

For LabSolutions LCMS

LC/MS/MS Method Package for Mycotoxins



LCMS-8060

Mycotoxins are highly toxic chemical byproducts from fungi commonly found in crops, and residual content in foods are regulated the world over. This method package provides simultaneous multi-component analysis conditions for mycotoxins subject to the regulations in Japan, the USA, the EU, and China.

Analytical Methods for 27 Mycotoxins

This package contains seven different analytical method conditions and fully optimized MRM transitions for a total of 27 different mycotoxins. Rapid analytical methods are included for a 25 mycotoxin screen, 16 mycotoxins using high-sensitivity conditions, 10 mycotoxins using APCI, and specialized methods for trichothecenes, fumonisins, aflatoxins, and patulin.

Analytical Method for 25 Mycotoxins in 15 Minutes

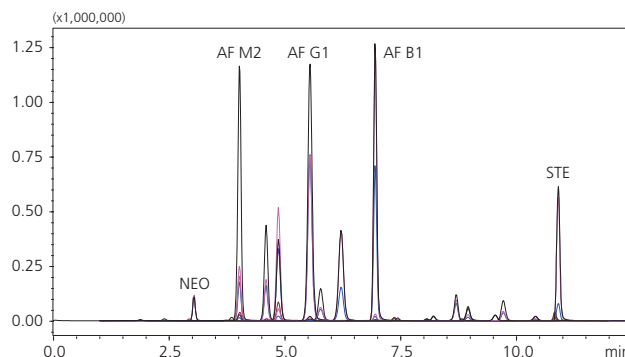
HPLC Conditions

Column	: Mastro™ PFP2 (Shimadzu GLC) (2.1 mmI.D. × 150 mmL, 3 μm)
Mobile Phase A	: 10 mmol/L aqueous ammonium acetate
Mobile Phase B	: Methanol (2 % acetic acid)
Flowrate	: 0.4 mL/min
Column Temp.	: 40 °C

MS Conditions

Ionization Mode	: ESI (+/-)
Nebulizer Gas Flowrate	: 2 L/min
Drying Gas Flowrate	: 10 L/min
Heating Gas Flowrate	: 10 L/min
Interface Temp.	: 300 °C
DL Temp.	: 250 °C
Heat Block Temp.	: 500 °C

High-Speed Simultaneous Analysis of 25 Mycotoxins



LC/MS/MS Method Package for Mycotoxins

Compound List for Each Method

	AF B1	AF B2	AF G1	AF G2	AF M1	AF M2	DON	3A DON	15A DON	NIV	FUX	FB1	FB2	FB3	OTA	PAT	T-2	HT-2	ZEN	α-ZEL	β-ZEL	α-ZAL	β-ZAL	DAS	NEO	D3G	STE	
A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Method name	Detail	Analysis time
A	A_MRM_25_PFP_15m.lcm	Simultaneous analysis of 25 mycotoxins	15 min
B	B_MRM_16_ODS_30m.lcm	Simultaneous analysis with high sensitivity	30 min
C	C_MRM_1_PAT_ODS_10m.lcm	Patulin analysis	10 min
D	D_MRM_6_AF_ODS_30m.lcm	Aflatoxins analysis	30 min
E	E_MRM_4_DONNIV_ODS_12m.lcm	Trichothecenes analysis	12 min
F	F_MRM_3_FB_ODS_15m.lcm	Fumonisin analysis	15 min
G	G_MRM_10_ODS_33m.lcm	10 mycotoxins using APCI	33 min

AF B1: aflatoxin B1 AF B2: aflatoxin B2 AF G1: aflatoxin G1 AF G2: aflatoxin G2 AF M1: aflatoxin M1
 AF M2: aflatoxin M2 DON: deoxynivalenol 3ADON: 3-acetyl-deoxynivalenol 15ADON: 15-acetyl-deoxynivalenol
 NIV: nivalenol FUX: 4-acetyl-nivalenol FB1: fumonisin B1 FB2: fumonisin B2 FB3: fumonisin B3 OTA: ochratoxin A
 PAT: patulin T-2: T-2 toxin HT-2: HT-2 toxin ZEN: zearalenone α-ZEL: α-zearalenol β-ZEL: β-zearalenol
 α-ZAL: α-zearalanol β-ZAL: β-zearalanol DAS: diacetoxyscirpenol NEO: neosolaniol D3G: deoxynivalenol-3-glucoside
 STE: sterigmatocystin

Mastro is a trademark of SHIMADZU GLC Ltd.



Shimadzu Corporation
www.shimadzu.com/an/

For Research Use Only. Not for use in diagnostic procedures.

This publication may contain references to products that are not available in your country. Please contact us to check the availability of these products in your country.

Company names, products/service names and logos used in this publication are trademarks and trade names of Shimadzu Corporation, its subsidiaries or its affiliates, whether or not they are used with trademark symbol "TM" or "®".

Third-party trademarks and trade names may be used in this publication to refer to either the entities or their products/services, whether or not they are used with trademark symbol "TM" or "®".

Shimadzu disclaims any proprietary interest in trademarks and trade names other than its own.

The contents of this publication are provided to you "as is" without warranty of any kind, and are subject to change without notice. Shimadzu does not assume any responsibility or liability for any damage, whether direct or indirect, relating to the use of this publication.