

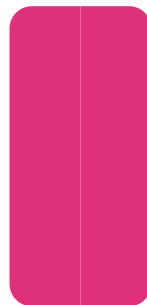
Pribolab

Solutions in Food Safety and Testing

PRIBOLAB PTE.LTD



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Standards and Reference Materials



SOLUTIONS IN FOOD SAFETY AND TESTING





Mycotoxins

- Pribolab® Mycotoxin Solid Standards;
- Pribolab® Mycotoxin Liquid Standards;
- Pribolab® Mycotoxin ¹³C Isotope Labeled Internal Standards;
- Pribolab® Mycotoxin Certified Reference Materials;



Cyanotoxins & Marine Toxins

- Pribolab® Cyanotoxin&Marine Toxin Solid/liquid Standards;
- Pribolab® Cyanotoxin&Marine Toxin Liquid Standards;



Vitamins

- Pribolab® Vitamin Solid Standards;



Mycotoxin Standards and Reference Materials



Analytical Standard is an integral part in any laboratory, which can be used for verification of laboratory performance, matrix fortification, method development and optimization, calibration curves, trouble shooting, method validation and calculating recovery corrections for the analysis of mycotoxins by HPLC, NMR, LC–MS/MS,etc.

Pribolab provides over 30 kinds of Mycotoxin Solid/Liquid Standards, also permits different format customization according to the research needs. Each batch of the standards will perform strict quality audits before delivery, to guarantee both the quality and the purity (All delivery with COA certificate).



Pribolab® Mycotoxin Solid Standards

Item No.	Product Name	CAS No.	Item No.	Product Name	CAS No.
MSS1001	3–Acetyl–deoxynivalenol	50722–38–8	MSS1015	Fusarenon–X	23255–69–8
MSS1002	15–Acetyl–deoxynivalenol	88337–96–6	MSS1016	HT–2 Toxin	26934–87–2
MSS1003	Aflatoxin B1	1162–65–8	MSS1017	Moniliformin	71376–34–6
MSS1004	Aflatoxin B2	7220–81–7	MSS1018	Neosolaniol	36519–25–2
MSS1005	Aflatoxin G1	1165–39–5	MSS1019	Nivalenol	23282–20–4
MSS1006	Aflatoxin G2	7241–98–7	MSS1020	Ochratoxin A	303–47–9
MSS1007	Aflatoxin M1	6795–23–9	MSS1021	Patulin	149–29–1
MSS1008	Aflatoxin M2	6885–57–0	MSS1022	Sterigmatocystin	10048–13–2
MSS1009	Citrinin	518–75–2	MSS1023	T–2 Toxin	21259–20–1
MSS1010	Cyclopiazonic acid	18172–33–3	MSS1024	Zearalenone	17924–92–4
MSS1011	Deoxynivalenol	51481–10–8	MSS1025	Gliotoxin	67–99–2
MSS1012	Diacetoxyscirpenol	2270–40–8	MSS1026	T–2 Toxin Triol	34114–98–2
MSS1013	Fumonisin B1	116355–83–0	MSS1027	T–2 Toxin Tetraol	34114–99–3
MSS1014	Fumonisin B2	116355–84–1	MSS1028	15–Acetoxyscirpenol	2623–22–5

Item No.	Product Name	CAS No.
MSS1029	15–O–Acetyl–4–Deoxynivalenol	88337–96–6
MSS1030	Alternariol	641–38–3
MSS1031	Alternariol Monomethyl Ether	26894–49–5
MSS1032	Tenuazonic acid	610–88–8
MSS1033	Beauvericin	26048–05–5
MSS1034	Fumagillin	23110–15–8
MSS1035	Penicillic Acid	90–65–3
MSS1036	Penitrem A	12627–35–9
MSS1037	Verruculogen	12771–72–1
MSS1038	Tentoxin	28540–82–1
MSS1039	Wortmannin	19545–26–7
MSS1040	Mycophenolic acid	24280–93–1
MSS1041	Citreoviridin	25425–12–1
MSS1042	Aflatoxicol	29611–03–8
MSS1043	Altenuene	29752–43–0
MSS1044	Ochratoxin B	4825–86–9
MSS1045	Ochratoxin C	4865–85–4
MSS1046	Fumonisin B ₃	136379–59–4
MSS1047	Enniatin B	917–13–5
MSS1048	Ergocristine	511–08–0
MSS1049	Ergotamine	113–15–5
MSS1050	Ergometrine	60–79–7
MSS1051	Ergotaminine	639–81–6
MSS1052	Altenusin	31186–12–6
MSS1053	Enniatin Complex	11113–62–5
MSS1054	Enniatin A	2503–13–1
MSS1055	Enniatin A ₁	4530––21–6
MSS1056	Enniatin B ₁	19914–20–6
MSS1057	3–Epi–Ochratoxin A	189152–21–4

