

Article

Alternaria Mycotoxins Analysis and Exposure Investigation in Ruminant Feeds

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LC-MS/MS parameters

Optimized mass spectrum parameters were settled as follows: Ion Spray Voltage, 3.0 KV, Cone Gas Flow, 50 L/h, Desolvation Gas Flow, 700 L/h, Source Temperature, 150 °C, and Desolvation Temperature, 500 °C. Argon was used as collision gas and the pressure was at 0.8 mbar.

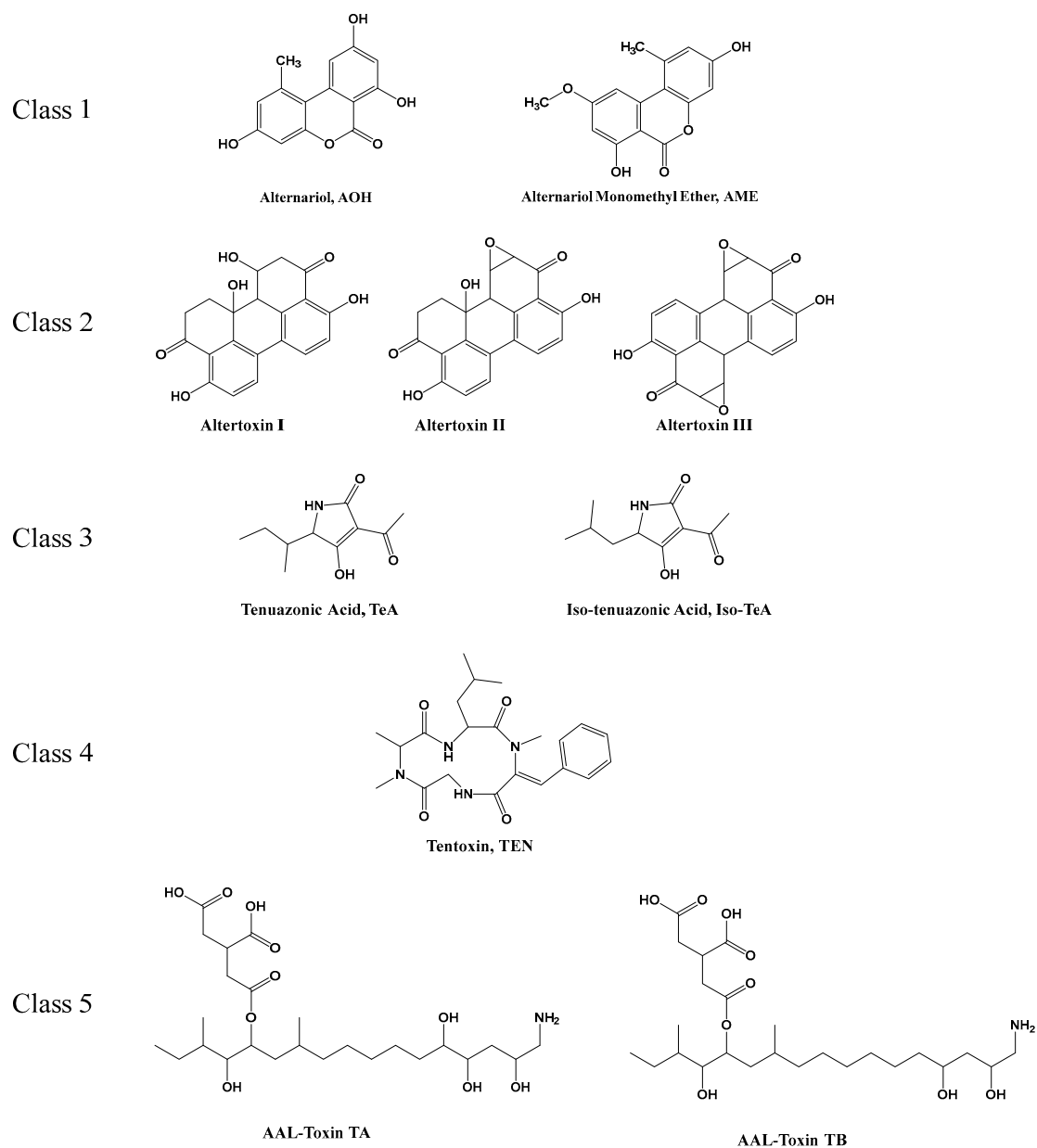


Figure S1. Chemical structures of the most common *Alternaria* toxins (Prepared by Chem Draw 18.0).

