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I have reviewed the data sent to me earlier. This data provides relatively good evidence that the O•ZONelite™ light bulb is an effective means of removing mold spores from indoor air. Firm conclusions require a detailed knowledge of experimental protocol followed and test facility employed in the collection of the samples.

As I noted, I am not an expert in the science of mold, or the quantification of mold. As such, I searched the literature and documentation of appropriate professional societies to learn identify standards of measurement to compare to the data you provided.

The National Allergy Bureau of the American Academy of Allergy and Immunology has set some general definitions for mold spore counts in an outdoor environment (Table 1). One recent article (D. M. Baxter et al. J Occup Environ Hygiene, 2005) defined thresholds to differentiate a clean building from a moldy building (Table 2); however, it appears no federally mandated or nationally accepted standard exists. The Asthma Center has nine medical offices in the Philadelphia area provides a more rigid interpretation of the rating system, as shown in Table 3.

To understand what constitutes a high or very high rating, I looked at some recent results of air testing for mold. Mold sampling was performed recently by the National Resources Defense Council (www.NRDC.org) in the Lower Ninth Ward in New Orleans, Louisiana to understand the effects of flooding on mold growth in the region. On 10/17/05 on Tupelo Street near Bienvenue, Holy Cross an outdoor sample gave a mold spore count of 67,000 spores/m³ (daily estimated average based on 6 hours of continuous volumetric sampling). The sample contained 36% Cladosporium and 40% Aspergillus/Penicillium. On 11/15/05 sampling performed indoors on Douglas near Caffin, Holy Cross in a partially remediated home gave a result of 79,000 spores/m³ that was 24% Cladosporium and 67% Aspergillus/Penicillium.

Table 1. National Allergy Bureau Outdoor Mold Counts (daily average spore counts per cubic meter)

Counts	Classification
0	Absent
1 - 6,499	Low
6,500 - 12,999	Moderate
13,000 - 49,999	High
> 50,000	Very High

Table 2. Indoor Mold Classifications: Residential Buildings (spores/m3)

	Total Spores	Aspergillus/ Penicillium	Ascospores/ Basidiospores
Clean	< 1,200	< 750	< 1,200
Moldy	> 1,300	> 900	> 1,300

Table 3. Mold Spore level classification by “The Asthma Center”

Count	Classification	Asthma Symptom Correlation
0 - 300	Very Low	Minimal
300 – 600	Low	Mild to Moderate
600 – 1000	Moderate	Moderate
1000 – 2500	High	Moderate to Severe
> 2500	Very High	Moderate to Severe
> 7000	Extreme	Severe

The data for the tests you provided are summarized in Table 4. One notes that the predominate variety of mold spores present are ascospore, aspergillus, basidiospore, cladosporium, trichoderma (a mold producing trichothecene poisons, and apparently similar to aspergillus, often mistaken as such and vice versa), and chaetomium.

Table 4. Test Data provided to Mold Specialists Inc. (analytical work performed by Advanced Scientific Laboratories, 1461 SW 12th Ave., Pompano Beach, FL)

Sample Date & Location	1/18/2006 containment	1/25/2006 inside	reduction	1/18/2006 outside	1/25/2006 outside	reduction
ascospore	565	216	62%	1220	429	65%
aspergillus/penicilium	40545	4097	90%	90	700	-678%
basidiospore	1129	801	29%	836	1039	-24%
cladosporium	2146	2618	-22%	181	2936	-1522%
stachybotrys	113		100%			
trichoderma	30494		100%			
chaetomium	226		100%			
misc/unknown		308		45	23	49%
total spores (count)	416	262	37%	109	233	-114%

The relative abundance of various species is consistent with that observed in the NRDC study; indoor samples are predominated by aspergillus, trichoderma, and cladosporium.

Also of note is the total spore count of samples taken outside more than doubled between 1/18/2006 and 1/25/2006, suggesting mold spore concentrations were increasing during the test period. Cladosporium went up by a factor 16 times; aspergillus nearly 8 times. Count levels for outside samples are considered *high* by the classification system of The Asthma Center, and *low* by the National Allergy Bureau.

Comparing outside to inside samples, the inside samples tend to be an order-of-magnitude higher in count level, and are *extreme* relative to The Asthma Center classification, and *high* or *very high* by the National Allergy Bureau. Levels are generally similar to those found in condemned houses in the Lower Ninth Ward of New Orleans.

Under such severe conditions, it is unlikely humans would dwell in such an environment, and would suffer severe respiratory distress if they opted to do so. Conditions described by the data provided in Table 4 represent a stringent test for the O•ZONElite™ light bulb, or any air treatment system for that matter. Yet, the data demonstrate the the O•ZONElite™ light bulb reduced the level of aspergillus by 90% and the level of trichoderma by 100%. These two mold spore varieties account for 95% of all the mold spores present in the initial sample. Despite a >1500% increase in the outdoor counts of cladosporium, the increase in the contained environment was only 32%, most likely due to the presence of the O•ZONElite™ light bulb.

In conclusion, this data set suggests the O•ZONElite™ light bulb performs as advertised to reduce mold spores in indoor air. I am interested in reviewing the detailed experimental protocol by which these data were collected to confirm this conclusion.