

# INSTRUCTIONS FOR USE



## **aokin** mycontrol **T2/HT2**

Order No. MY-QC-78-20

Manual for Sample preparation  
with **aokin** QuickClean columns (SPE)



## **aokinmycontrol T2/HT2**

Analytical-kit for rapid and quantitative determination of the mycotoxins T-2 and HT-2

### Materials:

*aokinmycontrolT2/HT2* (Order No: MY-QC-78-20)  
Analysis kit for rapid and quantitative determination of T2 and HT2

Package content (for 20 analysis)

A) *Materials for Sample preparation:*

*aokinExtractionSolventT2/HT2* extraction solution, 1l  
*aokinQuickCleanT2/HT2* centrifuge columns, 20 units  
Filter paper, 20 units

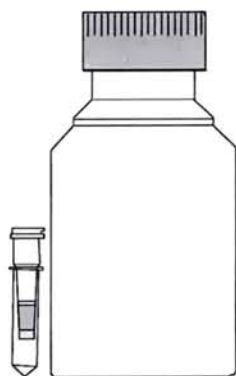


Figure 1: *aokinQuickClean* column with collection tube and Extraction Solvent

B) *Materials for Analytical Measurement:*

*aokinmycontrol* reaction buffer, 1l  
*aokinmycontrolT2/HT2* reagent 1 (yellow cap), 4 vials  
*aokinmycontrolT2/HT2* reagent 2 (black cap), 4 vials



Figure 2: Reagent 1, Reagent 2, and Reaction Buffer

Note: All substances provided are precisely weighed and calibrated. Control of the volume and concentration of the individual solutions are essential for the precision of the analysis.

Precaution: the extraction solution contains methanol. Work with professional care.

Storage Conditions: Reagents **1 and 2 must be stored at temperature of + 4°C**. All other components may be stored at room temperature.

Quality Control: All materials and reagents are prepared according to strict quality control protocols. Exchanging reagents between kits having different LOT numbers will lead to erroneous results and is not permitted.

Order Information:

*aokinmycontrolDON*: Order No: MY-QC-78-20  
(all materials can also be ordered individually)  
Tel.: +49 30 9489 2160

## Introduction

*aokinmycontrol* is a rapid and precise quantitative method for analyzing T2 and HT2 toxins, It has been specifically designed and calibrated for the analysis of food and feed and includes a sample preparation with solid phase extraction (SPE) columns. Samples in the µg/kg range (ppb = parts per billion range) can be analysed for T-2 and HT-2 in under 10 minutes.

*aokinmycontrolT2/HT2* is provided including a calibration, which has been validated for grain and other food products. Please use professional care and check the accuracy by regularly analyzing reference materials (e.g. *aokinReferenceMatrixMaterials*) or standards. Participation in proficiency tests is recommended.

*aokin* will gladly assist you customising the test for your specific sample type and application. Please do not hesitate to contact us.

Sample	Grain, Food, Feed
Time required for sample preparation	3 minutes
Time required for measurement	3 minutes
Quantification ranges	20 µg/kg – 400 µg/kg 40 µg/kg – 800 µg/kg 80 µg/kg – 1600 µg/kg

## T-2 and HT-2 toxins

T-2 and HT-2 are mycotoxins. They naturally occur in molds by *Fusarium* spp fungus. It is toxic to humans and animals. As a consequence, it is strongly recommended to monitor the content in grain products.

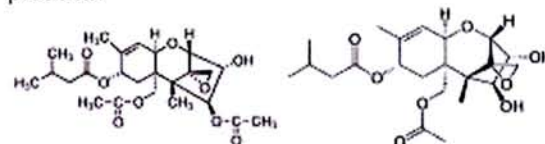


Figure 3: Chemical formula for T2 ( $C_{24}H_{34}O_9$ , molecular weight: 466,52g/mol) and HT2 ( $C_{22}H_{32}O_8$ ; molecular weight: 424,48 g/mol)

## Recommended Accessories

All required materials are available from *aokin*.  
Tel.: +49 30 9489 2160

	Order No.
<i>aokinextractor</i> (food blender)	EX-0706
<i>aokinwatchbox</i> (timer for food blender)	EX-0706-4
Weighing scale, d = 0,01 g	LB-0304
Eppendorf centrifuge, variable g-force	LB-0404
Variable pipettes (1000 µl)	LB-0405-1000
Pipette tips	LB-0408-1000
Funnel	LB-0504
Dispensette	LB-0801
<i>aokinReferenceMatrixMaterial</i>	RMM-03

## Sample preparation

The following protocol is an example. The quantification ranges dependent on dilutions. Volumes vary.

Note: It is of critical importance to use the correct sample preparation protocol for each quantification range. Use Volumes displayed in the software.

### 1. Sample collection, homogenisation, and grinding

The analysis sample is collected, ground, and homogenised according to an approved procedure. Small samples may be ground using the *aokinextractor*.

### 2. Weighing and extraction:

Weigh 10 g of your sample, and 32 g extraction solution (31.8 ml at 20° C) directly into the extraction beaker. Preferentially the exact volume is applied using a dispensette.



Figure 3: Weighing

Close the extraction beaker with the lid (with the blending knives). Start mixing for 1 minute.



Figure 4: Extracting with the *aokinextractor* (blender)

Alternatively, a magnetic stirrer can be used for a minimum of 10 minutes.

### 3. Direct Use of Extraction - Supernatant

Wait a few seconds until enough supernatant appears and continue with step 4.

Alternatively do a filtration: Place the filter on a suitable funnel and the funnel onto a collection container. Open the extraction beaker and pour the contents over the filter and collect the filtrate. The filter paper with filter cake is discarded. Slightly shake filtrate to ensure homogeneity.

### 4. Use of *aokinQuickClean* column

Place an *aokinQuickClean* column in a collection tube and add approximately 500 µl of the supernatant (or filtrate). Place it in the centrifuge and spin for 2 minutes at 5000 x g. Discard the column.



Figure 6: Pipetting of the extract onto the spin column

### 5. Analyzing

Use column-filtrate for analyzing in the *aokinspectrometerFP470*.

Volumes used: 2300 µl reaction buffer and 200 µl sample, 20 µl reagent 1, 20 µl reagent 2.

## Summary

T2/HT2-Toxin T2/HT2	
Sample	10 g
Extraction Solution	32 g =31.8 ml
Extraction	1 min
Filtration	optional
CleanUp	500 µl on <i>aokinQuickClean</i>
Centrifugation	2 min at 5000 g
Analysis	200 µl sample + 2.3 ml reaction buffer