

EFFECTIVE DATE	N P Analytical Laboratories	METHOD CODE
REVISED: 01/05/26	LABORATORY TEST METHOD SUMMARY	AFTX
REPLACES: 04/25/25	Aflatoxin Screen by ELISA	PAGE 1 OF 1
KEY WORDS: aflatoxin B1, aflatoxin B2, aflatoxin G1, aflatoxin G2, mycotoxins		

1. SCOPE AND PURPOSE:

This method screens samples for total aflatoxins B and G in foods, feeds, and ingredients at levels above 5 ppb. There is no assurance that matrices other than those listed can be assayed using this method.

2. PRINCIPLE:

- 2.1. This test uses the Neogen Veratox quantitative aflatoxin test kit, which is a direct competitive, enzyme-linked, immunosorbent assay. Aflatoxins are extracted with methanol/water and pH is adjusted. A portion of the extract is filtered and mixed with enzyme-labeled toxin (conjugate). The mixture is transferred to antibody-coated wells, where free aflatoxins compete with conjugate for antibody binding sites. The wells are rinsed and substrate is added. Color develops as a result of the presence of bound conjugate. Stopping reagent is added, and the optical density of the sample solution is read and compared with the optical density of known standards.
- 2.2. This is a screening test set to indicate the likely presence of aflatoxins at levels above 5 ppb.
- 2.3. Known Interferences: Products containing alfalfa and peanut skins are known to interfere with the test and may give a “positive” result when the sample contains less than 5 ppb aflatoxins. Other reported interfering matrices include products containing figs, spices, coffee beans, cocoa beans, and soy sauce. Samples known to contain these interfering substances should be tested using an alternate method.

3. PRECISION:

Records of method precision based on Method Validation and/or known control summaries are located in the QA Master file for this test method. Assay precision may vary with test matrix and analyte level. Terms used to describe method precision are defined in NPSOP3000, *Validation of Quantitative Chemical Tests*.

4. REFERENCES:

Veratox Quantitative Aflatoxin Test Kit Instructions, Neogen Corporation, Lansing, MI 48912