

Indoor Air Quality Report of Findings



Prepared for:

Derry Township School District

30C E. Granada Ave.

Hershey, PA 17033

Attn: Henry Snyder

August 06, 2026

Prepared by:

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Data Collected



- * Dates Sampled: August 03, 2026
- * Samples Collected by: Kyle B. Leaman
- * Sample Location: Derry Township School District
- * Equipment Used: Met One Model GT-526S Particle Counter Bio Test RCS Portable bio-aerosol Sampler. Vulcain SafetyPalm.

Guidelines for Evaluation of Airborne Microbial Contamination of Buildings



IAQ Evaluation	Category of Contamination	Bacteria CFU's/m3	FUNGI CFU's/m3
Excellent	Very Low	<100	<50
Good	Low	<500	<200
Marginal	Intermediate	<2,500	<1,000
Poor	High	<10,000	<10,000
Very Poor	Very High	>10,000	>10,000

By Brian Flanigan, PhD (Citing Wanner, et al, 1993) as presented to the International Conference on Fungi and Bacteria in Indoor Air Environments – Health Effects, Detection and Remediation; October 6-7, 1994

Table: Levels of Microbial Contamination of air and dust in naturally ventilated homes and non-industrial indoor work environments.

American Industrial Hygiene Association (AIHA), *The Synergist*, Geoffery Clark, *The Synergist*, 2001, updated 2003, and Godish 2001 (section).



Type	Normal Background*	Possible	Probable
Air Samples from Residential Buildings	<500 cfu/m ³	500-1,000 cfu/m ³	>1,000 cfu/m ³
Air Samples from Commercial Buildings (filtered HVAC system)	<250 cfu/m ³	250-1,000 cfu/m ³	>1,000 cfu/m ³
Bulk Samples	<10,000 cfu/g	10,000-100,000 cfu/g	>100,000 cfu/g
Swab Samples	<10,000 cfu/in ² <1,500 cfu/cm ²		>10,000 cfu/in ² >1,500 cfu/in ²
Tape Samples	NSFM, NSFC 1-5% <10,000 spores/in ²	5-25%	25-100% >10,000 spores/in ²

The table list mold spore levels considered to be a normal background, possible contamination, and probable contamination for a variety of sample collection methods.

- Types and relative proportions of fungal spores should be similar to outdoors.
- NSFM = no significant fungal material
- NSFC = no significant fungal contamination
- Cfu/m³ = colony forming units per cubic meter
- Cfu/g = colony forming units per gram of dust or material
- Cfu/in² = colony forming units per square inch of surface

“ Worldwide Exposure Standards for Mold and Bacteria”
By Robert C. Brandys, PhD, MPH, PE, CIH, CSP, CMR
Gail M. Brandys, MS, CSP, CMR

Data Collected High School



Location	3.0 Micron	5.0 Micron	10.0 Micron	RH%	Temp °F	Co/Co ²	Evaluation	Fungi CFU M ³
1- E119	230	50	10	73%	71°F	0/481	Very Good	51
2- D105	320	70	0	74%	71°F	0/492	Very Good	50
3- E117	370	70	10	78%	71°F	0/483	Very Good	76
4- E217	580	90	30	72%	72°F	0/482	Good	125
5- F226	460	80	20	72%	72°F	0/482	Excellent	38
6- G242	240	130	70	71%	72°F	0/479	Good	101
7- D206	90	10	0	74%	71°F	0/483	Excellent	38
8- F124	150	110	40	78%	71°F	0/486	Excellent	26
9- G143	160	20	0	80%	71°F	0/481	Very Good	88
10- C015	260	50	10	65%	71°F	0/477	Good	125

NOTES: Above particle counts are pieces per cubic foot of air. The Fungi counts are in colony forming units per cubic meter of air. Locations with carbon dioxide levels with 700 ppm above outside air should have the ventilation checked to ensure proper amount of outside air is being introduced.

