SUPPLEMENTARY INFORMATION

Comparison of Indoor Air Sampling and Dust Collection Methods for Fungal Exposure Assessment Using Quantitative PCR

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Table S1. Characteristics of the study homes

Home	Housing type	Number of occupants	Construction year	Floor area (ft^2)	Size of Room (ft^2)	Child's Room Flooring	Ventilation		Number of Pets		Moisture damage observations		
							Central Air days/week in summer	Heat Primary Furnace	Dogs	Cats	Visible damage (Frequency)	Visible Mold Location	Moldy Odor Location
1	Single Family	6	1865	1952	136	Carpet	1 to 3	Gas	3	3	Kitchen[A]		
2	Single Family	4	1976	2280	163	Carpet	7	Electric	1	3			
3	Single Family	5	2012	1011	141	Carpet	7	Gas	1	2			
4	Condominium	3	2011	1745	150	Carpet	7	Electric	1	1			
5	Apartment	4	1925	1728	170	Carpet	NA	Electric	2	2			Basement
6	Single Family	4	1923	1846	136	Carpet	4 to 6	Gas[S]	2	2	Basement[O]		
7	Condominium	4	1979	1772	111	Carpet	7	Electric	1	2			Laundry
8	Single Family	5	1932	1619	201	Carpet	4 to 6	Electric[S]	3	2		Other Bedroom	
9	Single Family	5	2004	704	143	Carpet	7	Electric	1	2			
10	Single Family	4	2010	2708	341	Carpet	7	Gas	2	2			
11	Condominium	5	1951	1458	59	Carpet	7	Gas	2	2	Kitchen[A]	Bathroom	
12	Single Family	4	1973	1021	103	Carpet	7	Gas	3	2			
13	Apartment	4	1921	1450	194	Hardwood	NA	Gas	2	2			
14	Single Family	3	1956	1120	110	Carpet	4 to 6	Gas[S]	2	1	Child's Bedroom & Basement[F]	Child's Bedroom & Basement	Basement

S - plus Space Heater; A – Always; F – Frequently; O – Often; NA – Not applicable

Table S2. Environmental Relative Moldiness Index (ERMI) Species

Group 1 Species	Group 2 Species
Aspergillus flavus	*Acremonium strictum*
Aspergillus fumigatus	*Alternaria alternata*
Aspergillus niger	*Aspergillus ustus*
Aspergillus ochraceus	*Cladosporium cladosporioides 1*
Aspergillus penicillioides	*Cladosporium cladosporioides 2*
Aspergillus restrictus	*Cladosporium herbarum*
Aspergillus sclerotiorum	*Epicoccum nigrum*
Aspergillus sydowii	Mucor group
Aspergillus unguis	*Penicillium chrysogenum*
Aspergillus versicolor	*Rhizopus stolonifer*
Aureobasidium pullulans	
Chaetomium globosum	
Cladosporium sphaerospermum	
Eurotium amstelodami	
Paecilomyces variotii	
Penicillium brevicompactum	
Penicillium corylophilum	
Penicillium crustosum	
Penicillium purpurogenum	
Penicillium spinulosum	
Penicillium variabile	
Scopulariopsis brevicaulis	
Scopulariopsis chartarum	
Stachybotrys chartarum	
Trichoderma viride	
Wallemia sebi	

