

Electronic Supplementary Information

Results

Analyses of mouldy spot surface swab samples

Table S1 summarizes the results of the analyses of the mouldy spot surface swab (MSS) samples for the three countries. In Spanish index school buildings, trichodermol, verrucarol, stachybotrylactam and roquefortine C were found exclusively in MSS, but not in SDS samples (Table 2). Trichodermol and stachybotrylactam were detected in one and the same MSS sample. Emodin was found in both, MSS and SDS samples of the same location; meleagrín and griseofulvin were also found in both sample types, but not in samples of the same location. Generally, mycotoxin concentrations in mouldy spot surface swabs were found to be higher compared to settled dust samples, typically at least by one order of magnitude.

A big variety of 21 different metabolites was detected from 35 MSS samples from Dutch school buildings. Of these, only beauvericin, emodin, enniatin B, and meleagrín were detected in both, MSS extracts SDS samples from the same locations as well as in additional samples from other locations of the same buildings. Enniatins A, A1 and B1, and physcion were prevalent in MSS and SDS samples collected from the same school buildings; however, those toxins were not detected in both sample types of the same locations. Mostly, the concentrations measured in surface swabs were much higher compared to settled dust samples (see Tables 3 and S1).

In Finland, chaetoglobosin A, meleagrín, 3-nitropropionic acid, physcion, sterigmatocystin and tentoxin were detected in MSS samples (Table S1), but not in SDS samples from the same locations or buildings. Emodin and enniatin B and B1 were found in SDS and MSS samples from same sampling locations as well as in samples from different locations but the same school buildings.

Table S2 supplements table 5 of the main manuscript and shows the differences in rank sums for number of metabolites per sample for sample *s* derived from locations/rooms with and without observations of moisture damage and dampness. In line with the approach described for Table 5, the comparisons are shown for different cut-off values for the enumeration of metabolites in a given sample.

Supplementary Tables

Table S1. Fungal and bacterial secondary metabolites detected in surface swab samples (MSS) collected from visibly water damaged areas and mouldy spots in Spanish, Dutch and Finnish school buildings.

	Spain N _{samples} = 12 Conc. [pg cm ⁻²]				Netherlands N _{samples} = 35 Conc. [pg cm ⁻²]				Finland N _{samples} = 19 Conc. [pg cm ⁻²]			
	Positive samples (%) [†]	Mean	Max	Building category detected	Positive samples (%) [†]	Mean	Max	Building category detected	Positive samples (%) [†]	Mean	Max	Building category detected
Altertoxin					1 (2.9)	0.59	20.5	index				
Beauvericin					3 (8.6)	14.8	499	index, not categorized				
Chanoclavin					2 (5.7)	0.29	7.20	index, not categorized				
Chaetoglobosin A									1 (5.3)	11549	219429	index
Emodin	1 (8.3)	40.0	480	index	5 (14.3)	2.14	30.5	index, not categorized	4 (21.1)	1.68	27.9	index, not categorized
Enniatin A					2 (5.7)	6.19	214	index, not categorized				
Enniatin A1					1 (2.9)	18.5	648	not categorized				
Enniatin B					8 (22.9)	188	5100	index, not categorized	9 (47.4)	36.2	498	index
Enniatin B1					2 (5.7)	41.7	1458	index, not categorized	6 (31.6)	72.4	995	index
Enniatin B2					1 (2.9)	1.63	57.0	not categorized				
Equisetin					2 (5.7)	0.16	5.36	index				
Fumigaclavin					2 (5.7)	3.08	81.0	index, not categorized				

Griseofulvin	1 (8.3)	4.17	50.0	index								
Meleagrín	2 (16.7)	68.7	816	index	9 (25.7)	2548 9	7440 00	index, reference, not categorized not categorized	1 (5.3)	7.49	142	index
Monactin					1 (2.9)	0.15	5.40					
3-Nitropropionic acid									1 (5.3)	1.39	26.4	index
Nonactin					1 (2.9)	0.07	2.55	not categorized				
Physcion					5 (14.3)	234	7290	index, reference, not categorized	1 (5.3)	13.3	253	index
Roquefortin C	1 (8.3)	0.24	2.93	index	3 (8.6)	340	7884	index, not categorized				
Stachybotrylactam	1 (8.3)	513	6150	index	4 (11.4)	6023 3	1935 000	index, reference				
Sterigmatocystin					4 (11.4)	306	1034 7	index, reference, not categorized	2 (10.5)	6.78	122	index
Tentoxin									1 (5.3)	0.95	18.0	index
Valinomycin					3 (8.6)	1.79	60.0	not categorized				
Trichodermin	1 (8.3)	0.53	6.30	index	4 (11.4)	33.2	960	index, reference, not categorized				
Verrucarol	1 (8.3)	0.04	0.53	index	6 (17.1)	6.50	82.5	index, reference, not categorized				

† Relative abundances of positive samples (MSS) calculated according to the number of all surface swab samples collected in Spanish, Dutch, and Finnish school buildings, respectively.

Table S2. Differences in rank sums (Wilcoxon-Mann Whitney test) for number of metabolites per sample based on sampling location status (observations of moisture damage / dampness versus no such observations) at increasing cut-off values for the enumeration of metabolites in a sample (all metabolites; metabolites in concentration >0.1 , >1.0 , and >10 pg cm^{-2}).

		Damage observations vs. no damage observations in sampling location							
		all metabolites		metabolites >0.1 pg cm^{-2}		metabolites >1.0 pg cm^{-2}		metabolites >10 pg cm^{-2}	
		Rank sums	p- value*	Rank sums	p- value*	Rank sums	p- value*	Rank sums	p- value*
all countries combined	reference index	337 340	0.869	334 345	0.477	330 355	0.068	328 361	0.004
Spain	reference index	103 109	0.413	102 110	0.283	100 112	0.086	100 112	0.058
The Netherlands	reference index	118 131	0.307	117 134	0.203	118 130	0.286	117 132	0.166
Finland	reference index	112 117	0.619	113 114	0.919	113 115	0.773	113 112	0.823