Item No.	Product Name	CAS No.
MSS1058	3–Epi–Ochratoxin B	—
MSS1059	3–Epi–Ochratoxin C	—
MSS1061	Fusaric acid	536–69–6
MSS1063	Aflatoxin P ₁	32215–02–4
MSS1064	Aflatoxin P ₂	891197–67–4
MSS1065	Aflatoxin Q ₁	52819–96–2
MSS1066	Aflatoxin Q ₂	89989–32–2
MSS1067	Hydrolyzed Fumonisin B ₁	—
MSS1068	Hydrolyzed Fumonisin B ₂	—
MSS1069	Destruxin A	6686–70–0
MSS1070	Destruxin B	2503–26–6
MSS1071	Destruxin C	27482–49–4
MSS1072	Destruxin D	27482–50–4
MSS1073	Desmethyl–destruxinB	27482–48–0
MSS1074	Altertoxin I	56258–32–3
MSS1075	Altertoxin II	56257–59–1
MSS1076	Altertoxin III	10557–74–6
MSS1077	Altertoxin IV	—
MSS1078	Aflatoxin R ₀	29611–03–8
MSS1079	Fumitremorgin A	12626–18–5
MSS1080	Fumitremorgin B	12626–17–4/111139–38–9
MSS1081	Fumitremorgin C	118974–02–0
MSS1082	Alternaria alternata toxin	79367–52–5
MSS2001	α –Zearalenol	84–82–2
MSS2002	β –Zearalenol	11076–19–0
MSS2003	Zearalanone	36455–72–8
MSS2004	Zearalanol,Zeranol	71030–11–0
MSS2005	β –Zearalanol, β –Zeranol	5975–78–0
MSS1029	15–Acetoxyscirpenol	2623–22–5

(*Solid standards default packing formats: 1.0 mg/5.0mg/10.0 mg,other size are customizable.)

Pribolab®Mycotoxin Liquid Standards

Item No.	Product Name Concentration	(μ g/mL)	Solvent
STD#1041	Aflatoxin B ₁	25	Acetonitrile
STD#1042	Aflatoxin B ₁	100	Acetonitrile
STD#1051	Aflatoxin B ₂	25	Acetonitrile
STD#1052	Aflatoxin B ₂	100	Acetonitrile
STD#1061	Aflatoxin G ₁	25	Acetonitrile
STD#1062	Aflatoxin G ₁	100	Acetonitrile
STD#1071	Aflatoxin G ₂	25	Acetonitrile
STD#1072	Aflatoxin G ₂	100	Acetonitrile
STD#1081	Aflatoxins B ₁ /G ₁ /B ₂ /G ₂	2 /2/ 0.5/0.5	Acetonitrile
STD#1082	Aflatoxins B ₁ /G ₁ /B ₂ /G ₂	1/1/0.3/0.3	Acetonitrile
STD#1083	Aflatoxins B ₁ /G ₁ /B ₂ /G ₂	2/2/0.5/ 0.5	Acetonitrile
STD#1091	Aflatoxin M ₁	0.5	Acetonitrile
STD#1092	Aflatoxin M ₁	10	Acetonitrile
STD#1101	Aflatoxin M ₂	0.5	Acetonitrile
STD#1102	Aflatoxin M ₂	10	Acetonitrile
STD#1103	Aflatoxin M ₁ /M ₂	10/10	Acetonitrile
STD#2011	Fumonisin B ₁ /B ₂	50/50	Acetonitrile /Water
STD#2012	Fumonisin B ₁ /B ₂ /B ₃	50/50/50	Acetonitrile/Water
STD#2031	Fumonisin B ₁	50	Acetonitrile/Water
STD#2041	Fumonisin B ₂	50	Acetonitrile/Water
STD#2051	Fumonisin B ₃	50	Acetonitrile/Water
STD#3071	Type A/B Trichothecenes*	100	Acetonitrile
STD#3081	Type A Trichothecenes*	10	Acetonitrile
STD#3088	Aflatoxin B ₁ /B ₂ /G ₁ /G ₂ , Zearalenone,T–2 Toxin	10	Methanol
STD#3091	Type B Trichothecenes*	10	Acetonitrile
STD#3101	Deoxynivalenol	50	Acetonitrile
STD#3102	Deoxynivalenol	100	Acetonitrile
STD#3103	3–Acetyl–deoxynivalenol	100	Acetonitrile
STD#3104	15–Acetyl–deoxynivalenol	100	Acetonitrile
STD#3105	Deoxynivalenol–3–glucoside(3–G–DON)	50	Acetonitrile
STD#3110	Deoxynivalenol,Nivalenol, 3–Acetyl–Deoxynivalenol,15–Acetyl–Deoxynivalenol	100	Acetonitrile
STD#3111	T–2 toxin	100	Acetonitrile
STD#3112	T–2 toxin Triol	100	Acetonitrile
STD#3113	T–2 toxin Tetraol	100	Acetonitrile