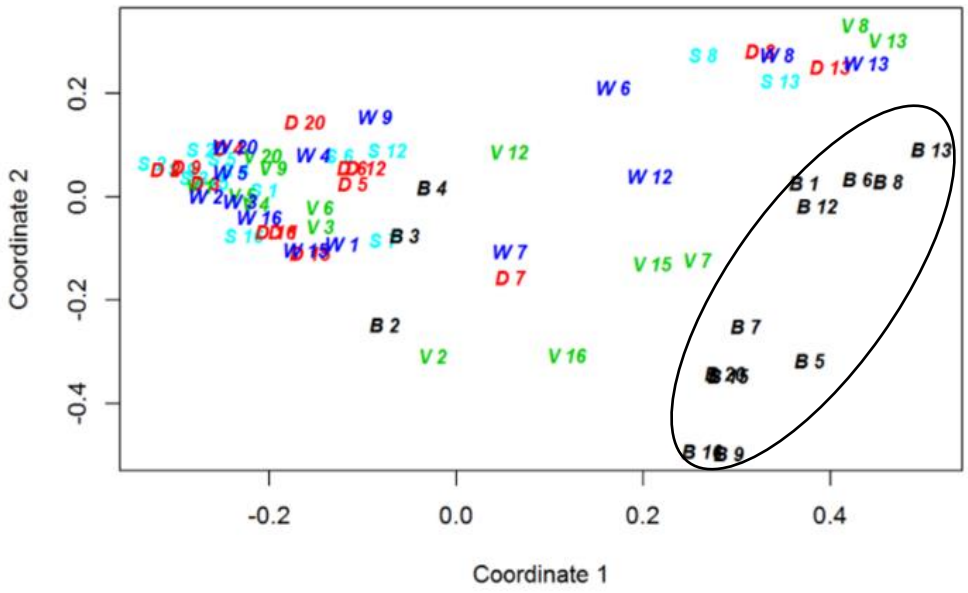

Figure S1. Multidimensional Scaling for all five tested methods. (Each data point represents one sample and is labelled S-Swiffer, D-Dutch, V-Vacuum, W-Wipe, or B-Button™)

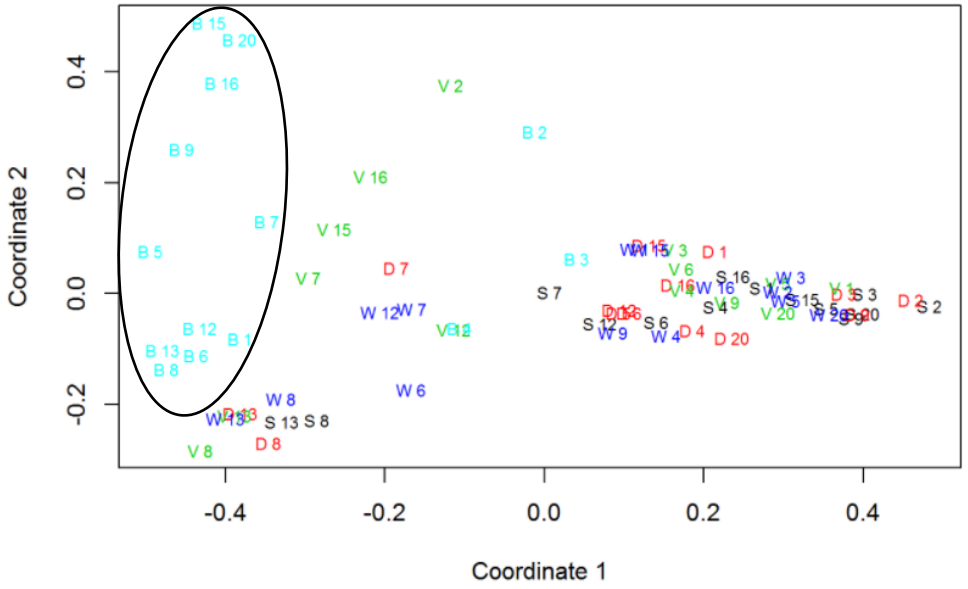

Figure S2. Principal Component Analysis (Each data point represents one sample and is labelled S-Swiffer, D-Dutch, V-Vacuum, W-Wipe, or B-Button™)

