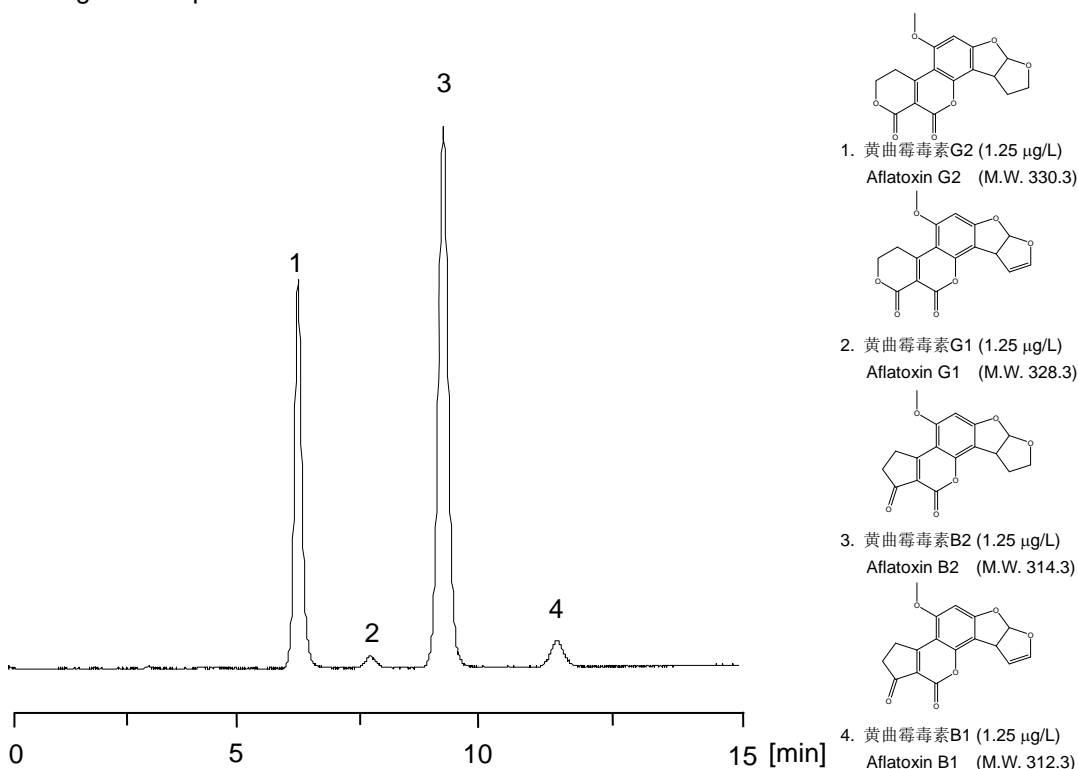


黄曲霉毒素作为一种强毒性、强致癌性的物质广为人知，从花生、杏仁或香辛料等中检测到黄曲霉毒素的事情曾被报导。从流通食品中的实际含有量考虑，黄曲霉毒素指标以总黄曲霉毒素（B1、B2、G1、G2 的总和）作为判定标准，使用 LC-MS 以及 LC-FL 的方法对其进行分析。

使用资生堂 CAPCELL PAK C₁₈ MGIII-H S3 (2.0 mm i.d. × 100 mm) 色谱柱，荧光检测器检测得到两谱图。图 1 为国家标准中 LC-MS 方法的流动相条件下，使用荧光检测器检测得到的谱图，图 2 使用国家标准中 LC-FL 的流动相条件，同样使用荧光检测器检测的结果。两图中，黄曲霉毒素都得到了良好峰型与分离。

