

Moms

July 25, 2008, 11:17PM

Be wary of granite that glows

Rice professor says countertops may be tainted with uranium

By ALLAN TURNER

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Last August, Consumer Reports magazine — ever alert to stylish trends among its affluent readers — pinpointed the growing popularity of natural stone countertops, demand for which had increased 5 percent annually for the previous five years. But for Rice University physics professor W.J. Llope, the article's title, "Countertops: The Hottest Rocks," carried an unsettling irony.



Some granite countertops, he says, contain high levels of uranium, which, by generating gamma radiation and radon gas, can endanger human health.

"Most stones, in terms of radioactivity, are relatively quiet," Llope said. "But there are a couple I have found that are insanely hot."

Using a Rice University spectrometer, Llope has examined 55 stones, representing about 25 varieties of granite purchased from Houston-area dealers. Some, he said, could expose homeowners to 100 millirems of radiation — the annual exposure limit set by the Department of Energy for visitors to nuclear labs — in just a few months.

Llope, who said he plans to publish his findings in a peer-reviewed journal, declined to name the most hazardous varieties of granite he has thus far examined. But he said dangerously radioactive varieties include striated granites from Brazil and Namibia.

As many as 1,600 varieties of granite from 64 countries are sold for household use in the United States. None of them is routinely tested for radioactivity.

Jim Martinez, spokesman for the Marble Institute of America, a trade group which also represents the granite industry, cited a University of Akron study that found granite varieties used in 85 percent of such countertops are safe.

Still, he said, his organization is assembling a panel of scientists to develop a protocol for testing granite for radioactivity. He said that panel should be in place by summer's end.

"There's been a lot of junk science passed off as real science," Martinez said. "We want to establish scientific standards and protocol that would allow consistent testing in a logical way."

The trade group said reports of granite's radioactivity have been sensationalized by competitors who market non-granite products.

Llope hailed the group's move to test granite as an important first step in ensuring customer safety.

"There should be some oversight in this," Llope said. "This is something the Environmental Protection Agency or the dealers or both of them should do. This isn't something customers should have to do, not something they should have to lay awake worrying themselves to death about. They need help."

The EPA, although it offers the public information on radon hazards, has no authority to regulate quality of indoor air.

Llope said the radioactive substances in granite, significantly uranium, pose a double threat to homeowners: radiation and radon gas. Radiation exceeding levels an individual routinely receives just living on Earth can contribute to cancer. Radon is second only to cigarettes as a cause of lung cancer. It is especially dangerous to smokers.

"Where you have radon," Llope said, "you have radiation."

Llope said that slabs of stone taken from the same quarry — even different sections of the same slab — may differ in radiation levels.

In addition to his study of granite purchased in Houston, Llope studied 20 peer-reviewed journal articles reporting on the results of radiation testing of 95 granite samples. Llope found three cases where the stones generated levels of radon deemed dangerous by EPA.

"I'm not claiming that people necessarily will get very sick or die of cancer within months," he said, "but if you spend 10 years in that kitchen there is a risk you may end up with cancer. It might or might not be attributed to granite. Who would know?"

Llope advised homeowners to test their granite countertops for radon. Inexpensive test kits can be found at hardware stores.

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SilviaOsante wrote:

The Marble Institute of America wants to reassure the public that granite countertops are safe. Research shows granite countertops pose no threat.

The U.S. Environmental Protection Agency, Consumer Reports and repeated independent studies have shown granite countertops pose no health hazard.

-EPA stated Friday: "EPA has no reliable data to conclude that types of granite used in countertops are significantly increasing indoor radon levels."

(http://iaq.custhelp.com/cgi-bin/iaq.cfg/php/enduser/std_alp.php)

-University of Akron researchers found no threat. (www.marble-institute.com/industryresources/radontesting_u-akron2008.pdf)

An independent scientific analysis of a variety of studies shows that, accounting for normal airflow in the typical home, radon contributed by granite countertops ranges from 0.01 – 0.02 pCi/L – levels that are 200 to 400 times lower than the EPA guideline of 4 pCi/L.