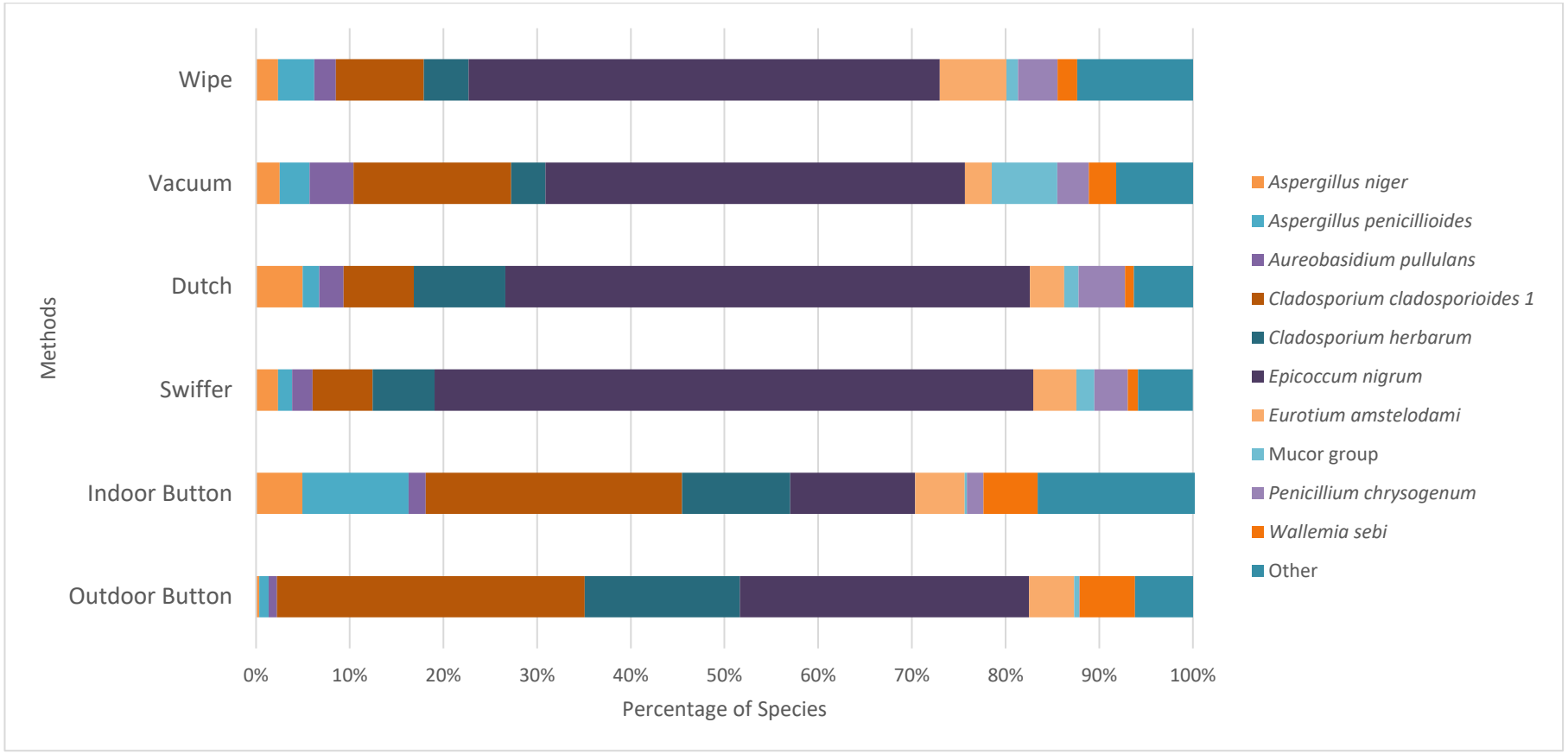

Figure S3. Average percentage of the ten most abundant species obtained with each method

Table S3. Median and range of concentrations[a] for the ten most abundant species obtained with each sample type