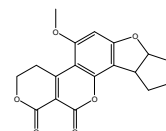
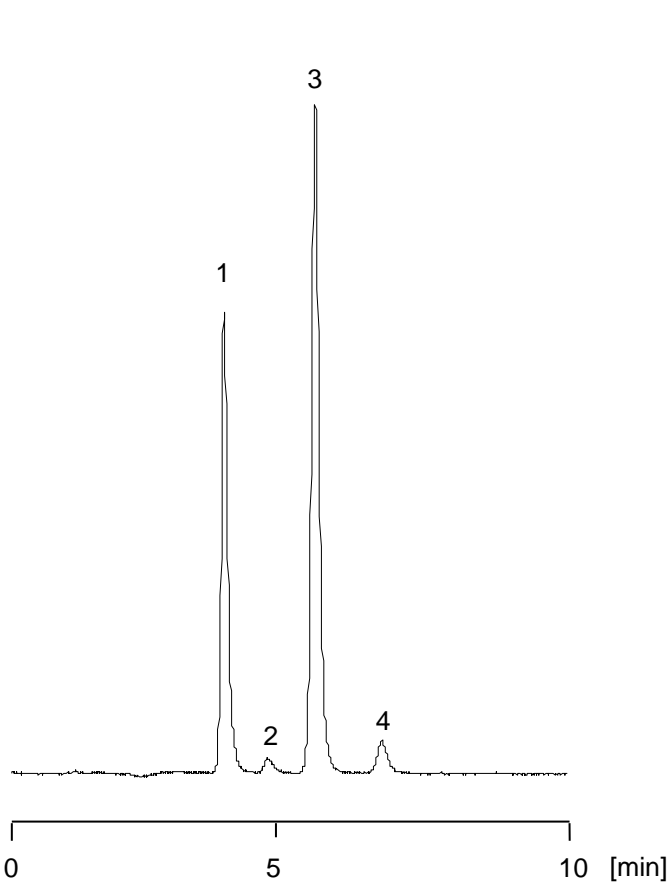
Aflatoxins are naturally occurring mycotoxins contained in food, such as peanuts, almonds and seasonings. They are known to show strong toxicity and carcinogenicity. Considering the current cases of food contamination, it has been thought the most appropriate to define aflatoxin content as the total amount of B1, B2, G1, and G2 forms determined with LC-MS or LC-FL.

Two chromatograms (figures 1 and 2) were obtained CAPCELL PAK C₁₈ MGIII-H S3 (2.0 mm i.d. × 100 mm) and a fluorescence detector. The mobile phases used in figures 1 and 2 are those designated by the governmental standard methods, assuming the use of mass spectrometer and fluorescence detector, respectively. Both chromatograms show good peak shapes and resolution among the compounds.

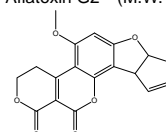


【HPLC Conditions】

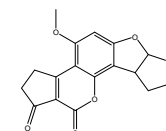
Column	: CAPCELL PAK C ₁₈ MGIII-H S3 ; 2.0 mm i.d. x 100 mm
Mobile phase	: CH ₃ CN / CH ₃ OH / 10 mmol/L CH ₃ COONH ₄ = 2 / 6 / 15
Flow rate	: 200 μL / min
Temperature	: 50 °C
Detection	: FL Ex.365 nm , Em.450 nm
Inj. vol.	: 1 μL
Sample dissolved in	: Mobile phase
	※ 1 μg/mL = 1 ppm



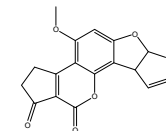
1. 黄曲霉毒素G2 (1.25 µg/L)
Aflatoxin G2 (M.W. 330.3)



2. 黄曲霉毒素G1 (1.25 µg/L)
Aflatoxin G1 (M.W. 328.3)



3. 黄曲霉毒素B2 (1.25 µg/L)
Aflatoxin B2 (M.W. 314.3)



4. 黄曲霉毒素B1 (1.25 µg/L)
Aflatoxin B1 (M.W. 312.3)

【HPLC Conditions】

Column : CAPCELL PAK C₁₈ MGIII-H S3 ; 2.0 mm i.d. x 100 mm
 Mobile phase : CH₃CN / CH₃OH / H₂O = 10 / 30 / 60
 Flow rate : 200 µL / min
 Temperature : 50 °C
 Detection : FL Ex.365 nm , Em.450 nm
 Inj. vol. : 1 µL
 Sample dissolved in : Mobile phase
 ※ 1 µg/mL = 1 ppm