Item No.	Product Name Concentration	(μ g/mL)	Solvent
STD#3121	HT–2 toxin	100	Acetonitrile
STD#3131	Nivalenol	100	Acetonitrile
STD#3141	Fusarenon–X	100	Acetonitrile
STD#3151	Deepoxy–deoxynivalenol	50	Acetonitrile
STD#3161	Diacetoxyscirpenol	100	Acetonitrile
STD#3171	Neosolaniol	100	Acetonitrile
STD#3181	Moniliformin	100	Acetonitrile
STD#4011	Zearalenone	25	Acetonitrile
STD#4012	Zearalenone	100	Acetonitrile
STD#5011	Ochratoxin A	10	Methanol
STD#5012	Ochratoxin A	100	Methanol
STD#5021	Ochratoxin B	10	Acetonitrile
STD#5031	Ochratoxin C	10	Acetonitrile
STD#5041	Ochratoxin A/B/C	10/10/10	Acetonitrile
STD#6011	Patulin	25	Acetonitrile
STD#6012	Patulin	100	Acetonitrile
STD#7010	Ergot Alkaloids	100	Methanol
STD#7011	Ergocornine	100	Methanol
STD#7012	Ergocristine	100	Methanol
STD#7013	Ergocryptine	100	Methanol
STD#7014	Ergometrine	100	Methanol
STD#7015	Ergosine	100	Methanol
STD#7016	Ergotamine	100	Methanol
STD#7017	Agroclavine	100	Methanol
STD#7018	Ergocorninine	25	Methanol
STD#7019	Ergocristinine	25	Methanol
STD#7020	Ergocryptinine	25	Methanol
STD#7021	Ergotaminine	25	Methanol
STD#7022	Dihydroergocristine	100	Methanol
STD#7023	Ergosinine	25	Methanol
STD#7024	Ergometrinine	25	Methanol
STD#7050	Alternariol	100	Acetonitrile
STD#7051	Alternariol monomethyl Ether	100	Acetonitrile
STD#7052	Tentoxin	100	Acetonitrile
STD#7054	Altenuene	100	Acetonitrile
STD#7055	Altenusin	100	Acetonitrile

Item No.	Product Name Concentration	(μ g/mL)	Solvent
STD#7056	Alternariol, Alternariol monomethyl Ether, Tentoxin, Tenuazonic Acid	100	Methanol
STD#8021	Cyclopiazonic Acid	10	Acetonitrile
STD#8022	Cyclopiazonic Acid	100	Acetonitrile
STD#8023	Sterigmatocystin	50	Acetonitrile
STD#8024	Sterigmatocystin	100	Acetonitrile
STD#9041	Citrinin	5	Methanol
STD#9042	Citrinin	100	Methanol

***Liquid Standards default packing format: 1.0mL/5.0mL/10.0mL,other size and concentration are customizable.**

Note:①Type A, B Trichothecenes* ——Fusarenon–X, Neosolaniol,Deoxynivalenol, 3–Acetyl–deoxynivalenol,15–Acetyl–deoxynivalenol,Nivalenol,HT–2 Toxin,Diacetoxyscirpenol, T–2 Toxin.
②Type A Trichothecenes*——Neosolaniol, Diacetoxyscirpenol, HT–2 Toxin, T–2 Toxin.
③Type B Trichothecenes*——Fusarenon–X, Deoxynivalenol, 3–Acetyl–deoxynivalenol, 15–Acetyl–deoxynivalenol, Nivalenol.

Pribolab®

¹³C Isotope labeled Internal Standards

Mycotoxin ¹³C isotope labeled internal standards are stable, non–radioactive isotopically labeled versions of the target analyte with the same physiochemical and chromatographic behaviors. These internal standards provide an accurate detection, as they show an optimal mass unit difference between the analyte and the standard, which prevents interference. They also account for variations during sample preparation, cleanup and ionization.

