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Franklin & Marshall Researchers Have Trusted Percival for 40 Years

CLIENT STORY

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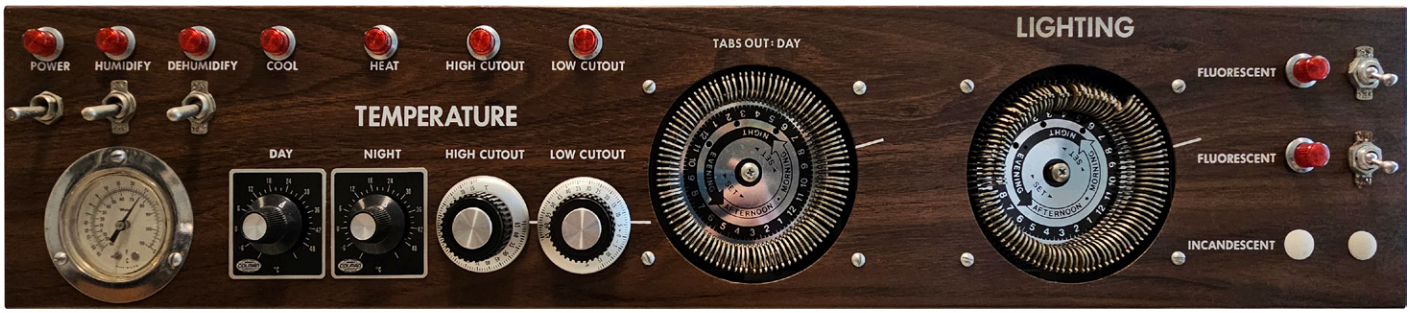

The Biology Department at Franklin & Marshall College (F&M)* has inadvertently conducted an experiment over the past four decades on the reliability of Percival Scientific chambers. The pristine residential college in Lancaster, Penn., houses 11 Percival models, ranging from a 1985 incubator to two shiny, new 2025 chambers.

Oldies But Still Goodies

If you ask Academic Department Coordinator Sam Seldomridge, who orders equipment for the department, which chamber is her favorite, she'll tell you it's the oldest one, hands down. "The 1985 model has never needed maintenance," she says. "It's the most reliable chamber we have. I think Percival needs to bring back a limited edition of it."

Seldomridge compares the decades-old incubator, with wood paneling and other nostalgic features, to a classic car and says students appreciate the simple mechanics of using buttons, switches and dials to set experiment parameters. She uses the '85 incubator and a later '80s model for isopod behavior experiments each semester in Biology 101. The students document the isopods' movement patterns in water, including mating behaviors, in seasonal temperature settings. "It's essential to have a chamber that works so we don't disrupt [the isopods'] natural cycles," says Seldomridge.

The two incubators have contributed to a long history of innovative insect research over the past 40 years, including a study that inoculated cabbage looper caterpillars with viruses to stimulate an immune response and test how this increased their metabolic rates and affected growth.

Chambers That Outlast Careers

Several professors who used the two classic incubators for various experiments at F&M have come and gone, while the chambers have remained, holding the longest tenure in the department.

"They've been here the entire 18 years I've been here," says Jim Engleman. "They hold temperature well and have everything you want in a piece of equipment." As greenhouse manager and laboratory technician, Engleman has worked on chambers in the department from other manufacturers that required compressor replacements or repairs of refrigerant-system leaks, but he says the Percival incubators have needed little maintenance to keep running like clockwork.

"We've purchased other brands in the past, but Percival has been the most reliable and user-friendly and the easiest for training students who don't have time to learn complicated controls," says Seldomridge. "Our positive experience with the older models has inspired us to stick with Percival moving forward."

Loved for Their Low Maintenance

F&M now owns an impressive collection of Percival chambers, and Engleman is well acquainted with them all. He especially likes that they are less trouble than other chambers he maintains. "I don't have a lot of time to fix problems," he says. "[The Percival chambers] have less downtime and work better. And I really appreciate that the mechanical compartment is on the top for easy access. I would prefer standing rather than lying on the floor."

The department also uses a certified mechanic to repair out-of-warranty equipment. He's shared his preferences with the staff, drawing on his experience with a wide range of climate-controlled chamber brands. "He recommends Percival chambers over others because they're reliable and easy to work on," says Seldomridge.

Investing in Longevity and Dependability

Engleman explains that the recent decision to purchase two Percival chambers to replace some older chambers from another brand was largely driven by budget constraints due to a decline in available grant funding. "We're now funding ourselves, so we are budget-conscious like we haven't had to be in a long time," he says. "Anything we can do to extend the life of the equipment through wise purchase decisions makes it more useful for these researchers."

He adds that what's most important to researchers is that their chambers run properly without breakdowns: "They just don't want them to stop working in the middle of an experiment." A major issue with equipment performance during a research trial can cause significant losses of time, cost and progress. That's why Percival chambers have earned the department's trust after years of dependable use.

Customer Service That Doesn't Try to Oversell

In addition to the chambers' reliable performance, the department staff also trusts Percival for its excellent customer service. Seldomridge says the representative they worked with on their recent purchases was extremely helpful. She asked the Percival engineers insightful questions that the F&M staff hadn't considered and offered to customize features they didn't realize were possible, such as outlet placement. She also didn't try to sell them bells and whistles.

"She did a great job honing down the options to only what we needed," says Seldomridge. "It felt very thorough and very low pressure."

New Discoveries With New Chambers

The F&M Biology Department is using the two newest chambers for a range of plant and biology studies. Assistant Professor Dan Metz, PhD, is using them to conduct temperature-controlled trials of experimentally infected zooplankton. "Basically, I'll be seeing how certain hard-to-cure 'parasitic decomposers' perform under a variety of conditions," he says. "Getting that experimental info will then let me evaluate some cool mathematical models that will reveal what part of the parasite life cycle is most vulnerable to attack by things like drugs or preventative measures. And it will help us understand why some parasites switch to being decomposers in the first place ... and why that strategy makes them so hard to control!"

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Engleman ordered them with an extended CO_2 range for a plant physiology unit, during which students test plant growth and development under climate change scenarios, including drought stress, acid rain and high CO_2 levels. "CO_2 treatment has always been a good learning tool to see how environmental changes affect plants," he says. "We tried other chambers for CO_2, but they were expensive to maintain."

Looking Back on 40 years of Percival Performance

After explaining the role Percival chambers have played in the Biology Department over the last several decades, Seldomridge becomes reflective. "It's made me more aware of the usefulness and longevity of this equipment," she says. "How much more often have we needed to replace our washers, dryers and refrigerators? These chambers are keeping things alive, whether it's caterpillars, isopods or microbiomes. They support classes, student research and faculty research. You can't get much better than that – it's great!"

* The views expressed in this article do not represent those of Franklin & Marshall College. The information within reflects individual, real-life experiences regarding the use of Percival Scientific chambers. No individuals received goods, services or incentives of any kind from Percival Scientific in exchange for information or opinions regarding Percival Scientific products and/or services.