



CERTIFICATION

AOAC Research Institute *Performance Tested Methods*SM

Certificate No.

032402

The AOAC Research Institute hereby certifies the method known as

AgraStrip[®] Pro Total Aflatoxin WATEX[®]

manufactured by

**Romer Labs Division Holding GmbH
Technopark 5
3430 Tulln
Austria**

This method has been evaluated and certified according to the policies and procedures of the AOAC *Performance Tested Methods*SM Program. This certificate indicates an AOAC Research Institute Certification Mark License Agreement has been executed which authorizes the manufacturer to display the AOAC Research Institute *Performance Tested Methods*SM certification mark on the above-mentioned method for the period below. Renewal may be granted by the Expiration Date under the rules stated in the licensing agreement.

A handwritten signature in black ink, appearing to read "Bradley A. Stawick".

Bradley A. Stawick, AOAC Research Institute Senior Director

Issue Date

October 14, 2025

Expiration Date

December 31, 2026

METHOD NAME	CATALOG NUMBER	ORIGINAL CERTIFICATION DATE
AgraStrip® Pro Total Aflatoxin WATEX®	10006322	March 13, 2024

PRINCIPLE OF THE METHOD

The AgraStrip Pro Total Aflatoxin WATEX test is a one-step lateral flow immune-chromatographic assay for the quantitative screening of total aflatoxins (AFLA, including B₁, B₂, G₁, and G₂) present in a sample. The test is based on a competitive immunoassay format. The LFIA (Lateral flow immunoassay) set-up is designed to confirm the presence or absence of an (un)wanted compound; the analyte under consideration can be this compound, or a metabolic derivative. Antibodies to the analyte are used for recognition. Several formats have been described for LFIAs. These formats are chosen depending on the analyte. When the analyte is of low molecular mass and has only one epitope, i.e., a hapten, the format is restricted to the competitive design. Two layouts are possible: (1) antibody is sprayed at the test line, a mixture of sample analyte and labelled analyte is applied at the conjugate pad and the sample analyte and labelled compete for binding sites on the antibody at the testline; (2) an analyte-protein conjugate is sprayed at the test line, and a mixture of labelled antibody and sample analyte is applied at the conjugate pad, giving the sample analyte a head start for binding to the antibody. The preferred layout is dependent on the particular application. The test kit utilized in this study has the same structure as described in the second layout.

The test portion extract migrates through the conjugate pad containing AFLA-specific monoclonal antibodies conjugated to colloidal gold nanoparticles. In the case of the AgraStrip Pro Total Aflatoxin WATEX test, if the sample is positive for AFLA mycotoxin, the mycotoxin will bind to the nanoparticle-antibody complex (conjugate) and migrate into the detection zone. In the competitive format, the test line consists of immobilized analyte molecules (in this case, AFLA mycotoxins) conjugated to a protein carrier. Any unbound AFLA antibody will be captured in the test zone forming a visible line. As the AFLA concentration in the sample increases, the AFLA mycotoxin will be captured by the antibody-gold particles and reduce the interaction of antibody-gold particle with the test zone analyte, resulting in a reduced signal at the test line. The color intensity of the line is therefore inversely proportional to the concentration of AFLA in the sample. The control line indicates proper flow through the strip and should always be visible in the control zone, irrespective of the presence/absence of AFLA mycotoxin. The AFLA test strips are measured using an AgraVision Pro Reader, which quantifies the concentration of AFLA in the sample.

CERTIFIED CLAIM STATEMENT: The AgraStrip Pro Total Aflatoxin WATEX method is certified for the determination of total aflatoxins (AFLA, including B₁, B₂, G₁, and G₂) within the scope of Tables 1 and 2.

- Certification includes:**
- 1. AgraVision™ Pro Reader cat. No. 10006324.
 - 2. Lot-dependent calibration curves supplied via QR code.

Table 1. Method Performance Claims

Matrix	Analyte	Test Portion	Range, µg/kg	Performance supporting certification				Comparison to Codex Criteria ^c
				LOD, µg/kg	LOQ, µg/kg	Mean Recovery, % ^a	RSD _r , % ^b	
Ground corn	AFLA	10 g	0 – 50 µg/kg	0.9	2.8	74.4 – 103.5	1.9 – 10.1	Criteria met

Ground corn ^d	AFLA	10 g	0 – 50 µg/kg	0.5	1.6	78.6 – 93.2	5.7 – 16.1	Criteria met
Peanut paste	AFLA	10 g	0 – 50 µg/kg	0.8	2.3	86.0 – 98.9	3.1 – 10.8	Criteria met

^a Recovery = (mean/reference concentration) × 100, where reference concentration is either HPLC result, Certificate of Analysis value, or known spike value.

^b RSD_r = Relative standard deviation of repeatability.

^c Codex Alimentarius CXG 71-2009. Criteria vary by concentration range (Reference 2).

^d Independent Laboratory data.

Table 2. Method Selectivity – Individual Aflatoxins and Potential Interferents

Compounds	No. Compounds Reacting				
	Concentration, µg/kg	Blank corn	Corn with 10 µg/kg AFLA	Blank peanut paste	Peanut paste with 10 µg/kg AFLA
Aflatoxins B ₁ , B ₂ , G ₁ , G ₂	N/A	0	4	0	4
6 Nontarget mycotoxins ^a	500	0	0	0	0

^a Including neosalaniol, zearalenone, fumonisin B₁, ochratoxin A, deoxinivalenol and sterigmatocystin.

Table 3. Method Summary

No.	Date	Summary	Supporting Data
1	March 2024	Original Certification.	Certification Report