



Mycotoxin standards: a cornerstone of quality control

- ISO 17034:2016 Certified Trilogy® Liquid Standards
- Trilogy® analytical standards in organic solvents
- Trilogy® analytical standards in dried form



Mycotoxin standards: a cornerstone of quality control

Mycotoxin standards are used routinely in mycotoxin analysis for various purposes. R-Biopharm offers an extensive range of ready-to-use mycotoxin standards in solution or in dry form to be reconstituted in situ.

Laboratories must ensure that the results of their analyses are correct. This is not always an easy task: In food analysis, results are usually not absolute and universally valid and can vary depending on the sample preparation, the test system used, the storage of reagents, the experience of the employee and other parameters. This means that two laboratories may produce (slightly) different results even when using the same sample and test system. Standards serve as a scale for comparison and allow interpreting the analysis result correctly. This is especially useful for method validation, quality

assurance, calibration of equipment, training of employees and proficiency testing.

Mycotoxin standards are mycotoxins in dried form or in solution with a precisely defined concentration of a certain mycotoxin, for example aflatoxin. Two types of standards are available from Trilogy® Analytical Laboratory: certified and non-certified standards. For non-certified standards, terms like analytical standards are widely used. The following table gives an overview of the characteristics of standards available from Trilogy®:

	Certified Liquid Standards	Analytical Standards (dried and liquid)
Producer	ISO 17034:2016 accredited	ISO 17034:2016 accredited
Certificate of Analysis (CoA)	ISO Guide 31:2015 compliant	ISO Guide 31:2015 compliant
Characterized material	✓	✓*
Traceability	✓	–
Information on uncertainty	✓	✓*

* not mandatory, but provided

Trilogy® Analytical Laboratory – quality starts here

With more than 20 years of experience as a laboratory, the Trilogy® staff is dedicated to developing and providing quality analytical procedures for the food and feed industry. Trilogy® analytical methods have been researched to provide precise and reliable analytical procedures that meet the client's needs. Trilogy®'s commitment extends beyond offering quality analytical services, rapid turnaround times and competitive pricing. Trilogy®'s chemists are dedicated to providing their clients

with the very best in analytical services.

Trilogy® Analytical Laboratory the only ISO 17025 accredited full service lab that is also an ISO 17034:2016 accredited producer of certified mycotoxin standard solutions and analytical standards. In cooperation with Trilogy® R-Biopharm offers ready-to-use standard solutions and in-situ generated mycotoxin standards from dry mycotoxins.

Certified Trilogy® Liquid Standards

Certified® Trilogy Liquid Standards are a cornerstone for method validation and instrument calibration in ISO 17025 accredited laboratories. They are accompanied with an appropriate Certificate of Analysis including metrologic traceability.

Certified Trilogy® Liquid Standards are available for aflatoxins, deoxynivalenol (DON), ochratoxin and zearalenone.



Trilogy® – Certified Liquid Standards and Analytical Standards

Trilogy® Liquid and Dried Standards

Analytical standards solutions are used routinely in mycotoxin analysis to prepare a calibration curve for the HPLC system, ensuring accurate determination of the toxin. For the daily use in your lab a full range of single and multi-toxin options is available with

more than 15 ready-to-use mycotoxin standards in organic solvents and more than 20 standards in dry form. Trilogy® provides a Certificate of Analysis (COA) with each standard produced.



Molds like *Aspergillus*, *Fusarium*, *Penicillium*, etc. are able to generate toxic chemical compounds, so called mycotoxins. Molds grow on a variety of different crops and foodstuffs including cereals and can contaminate them with mycotoxins.



Trilogy® Analytical Laboratory is an **ISO 17025** accredited laboratory and an accredited producer of certified standards and certified reference materials for mycotoxin analysis according to ISO 17034:2016.



Trilogy® certified reference material with full metrical traceability

Produced under the scope of ISO 17034:2016. Typically used for method validation and **instrument calibration**. Shelf life is typically 12 months before reconstitution from the date of manufacture.



Trilogy® analytical liquid and dried standards

Mycotoxin standards for the daily use in your **quality control processes**.

- Dried standards available. Choose from a wide range of toxins and toxin combinations. Shelf life is typically 12 months before reconstitution from the date of manufacture.
- Liquid standards available, ready-to-use for your convenience. Shelf life is typically 12 months from the date of manufacture.