Features:

- Unique patented technology;
- Triple purification procedures;
- Correct matrix effect;
- High accuracy and precision;
- Effectively eliminate the interaction effect of mycotoxins.



Item No.	Product Description	Cocentration(μ g/mL)	Solvent
STD#3101U	U–[¹³ C ₁₅]-Deoxynicalenol	25	Acetonitrile
STD#3102U	U–[¹³ C ₁₇]-15–acetyl–Deoxynicalenol	25	Acetonitrile
STD#3103U	U–[¹³ C ₁₇]-3–acetyl–Deoxynivalenol	25	Acetonitrile
STD#3104U	U–[¹³ C ₁₅]-Nivalenol	25	Acetonitrile
STD#3105U	U–[¹³ C ₁₅]-3–G–Deoxynivalenol	10	Acetonitrile
STD#1041U	U–[¹³ C ₁₇]-Aflatoxin B ₁	0.5	Acetonitrile
STD#1051U	U–[¹³ C ₁₇]-Aflatoxin B ₂	0.5	Acetonitrile

Item No.	Product Description	Cocentration(μ g/mL)	Solvent
STD#1061U	U-[¹³ C ₁₇]-Aflatoxin G ₁	0.5	Acetonitrile
STD#1071U	U-[¹³ C ₁₇]-Aflatoxin G ₂	0.5	Acetonitrile
STD#1091U	U-[¹³ C ₁₇]-Aflatoxin M ₁	0.5	Acetonitrile
STD#2030U	U-[¹³ C ₃₄]-Fumonisin B ₁	25	Acetonitrile/Water
STD#2040U	U-[¹³ C ₃₄]-Fumonisin B ₂	10	Acetonitrile/Water
STD#2050U	U-[¹³ C ₃₄]-Fumonisin B ₃	10	Acetonitrile/Water
STD#3110U	U-[¹³ C ₂₄]-T-2 toxin	25	Acetonitrile
STD#3121U	U-[¹³ C ₂₂]-HT-2 toxin	25	Acetonitrile
STD#3160U	U-[¹³ C ₁₉]-Diacetoxyscirpenol	25	Acetonitrile
STD#4010U	U-[¹³ C ₁₈]-Zearalenone	25	Acetonitrile
STD#5010U	U-[¹³ C ₂₀]-Ochratoxin A	10	Acetonitrile
STD#6010U	U-[¹³ C ₇]-Patulin	25	Acetonitrile
STD#7017U	U-[¹³ C ₁₆]-Agroclavine	25	Acetonitrile
STD#7053U	U-[¹³ C ₁₀]-Tenuazonic Acid	25	Methanol
STD#8020U	U-[¹³ C ₂₀]-Cyclopianic Acid	10	Acetonitrile
STD#8030U	U-[¹³ C ₁₈]-Sterigmatocystin	25	Acetonitrile
STD#9040U	U-[¹³ C ₁₃]-Citrinin	10	Acetonitrile
STD#1080U	Aflatoxins Mix*	0.5	Acetonitrile
STD#1085U	Aflatoxins Mix**	0.5	Acetonitrile
STD#2011U	Fumonisins Mix*	5	Acetonitrile/Water
STD#2012U	Fumonisins Mix**	5	Acetonitrile/Water
STD#3020U	Fusarium Toxins Mix*	10/10/1/3	Acetonitrile

***¹³C Isotope Labeled Internal Standards default packing format: 1.2mL,other size and concentration are customizable.**

Note:①Aflatoxins Mix*——U-[¹³C₁₇]-Aflatoxin B₁, U-[¹³C₁₇]-Aflatoxin B₂, U-[¹³C₁₇]-Aflatoxin G₁, U-[¹³C₁₇]-Aflatoxin G₂.

②Aflatoxins Mix**——U-[¹³C₁₇]-Aflatoxin B₁, U-[¹³C₁₇]-Aflatoxin G₁.

③Fumonisins Mix*——U-[¹³C₃₄]-Fumonisin B₁, U-[¹³C₃₄]-Fumonisin B₂.

④Fumonisins Mix**——U-[¹³C₃₄]-Fumonisin B₁, U-[¹³C₃₄]-Fumonisin B₂, U-[¹³C₃₄]-Fumonisin B₃.

⑤Fusarium Toxins Mix*——U-[¹³C₁₅]-Deoxynivalenol,U-[¹³C₂₂]-HT-2 toxin,U-[¹³C₂₄]-T-2 toxin,U-[¹³C₁₈]-Zearalenol.



