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IAQ RADIO+

Show Number: 762

Joe Spurgeon, PhD

Danny Gough

Mold in wall cavities; a growing Issue?

Good day and welcome to IAQ Radio+ episode 762 blog. This week we welcomed Dr. Joe Spurgeon and Danny Gough to discuss issues with moisture and mold in wall cavities and to provide answers to questions: Is mold commonly found in wall cavities? Is mold in wall cavities a growing problem? What causes mold inside wall cavities? Is mold inside of wall cavities geographically variable? How do you sample for and explain findings to clients?

Joe Spurgeon, PHD, has a multidisciplinary doctorate degree in Analytical Chemistry and Environmental Health from the University of Pittsburgh; and was a Certified Industrial Hygienist from 1993 – 2013. His career has included working as a research chemist on the NBS Lead-Paint Poisoning Program, directing the FAA's Combustion Toxicology Laboratory, performing Health Assessments for CDC/ATSDR, implementing US EPA's Laboratory Exposure Assessment Project, and working as a consultant specializing in microbial indoor air quality for US PHS. He has performed numerous residential and commercial investigations involving water intrusions and microbial contaminants; has taught courses on mold investigations, sampling, and data interpretation methods; and has served as an expert witness in numerous mold cases. His books are available at http://expertonmold.com/

Danny Gough calls himself a slow learner trying to retire. He works out of Yadkinville, NC and his specialties include Building Performance Consulting, Psychometric analysis and advanced humidity control, Design of HVAC systems for Low Energy Buildings, Geothermal, Solar, Radiant, and Service hot water. Mr. Gough is also an Approved Instructor for the National Association of Home Builders (NAHB) and the Air Conditioning Contractors of America (ACCA). He also provides continuing education

Instruction for American Institute of Architects (AIA) and for builders for the NC licensing board for General contractors.

Nuggets mined from this week's episode:

Danny, what got you interested in this subject? I'm encountering moisture and mold problems in homes where owners are cooling their homes to 65º F-68º F and water is visually dripping out of wall switches and electrical outlets.

Joe, do you opine that wall sampling a good technique? Yes, wall sampling is a good method when applied properly, but unfortunately it is often used inappropriately. Wall sampling demonstrates building related fungal contamination but should NOT be used to assess occupant exposure. Joe's experience is that mold spores in the wall cavity tend to stay in the wall cavity.

Comments from Joe and Danny:

- Joe uses PCM filter cassettes, cleaner background, low sample volume, plus optional qPCR and culture analysis.
- When sampling a suspected leaky window, Joe samples 50% on left side and 50% on right side.
- A wall cavity sample location should be selected to answer a specific question, not just sample the nearest electrical outlet.
- A wall cavity sample cannot be interpreted like an airborne sample and compared to the outdoor air.
- Joe prefers aggressive sampling, using palm of hand or rubber mallet to tap on wall during sampling. Don't use a black mallet on white walls!
- Two options drive mold amplification inside wall cavities: 1) Infiltration of humid air from outdoors OR 2) water intrusions.
- Joe's wall cavity data in the presentation was based upon newer homes, about 10 years old or less.
- Danny's experience is that mold in wall cavities is a problem in newer homes and is NOT a problem in older homes.

Joe Spurgeon's slide presentation is attached on the website.

Trivia:

On Sept. 12, 1958, Jack Kilby presented his findings to Texas Instruments' management for a discovery for which he later was awarded the Noble Prize. What was this invention?

Answer: Integrated circuit

Answered by: Ralph Froehlich

Z-Man signing off