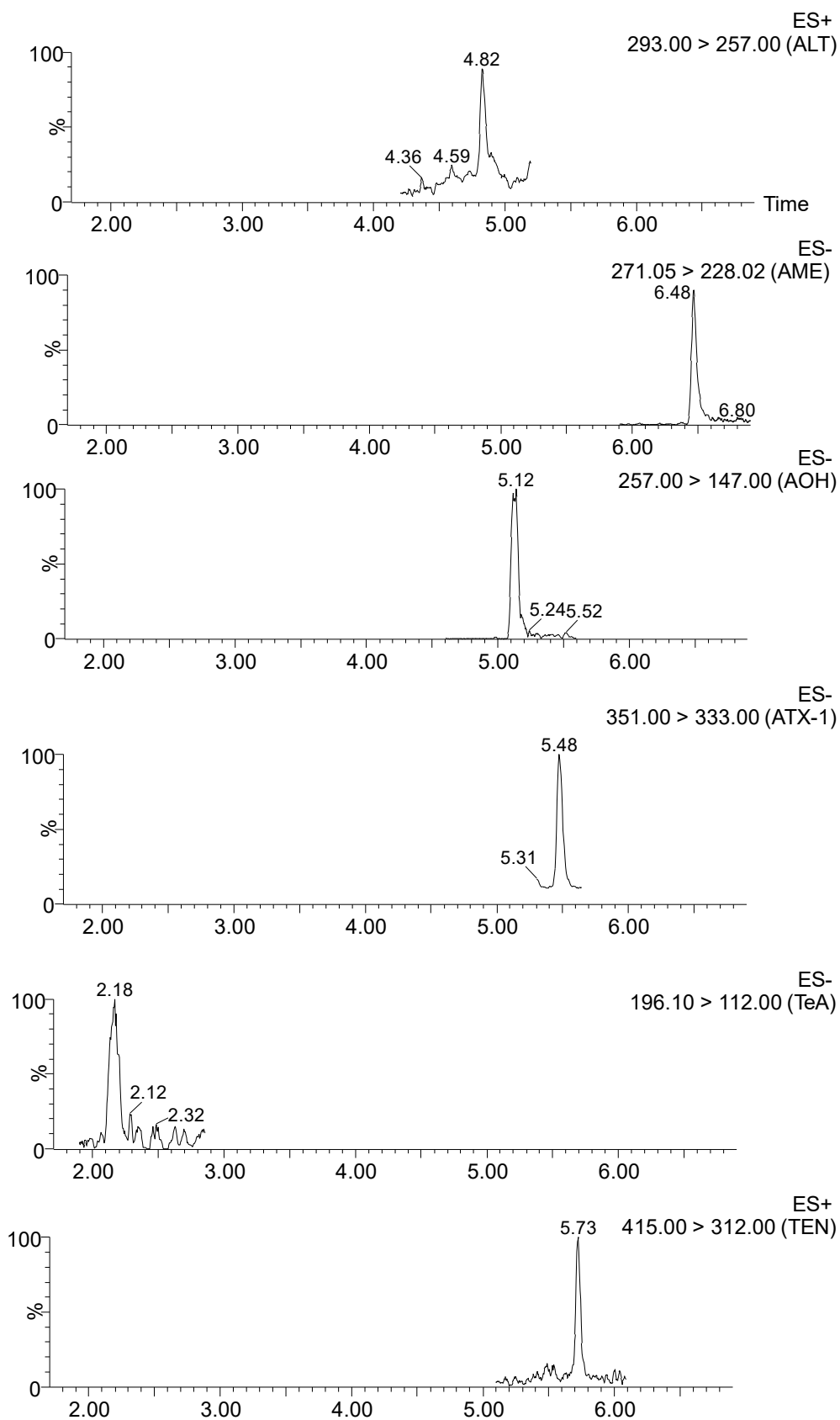


Figure S2. Chromatograms of each analyte at the lowest calibration curve level (2 ng/mL) (Prepared by Masslynx 4.2).

Table S1. Occurrence and levels of *Alternaria* toxins in ruminant feeds ($n = 40$).

Type of Feed	Sample No.	AME (µg/kg)	AOH (µg/kg)	ATX-I (µg/kg)	TeA (µg/kg)	TEN (µg/kg)
Cattle Feeds	1	39	22	4	56	4
	2	238	196	9	295	39
	3	ND	ND	ND	ND	ND
	4	196	178	ND	276	10
	5	208	189	ND	206	22
	6	164	149	ND	150	6
	7	ND	ND	ND	ND	ND
	8	155	141	ND	195	18
	9	85	133	ND	165	25
	10	ND	ND	ND	ND	ND
	11	ND	ND	ND	ND	ND
	12	ND	ND	ND	ND	ND
	13	92	84	ND	175	8
	14	219	199	ND	177	8
	15	209	190	ND	182	10
	16	203	185	ND	233	ND
	17	109	99	ND	265	ND
	18	ND	162	ND	ND	ND
	19	ND	151	ND	ND	ND
	20	ND	156	ND	ND	ND
Sheep Feed	21	58	66	6	87	8
	22	62	87	15	551	142
	23	82	97	8	161	65
	24	98	99	ND	182	48
	25	350	99	ND	199	106
	26	ND	ND	ND	ND	ND
	27	ND	ND	ND	464	ND
	28	384	255	ND	489	122
	29	ND	ND	ND	ND	ND
	30	396	258	ND	502	86
	31	400	315	ND	496	ND
	32	415	331	ND	436	ND
	33	443	353	ND	ND	ND
	34	466	360	ND	ND	ND
	35	470	386	ND	ND	ND
	36	479	ND	ND	ND	ND
	37	481	ND	ND	ND	ND
	38	ND	ND	ND	ND	ND
	39	ND	ND	ND	ND	ND
	40	367	223	ND	ND	78

Each sample was run in three replicates.

Sample No. (1-20) stands for twenty different batches of cattle feed, while sample No. (21-40) stands for twenty different batches of sheep feed.

ND: not detected. Lower than LOD.

Table S2. Most optimized mass spectrum parameters for *Alternaria* mycotoxins.

Parameter	Value
Ion Spray Voltage	3.0 KV
Cone Gas Flow	50 L/h
Desolvation Gas Flow	700 L/h
Source Temperature	150 °C
Desolvation Temperature	500 °C
Collision Gas	Argon
Pressure	0.8 mbar