

List of CEN, EN & ISO methods & general requirements for mycotoxin analysis in food and feed

Standards must be purchased from CEN

Matrix	Mycotoxin(-s)	Method / link	Description
Food	General requirements for all mycotoxins	CR 13505:1999	Food analysis - Biotoxins - Criteria of analytical methods of mycotoxins
Food	General requirements for all mycotoxins	CEN/TR 15298:2006	Foodstuffs - Sample comminution for mycotoxins analysis - Comparison between dry milling and slurry mixing
Food	General requirements for all mycotoxins	CEN/TR 16059:2010	Food analysis - Performance criteria for single laboratory validated methods of analysis for the determination of mycotoxins
Feed	General requirements for all mycotoxins	CEN/TS 17455:2020	Animal feeding stuffs - Methods of sampling and analysis - Performance criteria for single laboratory validated and ring-trial validated methods of analysis for the determination of mycotoxins
Cereals, shell fruits & derived products	Aflatoxin B1 Aflatoxin B2 Aflatoxin G1 Aflatoxin G2	EN 12955:1999	Foodstuffs - Determination of aflatoxin B1, and the sum of aflatoxins B1, B2, G1 and G2 in cereals, shell-fruits and derived products - High performance liquid chromatographic method with post column derivatisation and immunoaffinity column clean up
Cereals, nuts & derived products	Aflatoxin B1 Aflatoxin B2 Aflatoxin G1 Aflatoxin G2	ISO 16050:2003	Foodstuffs - Determination of aflatoxin B1, and the total content of aflatoxins B1, B2, G1 and G2 in cereals, nuts and derived products. High-performance liquid chromatographic method
Hazelnuts, peanuts, pistachios, figs & paprika powder	Aflatoxin B1 Aflatoxin B2 Aflatoxin G1 Aflatoxin G2	EN 14123:2007	Foodstuffs - Determination of aflatoxin B1 and the sum of aflatoxin B1, B2, G1 and G2 in hazelnuts, peanuts, pistachios, figs, and paprika powder. High performance liquid chromatographic method with post-column derivatisation and immunoaffinity column clean-up
Animal feeding stuffs	Aflatoxin B1	ISO 14718:1998	Animal feeding stuffs -- Determination of aflatoxin B1 content of mixed feeding stuffs -- Method using high-performance liquid chromatography
Feed	Aflatoxin B1	EN ISO 17375:2006	Animal feeding stuffs - Determination of aflatoxin B1 (ISO 17375:2006)
Cereal based food	Aflatoxin B1	EN 15851:2010	Foodstuffs - Determination of aflatoxin B1 in cereal based foods for infants and young children - HPLC method with immunoaffinity column clean-up and fluorescence detection C
Cereals, nuts & derived products	Aflatoxin B1 Aflatoxin B2 Aflatoxin G1 Aflatoxin G2	EN ISO 16050:2011	Foodstuffs - Determination of aflatoxin B1, and the total content of aflatoxins B1, B2, G1 and G2 in cereals, nuts and derived products - High-performance liquid chromatographic method (ISO 16050:2003)
Food: spices other than paprika	Aflatoxin B1 Aflatoxin B2 Aflatoxin G1 Aflatoxin G2	EN 17424:2020	Foodstuffs - Determination of aflatoxins in spices other than paprika by IAC clean-up and HPLC-FLD with post-column derivatization
Milk & milk products	Aflatoxin M1	ISO 14675:2003	Milk and milk products. Guidelines for a standardized description of competitive