Pribolab®

Certified Reference Materials

Pribolab® Mycotoxin Certified Reference Materials are developed for the control of mycotoxin methodology. Pribolab processes these samples under strict quality control procedures to ensure a homogeneous material. HPLC/GC/MS quality Certificate of Analysis are provided with each bag. These naturally contaminated samples are ideal for validating methods, training new technicians and as positive control material during assays. Certified Reference Materials are available in various matrices and levels of mycotoxin contamination. Matrices including corn, wheat, peanut ,milk and their by-products, fodder samples are available.



Mycotoxin	Concentration Level (mg/kg)	Matrices
Aflatoxin B ₁	<5	Peanut Oil/Peanut/Feed/Corn/Wheat
	5~10	
	> 10	
Aflatoxin M ₁	Low/High Level	Milk Powder/Skim Milk/Whole Milk Powder
Zearalenone	< 100	Corn/Feed/Corn Oil/wheat
	100~200	
	200~500	
	> 500	
Deoxynivalenol	< 1000	Corn/Wheat/Feed
	1000~2000	
	2000~3000	
	> 3000	
Ochratoxin A	< 10	Wheat/Corn/Rice
	10~20	
	20~50	
Fumonisin B ₁	> 50	Corn/Wheat
	< 1000	
	1000~2000	
	2000~3000	
T-2 Toxin	> 3000	Corn/Wheat
	< 500	
	500~1000	
	1000~2000	
Multi-Toxin Mix	> 2000	Corn/Wheat
	Low/Middle/High Level	

Cyanotoxins & Marine Toxins Standards



Cyanotoxins & marine toxins are important biotoxin branches. There are over 1000 types of known cyanotoxins & marine toxins until now, which are mainly produced by microalgae, lower plants (e.g.,phytoplankton) and microorganisms, and enriched in fish, shellfish and other marine animals through the food chain. To assure safety of sea food, several new regulations have entered into force recommending LC–MS or LC–MS/MS as a detection method. For the accurate calibration of these methods, Pribolab provide both Solid Standards and Liquid Standards,and the Isotope Labeled Internal Standards are under development.



Pribolab®

Cyanotoixns & Marine Toxin Solid Standards

Item No.	Product Name	CAS No.
MSS3001	Microcystin–LR	101043–37–2
MSS3002	Microcystin–RR	111755–37–4
MSS3003	Microcystin–YR	101064–48–6
MSS3004	Microcystin–LW	157622–02–1
MSS3005	Microcystin–LF	154037–70–4
MSS3006	Microcystin–LA	96180–79–9
MSS3007	Microcystin–LY	123304–10–9
MSS3008	Microcystin–WR	138234–58–9
MSS3009	Tetrodotoxin	4368–28–9

Pribolab®

Cyanotoxin&Marine Toxin Liquid Standards

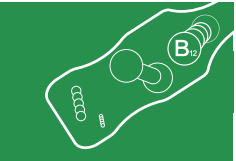
Item No.	Product Name Concentration	Concentration(μ g/mL)	Solvent
STD#010M	Gonyautoxin–5(GTX5)	10	Hydrochloric Acid
STD#001M	Gonyautoxin–1&4 (GTX1&4)	10	Hydrochloric Acid
STD#002M	Gonyautoxin–2&3 (GTX2&3)	10	Hydrochloric Acid
STD#100M	Microcystin–LR	10	Methanol
STD#110M	Microcystin–RR	10	Methanol
STD#120M	Microcystin–YR	10	Methanol
STD#130M	Microcystin–LW	10	Methanol
STD#140M	Microcystin–LF	10	Methanol
STD#150M	Microcystin–LA	10	Methanol
STD#160M	Microcystin–LY	10	Methanol
STD#170M	Microcystin–WR	10	Methanol
STD#180M	Demethylated microcystin–RR	10	Methanol
STD#190M	Microcystin–HiLR	10	Methanol
STD#200M	Nodularin	10	Methanol/Water
STD#300M	Tetrodotoxin	10	Methanol

Pribolab®

Vitamin Solid Standards

Cat.No.	Product Name	Volume	CAS No.
MSS4001	Pribolab® Folic Acid(Vitamin B9) Solid Standard	250mg	59–30–3
MSS4002	Pribolab® Cobalamin (Vitamin B12)Solid Standard	50mg	68–19–9
MSS4003	Pribolab® Biotin (Vitamin B7) Solid standard	250mg	58–85–5

Vitamin Standards



Food products are now being enriched and fortified with vitamins in many forms. But does the vitamin content present in the food at the end of the shelf life match the label on the package? Pribolab provide vitamin solid standards that helps to determine the natural and added vitamin content of food products rapidly and reliably.