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KEVIN PARRISH, ASSISTANT MANAGING EDITOR | (209) 546-8264 | kparrish@recordnet.com | fax (209) 547-8186

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Pacific team develops test for toxic drywall

By Jennie Rodriguez
Record Staff Writer

STOCKTON — In less than a minute, Matthew Curtis confirmed that a pea-size sample of Chinese drywall contained toxic sulfur, which tends to rot copper piping and electrical wiring of homes in humid areas.

After demonstrating the testing process, he pulled out a corroded piece of copper that had been contained with Chinese drywall for some time. "This is what happens," he said.

Curtis, who is working on a doctorate in biochemistry at University of the Pacific, has been working with chemistry Profes-

SENATE TAKES AIM AT MANUFACTURER

New federal legislation introduced this month could make it easier for homeowners with defective Chinese drywall to take the manufacturer to court.

The Foreign Manufacturers Legal Accountability Act of 2009,

introduced by Democratic Sen. Sheldon Whitehouse, D-R.I., and co-sponsored by Sen. Jeff Sessions, R-Ala., attempts to make it easier to bring foreign companies before an American court.

— McClatchy Newspapers

sors O. David Sparkman and Patrick Jones to develop a quick and easy method for testing drywall for sulfur.

The new method developed by Sparkman, Jones and Curtis was published online by The Journal of the American Society for Mass Spectrometry on July 19.

"It was really interesting to be able to solve a problem ... that affects a lot of people in the United States," said Curtis, 24.

In humid climates, Chinese drywall has been found to emit sulfur that causes metal decay and strong odors. In addition, the Centers for Disease Control and

Prevention is investigating claims that the sulfur emissions cause health problems, including respiratory illness and headaches.

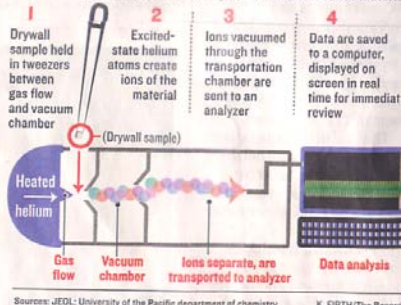
The Associated Press reviewed shipping records and reported in May that more than 500 million pounds of Chinese building materials were imported to the United States during the recent housing boom. According to estimates of various investigating groups, it's believed that more than 100,000 homes may have been built during that period with drywall that might contain sulfur.

"It's pretty important to determine whether or not you have

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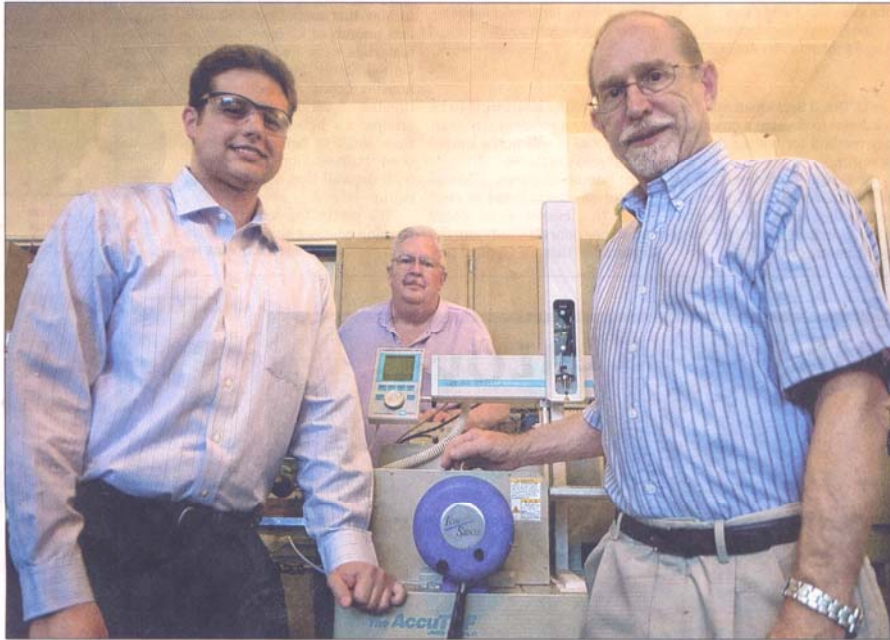
New drywall testing

Two University of the Pacific professors and a graduate student have developed a method to test drywall for harmful sulfur materials.



Sources: JEOL; University of the Pacific department of chemistry

K. FIRTH/The Record



CLIFFORD OTO/The Record

University of the Pacific graduate student Matthew Curtis, left, and chemistry Professors O. David Sparkman and Patrick Jones developed a way to determine if homes contain contaminated drywall from China using a mass spectrometer.

DRYWALL: Pacific also created test for Chinese pet food

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a problem," said Sparkman, who has been with Pacific for 10 years. "Banks are interested if they're foreclosing on a home (whether) it's contaminated. Homeowners want to know if they're liable for problems."

The group's research began when Sparkman was contacted in April by a Georgia contractor who wanted to confirm his suspicions about materials with

which he was working. Existing tests took up to a week to yield results.

"People are always looking for tests that determine certain things," Sparkman said.

The researchers tried several methods, but none produced accurate or timely solutions. Then, they decided to use a method Pacific had previously used to test Chinese-manufactured pet food for

the toxic chemical melamine, which is used in plastic furniture, cookware and fertilizers.

By using mass spectrometry with a DART instrument — an acronym for direct analysis in real time — the Pacific researchers ionized and separated the materials to check for sulfur. They had results within minutes and without having to pre-treat the samples.

"It's fast, which is the big advantage," said Jones, who has taught at Pacific for 35 years.

Sparkman, who teaches a course in which the method is demonstrated, said the test is available to the public at Pacific for less than \$500.

The exact cost varies from case to case.

Contact reporter Jennie Rodriguez at (209) 943-8564 or jrodriguez@recordnet.com.