			enzyme immunoassays. Determination of aflatoxin M1 content
Milk & milk powder	Aflatoxin M1	ISO 14674:2005	Milk and milk powder. Determination of aflatoxin M1 content. Clean-up by immunoaffinity chromatography and determination by thin-layer chromatography
Milk & milk powder	Aflatoxin M1	ISO 14501:2007 Will be replaced by prEN ISO 14501 (under approval)	Milk and milk powder. Determination of aflatoxin M1 content. Clean-up by immunoaffinity chromatography and determination by high-performance liquid chromatography (ISO/DIS 14501:2019)
Natural products	Aflatoxins	ISO/CD 22283:2020	Traditional Chinese medicine -- Determination of Aflatoxins in natural products by LC-FLD
Foodstuffs	Citrinin	EN 17203:2018	Foodstuffs - Determination of citrinin in food by liquid chromatography tandem mass spectrometry (LC-MS/MS)
Cereals & cereal based products	Ochratoxin A	EN ISO 15141-1:1998 EN ISO 15141-2:1998	Foodstuffs - Determination of ochratoxin A in cereals and cereal products - Part 1: High performance liquid chromatographic method with silica gel clean up Foodstuffs - Determination of ochratoxin A in cereals and cereal products - Part 2: High performance liquid chromatographic method with bicarbonate clean up
Barley & roasted coffee	Ochratoxin A	EN 14132:2009	Foodstuffs - Determination of ochratoxin A in barley and roasted coffee - HPLC method with immunoaffinity column clean-up
Wine & beer	Ochratoxin A	EN 14133:2009	Foodstuffs - Determination of ochratoxin A in wine and beer - HPLC method with immunoaffinity column clean-up
Currants, raisins, sultanas, mixed dried fruit and dried figs	Ochratoxin A	EN 15829:2010	Foodstuffs - Determination of ochratoxin A in currants, raisins, sultanas, mixed dried fruit and dried figs - HPLC method with immunoaffinity column cleanup and fluorescence detection
Cereal based food	Ochratoxin A	EN 15835:2010	Foodstuffs - Determination of ochratoxin A in cereal based foods for infants and young children - HPLC method with immunoaffinity column cleanup and fluorescence detection
Animal feed	Ochratoxin A	EN 16007:2011	Animal feeding stuffs - Determination of Ochratoxin A in animal feed by immunoaffinity column clean-up and High-Performance Liquid Chromatography with fluorescence detection
Cereals and cereal products	Ochratoxin A	ISO 15141:2018	Cereals and cereal products - Determination of ochratoxin A - High performance liquid chromatographic method with immunoaffinity column clean-up and fluorescence detection
Food: paprika, chilli, black & white pepper, nutmeg, spice mix, liquorice, cocoa and cocoa products	Ochratoxin A	EN 17250:2020	Foodstuffs - Determination of ochratoxin A in paprika, chilli, black & white pepper, nutmeg, spice mix, liquorice, cocoa and cocoa products by immunoaffinity column clean-up and high-performance liquid chromatography with fluorescence detection (HPLC-FLD)
Food: pork meat and derived products	Ochratoxin A	EN 17251:2020	Foodstuffs - Determination of ochratoxin A in pork meat and derived products by high performance liquid chromatography with fluorescence detection (HPLC-FLD)

Cereals & cereal based food	Deoxynivalenol	EN 15891:2010	Foodstuffs - Determination of deoxynivalenol in cereals, cereal products and cereal based foods for infants and young children - HPLC method with immunoaffinity column clean-up and UV detection
Animal feeding stuffs	Zearalenone	ISO 17372:2008	Animal feeding stuffs - Determination of zearalenone by immunoaffinity column chromatography and high-performance liquid chromatography
Animal feeding stuffs	Zearalenone	EN 1592:2009	Animal feeding stuffs - Determination of zearalenone in animal feed - High performance liquid chromatographic method with fluorescence detection and immunoaffinity column clean-up
Maize based baby food, barley flour, maize flour, polenta, wheat flour and cereal based food	Zearalenone	EN 15850:2010	Foodstuffs - Determination of zearalenone in maize based baby food, barley flour, maize flour, polenta, wheat flour and cereal based foods for infants and young children - HPLC method with immunoaffinity column clean-up and fluorescence detection
Vegetable oils	Zearalenone	EN 16924:2017	Foodstuffs - Determination of zearalenone in edible vegetable oils by LC-FLD or LC-MS/MS
Apple juice, apple juice concentrates and drinks containing apple juice	Patulin	ISO 8128-1:1993	Apple juice, apple juice concentrates and drinks containing apple juice. Determination of Patulin content. Part 1: Method using high-performance liquid chromatography
Apple juice, apple juice concentrates and drinks containing apple juice	Patulin	ISO 8128-2:1993	Apple juice, apple juice concentrates and drinks containing apple juice. Determination of Patulin content. Part 2: Method using thin-layer chromatography
Apple juice & puree	Patulin	EN 14177:2003	Foodstuffs - Determination of Patulin in clear and cloudy apple juice and puree - HPLC method with liquid/liquid partition clean-up
Fruit juice & fruit-based puree	Patulin	EN 15890:2010	Foodstuffs - Determination of Patulin in fruit juice and fruit-based purée for infants and young children - HPLC method with liquid/liquid partition clean-up and solid phase extraction and UV detection
Maize	Fumonisin B1 Fumonisin B2	EN 13585:2002-03	Foodstuffs - Determination of fumonisins B1 and B2 in maize - HPLC method with solid phase extraction clean-up
Maize based food	Fumonisin B1 Fumonisin B2	EN 14352:2004	Document title Foodstuffs - Determination of fumonisin B1 and B2 in maize based foods - HPLC method with immunoaffinity column clean up
Animal feeding stuffs	Fumonisin B1 Fumonisin B2	EN 16006:2011	Animal feeding stuffs - Determination of the Sum of Fumonisin B1 & B2 in compound animal feed with immunoaffinity clean-up and RP-HPLC with fluorescence detection after pre- or post-column derivatisation
Processed maize containing food	Fumonisin B1 Fumonisin B2	CEN/TS 16187:2011	Foodstuffs - Determination of fumonisin B1 and fumonisin B2 in processed maize containing foods for infants and young children - HPLC method with immunoaffinity column clean-up and fluorescence detection after precolumn derivatization