Data Collected High School



Location	3.0 Micron	5.0 Micron	10.0 Micron	RH%	Temp °F	Co/Co ²	Evaluation	Fungi CFU M ³
11- Café	360	80	0	64%	70°F	0/481	Good	101
12- Band	300	210	70	55%	71°F	0/486	Excellent	39
13- Gym	300	90	30	63%	72°F	0/492	Very Good	76
14- Auditorium	420	60	0	63%	70°F	0/476	Good	126
15- Library	2,350	1,070	210	70%	70°F	0/494	Good	125
Outside Air	1,330	280	30	68%	76°F	0/463	N/A	400

NOTES: Above particle counts are pieces per cubic foot of air. The Fungi counts are in colony forming units per cubic meter of air. Locations with carbon dioxide levels with 700 ppm above outside air should have the ventilation checked to ensure proper amount of outside air is being introduced.

Data Collected Middle School



Location	3.0 Micron	5.0 Micron	10.0 Micron	RH%	Temp °F	Co/Co ²	Evaluation	Fungi CFU M ³
1- A134A	740	210	50	76%	73°F	0/495	Good	138
2- B106	1,240	260	30	78%	73°F	0/541	Good	176
3- Band	620	120	10	60%	73°F	0/496	Good	175
4- Gym	190	10	0	45%	71°F	0/467	Very Good	76
5- A148	1,860	900	210	45%	72°F	0/527	Very Good	76
6- A138	1,420	640	170	52%	72°F	0/510	Good	125
7- Library	700	250	80	55%	72°F	0/479	Good	101
8- G74	2,610	1,450	410	61%	72°F	0/483	Very Good	88
9- G71	790	260	90	63%	73°F	0/504	Very Good	88
10- G06	1,470	600	180	48%	72°F	0/477	Very Good	63

NOTES: Above particle counts are pieces per cubic foot of air. The Fungi counts are in colony forming units per cubic meter of air. Locations with carbon dioxide levels with 700 ppm above outside air should have the ventilation checked to ensure proper amount of outside air is being introduced.

Data Collected Middle School



Location	3.0 Micron	5.0 Micron	10.0 Micron	RH%	Temp °F	Co/Co ²	Evaluation	Fungi CFU M ³
11- G15	3,250	1,500	410	46%	72°F	0/587	Good	100
12- Mat Room	32,310	14,040	2,890	47%	73°F	0/477	Good	126
Outside Air	1,330	280	30	68%	76°F	0/463	N/A	400

NOTES: Above particle counts are pieces per cubic foot of air. The Fungi counts are in colony forming units per cubic meter of air. Locations with carbon dioxide levels with 700 ppm above outside air should have the ventilation checked to ensure proper amount of outside air is being introduced.

Data Collected ECC



Location	3.0 Micron	5.0 Micron	10.0 Micron	RH%	Temp °F	Co/Co ²	Evaluation	Fungi CFU M ³
1- 33	330	190	50	46%	75°F	0/566	Excellent	0
2- Café	280	110	30	47%	72°F	0/515	Very Good	51
3- 1	520	300	110	54%	70°F	0/528	Very Good	51
4- 6	290	140	50	55%	69°F	0/552	Excellent	13
5- 13	250	120	30	57%	68°F	0/560	Excellent	25
6- 14	50	20	10	44%	69°F	0/479	Excellent	26
7- 20	30	130	30	41%	69°F	0/479	Excellent	13
8- 23	360	20	60	43%	68°F	0/478	Excellent	25
9- 32	300	140	20	45%	68°F	0/518	Excellent	13
10- 38	780	430	110	45%	69°F	0/487	Excellent	38
Outside Air	1,330	280	30	68%	76°F	0/463	N/A	400

NOTES: Above particle counts are pieces per cubic foot of air. The Fungi counts are in colony forming units per cubic meter of air. Locations with carbon dioxide levels with 700 ppm above outside air should have the ventilation checked to ensure proper amount of outside air is being introduced.