Available products

New

Product	Description, No. of tests/amount	Art. No.
Certified Trilogy® Liquid Standards		
Certified Liquid Standard Aflatoxin B1	10 µg/mL aflatoxin B1 in acetonitrile, 5 mL	CTSL-131-5
Certified Liquid Standard Aflatoxin B2	10 µg/mL aflatoxin B2 in acetonitrile, 5 mL	CTSL-1012-5
Certified Liquid Standard Aflatoxin G1	10 µg/mL aflatoxin G1 in acetonitrile, 5 mL	CTSL-1013-5
Certified Liquid Standard Aflatoxin G2	10 µg/mL aflatoxin G2 in acetonitrile, 5 mL	CTSL-1014-5
Certified Liquid Standard Deoxynivalenol	25 µg/mL deoxynivalenol in methanol, 5 mL	CTSL-383-5
Certified Liquid Standard Zearalenone	10 µg/mL zearalenone in methanol, 5 mL	CTSL-422-5
Certified Liquid Standard Ochratoxin A	5 µg/mL ochratoxin A in methanol, 5 mL	CTSL-520-5

Further Trilogy® products

Product	No. of tests/amount	Art. No.
Dried Standards		
Trilogy® Dried Standard Aflatoxins B1, B2, G1, G2	5 µg/mL after reconstitution, 10 mL	TS-108-10
Trilogy® Dried Standard Aflatoxin B1	25 µg/mL after reconstitution, 10 mL	TS-104-10
Trilogy® Dried Standard Aflatoxin B2	25 µg/mL after reconstitution, 10 mL	TS-105-10
Trilogy® Dried Standard Aflatoxin G1	25 µg/mL after reconstitution, 10 mL	TS-106-10
Trilogy® Dried Standard Aflatoxin G2	25 µg/mL after reconstitution, 10 mL	TS-107-10
Trilogy® Dried Standard Aflatoxin M1	1 µg/mL after reconstitution, 2 mL	TS-130-2
Trilogy® Dried Standard Ochratoxin A	1 µg/mL after reconstitution, 5 mL	TS-503-5
Trilogy® Dried Standard Zearalenone	25 µg/mL after reconstitution, 10 mL	TS-401-10
Trilogy® Dried Standard Diacetoxyscirpenol (DAS)	100 µg/mL after reconstitution, 5 mL	TS-316-5
Trilogy® Dried Standard DON	50 µg/mL after reconstitution, 10 mL	TS-310-10
Trilogy® Dried Standard Deoxynivalenol (DON)	100 µg/mL after reconstitution, 10 mL	TS-317-10
Trilogy® Dried Standard 3-Acetyl Deoxynivalenol	100 µg/mL after reconstitution, 5 mL	TS-342-5
Trilogy® Dried Standard 15-Acetyl Deoxynivalenol	100 µg/mL after reconstitution, 5 mL	TS-343-5
Trilogy® Dried Standard Fusarenon X	100 µg/mL after reconstitution, 5 mL	TS-351-5
Trilogy® Dried Standard Fumonisin B1, B2	100/30 µg/mL after reconstitution, 2 mL	TS-202-2
Trilogy® Dried Standard Neosolaniol	100 µg/mL after reconstitution, 5 mL	TS-328-5
Trilogy® Dried Standard Nivalenol	100 µg/mL after reconstitution, 5 mL	TS-344-5
Trilogy® Dried Standard T-2 Toxin	100 µg/mL after reconstitution, 5 mL	TS-314-5
Trilogy® Dried Standard HT-2 Toxin	100 µg/mL after reconstitution, 5 mL	TS-333-5
Trilogy® Dried Standard Type A Trichothecenes	10 µg/mL after reconstitution, 5 mL	TS-353-5
Trilogy® Dried Standard Citrinin	5 µg/mL after reconstitution, 5 mL	TS-904-5
Liquid Standards		
Trilogy® Liquid Standard Aflatoxins B1, B2, G1, G2	2/0.5/2/0.5 µg/mL, 10 mL	TSL-108-10
Trilogy® Liquid Standard Aflatoxin B1	25 µg/mL, 10 mL	TSL-104-10
Trilogy® Liquid Standard Aflatoxin B2	25 µg/mL, 10 mL	TSL-105-10
Trilogy® Liquid Standard Aflatoxin G1	25 µg/mL, 10 mL	TSL-106-10
Trilogy® Liquid Standard Aflatoxin G2	25 µg/mL, 10 mL	TSL-107-10
Trilogy® Liquid Standard Aflatoxin M1	0.5 µg/mL, 2 mL	TSL-143-2
Trilogy® Liquid Standard Ochratoxin A	10 µg/mL, 5 mL	TSL-504-5
Trilogy® Liquid Standard Zearalenone	25 µg/mL, 10 mL	TSL-401-10
Trilogy® Liquid Standard Deoxynivalenol (DON)	100 µg/mL, 10 mL	TSL-317-10
Trilogy® Liquid Standard Fumonisin B1, B2	100/30 µg/mL, 2 mL	TSL-202-2
Trilogy® Liquid Standard Fumonisin B1	100 µg/mL, 2 mL	TSL-204-2
Trilogy® Liquid Standard Fumonisin B2	100 µg/mL, 2 mL	TSL-205-2
Trilogy® Liquid Standard T-2 Toxin	100 µg/mL, 5 mL	TSL-314-5
Trilogy® Liquid Standard HT-2 Toxin	100 µg/mL, 5 mL	TSL-333-5
Trilogy® Liquid Standard Type A & B Trichothecenes	100 µg/mL, 2 mL	TSL-307-2
Trilogy® Liquid Standard Patulin	25 µg/mL, 5 mL	TSL-601-5