Food: Processed maize containing foods for infants and young children	Fumonisin B1 Fumonisin B2	EN 16187:2015	Foodstuffs - Determination of fumonisin B1 and fumonisin B2 in processed maize containing foods for infants and young children - HPLC method with immunoaffinity column clean-up and fluorescence detection after pre-column derivatisation
Animal feed	T-2 toxin HT-2 toxins Deoxynivalenol Zearalenone	EN 16877:2016	Animal feeding stuffs: Methods of sampling and analysis - Determination of T-2 and HT-2 toxins, Deoxynivalenol and Zearalenone, in feed materials and compound feed by LC-MS
Food: cereals and cereal products for infants and young children	T-2 HT-2	EN 16923:2017	Foodstuffs - Determination of T-2 toxin and HT-2 toxin in cereals and cereal products for infants and young children by LC-MS/MS after SPE clean-up
Food	Ochratoxin A Aflatoxin B1 Deoxynivalenol Zearalenone T-2 toxin HT-2 toxin Fumonisin B1 Fumonisin B2	EN 17279:2019	Foodstuffs - Multimethod for the screening of ochratoxin A, aflatoxin B1, deoxynivalenol, zearalenone, T2-toxin and HT-2 toxin and fumonisin B1 and B2 in foodstuffs, excluding foods for infants and young children, by LC-MS/MS
Animal feed	Ochratoxin A Aflatoxin B1 Deoxynivalenol Zearalenone T-2 toxin HT-2 toxin Fumonisin B1 Fumonisin B2	EN 17194:2019	Animal feeding stuffs: Methods of sampling and analysis - Determination of Deoxynivalenol, Aflatoxin B1, Fumonisin B1&B2, T-2 & HT-2 toxins, Zearalenone and Ochratoxin A in feed materials and compound feed by LC-MS/MS
Food	Aflatoxin B1 Deoxynivalenol Fumonisin B1 Fumonisin B2 Ochratoxin A T-2 toxin HT-2 toxin Zearalenone	EN 17279:2019	Foodstuffs - Multimethod for the screening of aflatoxin B1, deoxynivalenol, fumonisin B1 and B2, ochratoxin A, T-2 toxin, HT-2 toxin and zearalenone in foodstuffs, excluding foods for infants and young children, by LC-MS/MS
Food Cereal & cereal products	Zearalenone Deoxynivalenol 3-acetyl-DON 15-acetyl-DON Nivalenol T-2 toxin HT-2 toxin	EN 17280:2019	Foodstuffs - Determination of zearalenone and trichothecenes including deoxynivalenol and its acetylated derivatives (3-acetyl-deoxynivalenol and 15-acetyl-deoxynivalenol), nivalenol T-2 toxin and HT-2 toxin in cereals and cereal products by LC-MS/MS
Food	Aflatoxins Deoxynivalenol Fumonisin Ochratoxin A T-2 toxin HT-2 toxin Zearalenone	prEN 17641 (WI 00275369) (Under Enquiry)	Foodstuffs - Multimethod for the determination of aflatoxins, deoxynivalenol, fumonisins, ochratoxin A, T-2 toxin, HT-2 toxin and zearalenone by LC-MS/MS
Feed materials & compound feed	ergocornine ergocorninine ergocristine ergocristinine α -ergocryptine α -ergocryptinine ergometrine ergometrinine ergosine	EN 17256:2019	Animal feeding stuffs: Methods of sampling and analysis - Determination of ergot alkaloids and tropane alkaloids in feed materials and compound feeds by LC-MS/MS

	ergosinine ergotamine ergotaminine atropine scopolamine		
Cereals & cereal products	ergocornine ergocorninine ergocristine ergocristinine α -ergocryptine α -ergocryptinine ergometrine ergometrinine ergosine ergosinine ergotamine ergotaminine	EN 17425:2020 (approved)	Foodstuffs - Determination of ergot alkaloids in cereals and cereal products by dSPE clean-up and HPLC-MS/MS
Food: tomato, wheat, sunflower seeds	Altenuene Alternariol Alternariol monomethyl ether Tentoxin Tenuazonic acid	prEN17521 (WI=00275285) (under approval)	Foodstuffs - Determination of Alternaria toxins in tomato, wheat and sunflower seeds by SPE clean-up and HPLC-MS/MS