Data Collected Hershey Elementary



Location	3.0 Micron	5.0 Micron	10.0 Micron	RH%	Temp °F	Co/Co ²	Evaluation	Fungi CFU M ³
1- 6	1,690	870	190	55%	73°F	0/508	Good	176
2- 9	300	70	30	68%	72°F	0/480	Good	113
3- 15	2,060	760	120	63%	71°F	0/495	Excellent	25
4- 23	640	280	50	57%	70°F	0/480	Very Good	89
5- 29	440	150	20	66%	69°F	0/473	Good	138
6- 40	910	370	110	70%	70°F	0/479	Good	138
7- Library	150	30	10	72%	70°F	0/479	Very Good	75
8- 48	180	40	0	72%	71°F	0/483	Good	101
9- 55	490	250	50	64%	71°F	0/475	Very Good	88
10- 64	300	160	30	64%	72°F	0/486	Very Good	76

NOTES: Above particle counts are pieces per cubic foot of air. The Fungi counts are in colony forming units per cubic meter of air. Locations with carbon dioxide levels with 700 ppm above outside air should have the ventilation checked to ensure proper amount of outside air is being introduced.

Data Collected Hershey Elementary



Location	3.0 Micron	5.0 Micron	10.0 Micron	RH%	Temp °F	Co/Co ²	Evaluation	Fungi CFU M ³
11- Art 1	640	160	40	74%	72°F	0/481	Good	188
12- 2	90	20	10	64%	72°F	0/469	Very Good	51
13- Outside Air	1,330	280	30	68%	76°F	0/463	N/A	400

NOTES: Above particle counts are pieces per cubic foot of air. The Fungi counts are in colony forming units per cubic meter of air. Locations with carbon dioxide levels with 700 ppm above outside air should have the ventilation checked to ensure proper amount of outside air is being introduced.

Summary



Overall, the laboratory results are favorable: every indoor sample in all four buildings was below the 400 cfu/m³ outdoor total, and there is no pattern of widespread indoor fungal amplification. The Middle School indoor totals ranged from 63 to 176 cfu/m³, with *Acremonium* and *Cladosporium* predominating; occasional *Alternaria* and *Epicoccum* were present at relatively low concentrations. The Elementary School ranged from 25 to 188 cfu/m³; the only *Penicillium* finding was 25 cfu/m³ in Room 64, which is low and, by itself, does not indicate a significant indoor source. The High School ranged from 26 to 126 cfu/m³. *Penicillium* was detected only at 12 cfu/m³ in F226 and 12 cfu/m³ in Band, and the Gym contained a single low-level *Rhizopus* result of 12 cfu/m³; none of these results represent a meaningful elevation relative to the overall outdoor fungal burden. The ECC produced the lowest overall fungal concentrations, ranging from non-detect to 51 cfu/m³, with only isolated 12 cfu/m³ *Penicillium* detections in the Café, Room 1, and Room 14. The more important district-wide finding is the elevated relative humidity, since all sampled buildings except the ECC were above 60% at the time of assessment. Although the culture results do not currently demonstrate significant fungal amplification, sustained indoor relative humidity above approximately 60% can create conditions favorable for future microbial growth, particularly on porous materials and within HVAC systems. ACIA would therefore recommend that the High School, Middle School, and Elementary School HVAC systems be evaluated for dehumidification performance, including outside-air quantities, cooling-coil operation, condensate drainage, controls/setpoints, and any localized moisture intrusion. The goal should be to consistently maintain relative humidity below 60%, preferably within an approximately 40–60% range. At this time, we would not recommend district-wide antimicrobial fogging based solely on these culture results. Instead, corrective efforts should focus on humidity control and moisture prevention, with targeted visual inspection of any areas exhibiting staining, musty odors, condensation, or known water intrusion. Follow-up humidity measurements after HVAC adjustments are appropriate, and additional fungal sampling would be warranted if elevated humidity persists, visible microbial growth is identified, or occupant/building concerns develop. The ECC does not appear to require additional corrective action beyond routine preventive maintenance based on the current results.

