEAN M1 SMART
OtaCLEAN SMART