

Supplementary Information

Formation of B- and M-group aflatoxins and precursors by *Aspergillus flavus* on maize and its implication for food safety

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Table S1 Measured levels of aflatoxins and their precursors on autoclaved maize kernels produced by *A. flavus* after 1, 2, 3, 4, 5, 7 and 10 days of incubation. Data are given as arithmetic mean \pm standard deviation ($n = 6$) in mg/kg maize. Analytes are sorted as follows: group 1 aflatoxin pathway: ST, sterigmatocystin; OMST, O-methylsterigmatocystin; HOMST, 11-hydroxy-O-methylsterigmatocystin; ASP, aspertoxin; HASP, 11-hydroxyaspertoxin; AFB₁, aflatoxin B₁; AFM₁, aflatoxin M₁; group 2 aflatoxin pathway: DHST, dihydrosterigmatocystin; DHOMST, dihydro-O-methylsterigmatocystin; AFB₂, aflatoxin B₂; AFM₂, aflatoxin M₂; metabolization product: AFL, aflatoxicol.

Incubation time [day]	1	2	3	4	5	7	10
ST	< LOQ ^a	0.03 \pm 0.05	0.51 \pm 0.29	2.23 \pm 0.26	1.12 \pm 0.23	0.50 \pm 0.07	0.35 \pm 0.03
OMST	< LOQ	0.89 \pm 0.62	2.82 \pm 1.24	22.25 \pm 3.46	35.29 \pm 5.69	33.94 \pm 7.40	31.95 \pm 5.25
HOMST ^b	< LOQ	< LOQ	< LOQ	1.27 \pm 0.20	2.57 \pm 0.42	3.14 \pm 0.18	3.94 \pm 0.59
ASP ^b	< LOQ	0.11 \pm 0.12	0.71 \pm 0.36	4.09 \pm 0.37	8.06 \pm 1.31	10.26 \pm 2.02	11.71 \pm 1.39
HASP ^b	< LOQ	< LOQ	0.04 \pm 0.06	0.68 \pm 0.11	1.53 \pm 0.26	2.04 \pm 0.12	3.22 \pm 0.40
AFB ₁	< LOQ	1.90 \pm 1.09	7.81 \pm 3.48	64.36 \pm 12.42	147.28 \pm 19.16	208.60 \pm 31.69	268.97 \pm 33.70
AFM ₁	< LOQ	< LOQ	0.07 \pm 0.06	0.86 \pm 0.18	2.08 \pm 0.28	2.95 \pm 0.47	4.11 \pm 0.37
DHST ^b	< LOQ	< LOQ	0.19 \pm 0.47	0.06 \pm 0.05	< LOQ	< LOQ	< LOQ
DHOMST ^b	< LOQ	< LOQ	< LOQ	0.24 \pm 0.04	0.35 \pm 0.05	0.34 \pm 0.07	0.33 \pm 0.05
AFB ₂	< LOQ	< LOQ	0.13 \pm 0.09	1.91 \pm 0.32	4.42 \pm 0.65	6.64 \pm 1.80	10.23 \pm 1.34
AFM ₂	< LOQ	< LOQ	< LOQ	< LOQ	0.13 \pm 0.01	0.37 \pm 0.05	0.72 \pm 0.07
AFL	< LOQ	< LOQ	< LOQ	0.07 \pm 0.03	0.27 \pm 0.04	0.61 \pm 0.13	1.16 \pm 0.19

^a < LOQ (limit of quantitation): levels in all replicates were below LOQ (10 nmol/L in the injected sample; in mg/kg maize: ST: 0.06; OMST: 0.07; HOMST: 0.07; ASP: 0.07; HASP: 0.07; AFB₁: 0.06, AFM₁: 0.07; DHST: 0.07; DHOMST: 0.07; AFB₂: 0.06; AFM₂: 0.07; AFL: 0.06)

^b Analyte was semi-quantified using the structurally most similar available compound (ST or OMST)