Sampling Photos High School



1- E119



2- D105

Sampling Photos High School



3- E117



4- E217

Sampling Photos High School



5- F226



6- G242

Sampling Photos High School



7- D206



8- F124

Sampling Photos High School



9- G143



10- C015

Sampling Photos High School



11- Café



12- Band

Sampling Photos High School



13- Gym



14- Auditorium

Sampling Photos High School



15- Library

Sampling Photos

Middle School



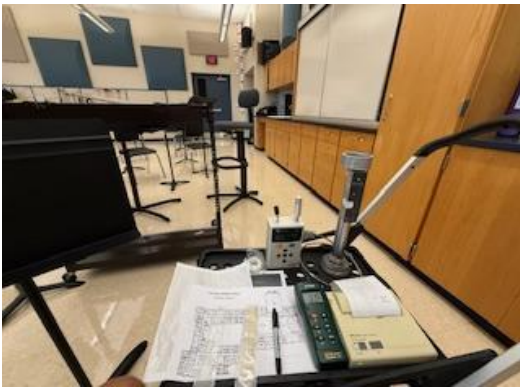
1- A134A



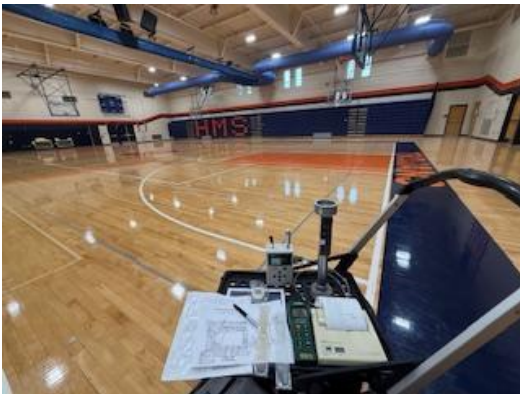
2- B106

Sampling Photos

Middle School



3- Band



4- Gym

Sampling Photos

Middle School



5- A148



6- A138

Sampling Photos Middle School



7- Library



8- G74

Sampling Photos Middle School



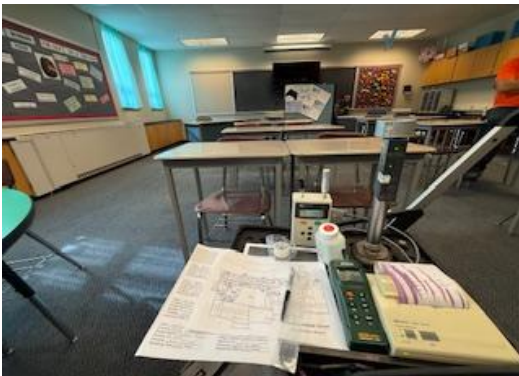
9- G71



10- G06

Sampling Photos

Middle School



11- G15



12- Mat Room

Sampling Photos ECC



1- 33



2- Café

Sampling Photos ECC



3- 1



4- 6

Sampling Photos

ECC



5- 13



6- 14

Sampling Photos

ECC



7- 20



8- 23

Sampling Photos

ECC



9- 32



10- 38

Sampling Photos Hershey Elementary



1- 6



2- 9

Sampling Photos Hershey Elementary



3- 15



4- 23

Sampling Photos Hershey Elementary



5- 29



6- 40

Sampling Photos Hershey Elementary



7- Library



8- 48

Sampling Photos Hershey Elementary



9- 55



10- 64

Sampling Photos Hershey Elementary



11- Art 1

12- 2 – No Picture

Sampling Photos Hershey Elementary



13- Outside Air