-By some measures, the amount of radon emitted by a granite countertop is less than one millionth of that already present in household air from other sources. Many granite countertops do not emit radon at all, and those treated with sealant reduce emissions even further.

Silvia Osante

Cohn & Wolfe on behalf of The Marble Institute of America

7/29/2008 3:31 PM CDT

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granitefabbe wrote:

Another voice for reason sounds an awful lot like the MIA technical director, same arguments, same writing style. He takes Dr. Llope on for researching this for the TV station, then presenting the facts. Perhaps voice is a sock puppet? Regardless, he ought to be ashamed of himself, ought to take ten minutes to google the subject and read a few scientific studies before blindly lashing out.

And the guy selling sealer? He is claiming he can stop radiation with a coat of sealer? I see a jail cell for this dude one of these days. Does one slather the sealer on oneself or the granite top?

Four inches of "old" lead stops only 87.5% of Gamma. Two feet of concrete will do the same. It takes 1/8" of plastic to stop the Beta radiation. This fool thinks he can stop radiation with a coat of sealer? Will it scratch or mar? How about all the complaints about sealing stone that isn't supposed to be sealed? Are they going to seal the bottom of the slab as well? Does it take the entire 5 gallon bucket to do a top?

Bricks emit around 7uR/hr, which is about background levels in our area. A truly exceptional granite, brick, or tile will hit 20 uR/hr, but Llope is talking about 700 uR/hr and up radiation being dangerous. The guy is on record in every story and on his websites as saying there are only a few granites that are a problem, but a few here claim he is attacking all granite????

Maudura Gold is okay, I think. It is a common slab and I would have recorded any I ran into that were elevated. Send Llope a sample, he will check it for you. But I would get it tested soon just to be safe.

Wow! DavidMD, what a post!

Our State Labor Board doesn't have a clue on what is in granite. I had to argue to get a test done on the air quality in our shop, will take 45 days to get to us, so we are using half masks and HEPA filters just in case. When showed a lab report on the countertop in the Houston TV report, they went "holy Cra!" I got a call on Friday that told me that our upcoming test is about silicosis, not radiation! They don't have a testing program in place. Granite is loaded with heavy metals, do a quick google search. Cadmium, lead, arsenic, polonium, besides the radioactive isotopes.

And David, they are actually fighting over some plots of land in Namibia, stone quarries want it and Uranium mines want it for nuclear fuel ore. Is that crazy or what?

<http://solidsurfacealliance.org/blog/2008/07/11/is-that-granite-worth-more-as-kitchen-countertops-or-as-uranium-fuel/>

Uquala Brown? Sorry, we have no data on that one. One of the reasons is that there is no tracking of granite materials in this country, nor any standards. There was a study done in Saudi Arabia that said if the "name game" wasn't stopped, the stone industry would face serious economic or social repercussions eventually, they pretty much said a simple mistake over the name of a stone could lead to exposures over safe limits. That study is available at solidsurfacealliance.org, look on page 2 of the Radon/radiation page. Some of those studies posted there list some stones, perhaps Uquala Brown is among them.

No money involved in Llope's work, he is doing it on his own. Oh, Joh is a shill for the stone industry, he posts that cut and paste response all over the internet, attempting to pack the google results. The dude is seriously misrepresenting the facts. Are we allowed to say "liar" here?

I am always amazed at those who will scream at measurements which are simple facts. And if anyone is to be blamed it is we granite fabricators that didn't insist on testing 15 years ago when this issue first showed up.

7/27/2008 1:29 PM CDT

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cathartic1 wrote:

How is it that Republicans find any threat ridiculous unless it involves a black, brown, or Muslim man?

7/26/2008 11:51 PM CDT

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Chadwick wrote:

New U.S. Environmental Protection Agency (EPA) statements reaffirm that granite countertops pose no significant health risk...

Yeah! Go ahead believe every single report the government makes public. Please!.....

7/26/2008 11:35 PM CDT

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Outtahere wrote:

Slow nuking yuppies. Is that really a bad thing?

7/26/2008 10:53 PM CDT

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