Species	Method	Median (min - max)
Aspergillus niger	Swiffer	23 (1 - 2100)
	Dutch	15 (1 - 20000)
	Vacuum	3 (1 - 14000)
	Wipe	24 (1 - 3300)
	Button™	0.04 (0 - 22)
Aspergillus penicillioides	Swiffer	28 (3 - 350)
	Dutch	40 (3 - 510)
	Vacuum	30 (1 - 670)
	Wipe	46 (1 - 12000)
	Button™	1 (0 - 72)
Aureobasidium pullulans	Swiffer	93 (14 - 860)
	Dutch	125 (26 - 960)
	Vacuum	64 (18 - 10000)
	Wipe	91 (4 - 240)
	Button™	1 (0 - 19)
Cladosporium cladosporioides Type 1	Swiffer	315 (82 - 3800)
	Dutch	360 (59 - 3300)
	Vacuum	355 (61 - 12000)
	Wipe	360 (50 - 1800)
	Button™	5 (0.3 - 319)
Cladosporium herbarum	Swiffer	280 (19 - 1200)
	Dutch	285 (26 - 5800)
	Vacuum	63 (11 - 240)
	Wipe	106 (3 - 1000)
	Button™	2 (0 - 225)
Epicoccum nigrum	Swiffer	2500 (640 - 60000)
	Dutch	2550 (500 - 42000)
	Vacuum	1400 (45 - 62000)
	Wipe	1050 (140 - 36000)
	Button™	4 (0 - 246)
Eurotium amstelodami	Swiffer	52 (6 - 2900)
	Dutch	80 (7-5500)
	Vacuum	50 (1 - 4300)
	Wipe	45 (1 - 2600)
	Button™	1 (0 - 81)

[a]Swiffer, Dutch, vacuum and wipe dust results are in cells/mg and Button™ air results are in cells/m^3

Table S3. Continued[a]

Species	Method	Median (min - max)
Mucor group	Swiffer	16 (1 - 1400)
	Dutch	15 (0 - 690)
	Vacuum	10 (0 - 15000)
	Wipe	16 (0 - 420)
	Button™	1 (0 - 3)
Penicillium chrysogenum	Swiffer	35 (1 - 4800)
	Dutch	62 (8-4400)
	Vacuum	23 (1 - 8900)
	Wipe	23 (4 - 1700)
	Button™	0.2 (0 - 22)
Wallemia sebi	Swiffer	34 (7-320)
	Dutch	57 (3 - 540)
	Vacuum	64 (0 - 3000)
	Wipe	78 (0 - 1800)
	Button™	1 (0 - 87)
Other 26 species combined	Swiffer	4 (0 - 3300)
	Dutch	7 (0-2700)
	Vacuum	5 (0-18000)
	Wipe	5 (0 - 29)
	Button™	0.4 (0 - 37)

[a]Swiffer, Dutch, vacuum and wipe dust results are in cells/mg and Button™ air results are in cells/m^3

Table S4. Temperature and humidity readings for passive collection dust samples

Home	Start for Passive Collection	Stop for Passive Collection	Temperature (ºC) Average (Range)	Relative Humidity (%) Average (Range)
1	11/4/2015 16:40	12/3/2015 16:21	20.2 (16 - 24)	42.2 (23 - 64)
2	1/14/2016 16:32	2/11/2016 15:06	18.8 (17 - 21)	38.9 (29 - 55)
3	11/11/2015 15:58	12/9/2015 15:35	20.9 (17 - 27)	49.4 (27 - 75)
4	1/27/2016 18:14	2/26/2016 17:18	21.4 (19 - 26)	41.3 (26 - 50)
5	4/22/2016 16:15	5/20/2016 12:11	23.1 (19 -28)	51.2 (29 - 98)
6	3/16/2016 16:45	4/17/2016 16:20	24.9 (22 - 28)	28.3 (15 - 47)
7	2/11/2016 16:16	3/10/2016 17:17	18.8 (16 - 22)	39.8 (24 - 62)
8	5/6/2016 10:12	6/11/2016 10:02	23.4 (19 - 31)	51.2 (35 - 64)
9	6/22/2016 17:43	7/20/2016 18:00	29.2 (24 - 36)	41.7 (31 - 56)
10	6/9/2016 15:07	7/9/2016 11:10	22.6 (18 - 26)	54.4 (42 - 80)
11	7/22/2016 14:37	8/18/2016 16:19	24.0 (22 - 26)	55.3 (48 - 64)
12	12/12/2015 12:20	1/9/2016 12:20	27.5 (24 - 32)	28.4 (15 - 55)
13	10/9/2015 16:10	11/6/2015 16:40	21.9 (18 - 26)	64.4 (45 - 78)
14	7/15/2016 18:32	8/10/2016 18:41	29.6 (27 - 34)	45.3 (35 - 62)