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Is that granite counter in your home emitting radon?

Homeowners seeking just the right granite for their countertops have something new to ponder, besides which color complements their cabinets. Some are wondering about the radiation and radon gas that might be emanating from those showy slabs.

The topic sent online forums buzzing last summer after a few high-profile media reports, including a New York Times story featuring a doctor who removed her granite after it tested high for radiation, then replaced it with a different granite.

Now scientists, including a Minnesota physicist, are testing slabs, producing papers and debating each other's findings. The Marble Institute of America recently announced it will launch a "Home Approved Stone" program to reassure consumers about granite's safety. And radon professionals say some homeowners now want their countertops tested along with the rest of the house.

Most who seek testing receive reassuring news that their countertops are safe. When testing does reveal high radon levels, the gas is usually emanating from the basement, not the kitchen. But while the Marble Institute says its testing has yet to find a problem piece of granite, others insist that hot stones are being sold and installed, their owners unaware that the material packs a radioactive punch.

Is that a problem? It depends whom you ask. The Environmental Protection Agency declared it had "no reliable data" to conclude that granite was significantly increasing indoor radon levels. Radon coming from the ground is a much bigger concern, particularly in Minnesota, said Dale Dorschner, a supervisor for the state Department of Health.

But others see potential risk. "The vast majority of granites in the vast majority of houses are not going to be a problem," said Daniel Steck, physics professor at St. John's University in Collegeville, Minn., who heads the Minnesota Radon Project. Steck has tested about 250 granites. Of those, none emitted enough radiation to be a concern, he said. But a small minority, about 5 percent, appeared to contribute enough radon to pose "a mild problem" when used in large quantities or in a small, tightly sealed home.

The current debate is whether those stones pose a risk and in what circumstances, and how to identify them. You can't spot a hot slab by its looks, color or even its name. Granite names are variable, and stones with the same name can have different geological content, Steck said. Right now, "There's no good way to identify that 5 percent."

As demand for granite has increased, exotic stones are being imported from remote corners of the world and greater scrutiny is needed, said William Llope, a nuclear physicist at Rice University in Houston. Llope started testing granites as "a hobby" after he was asked to test a countertop and was surprised at the level of radiation.

Most granite is 'quiet'

"It's an uncontrolled situation," he said. "The majority of granites are quiet," with radiation levels that are negligible when compared with background radiation. But there are now about 2,000 granites being exported from about 70 countries, he noted, with some quarries within miles of uranium mines. "Some stones from Namibia and Brazil are wicked hot." Still, the health risk is ambiguous and probably long-term. "You're not going to spend six months in your kitchen and die of cancer," Llope said. But extended exposure to the hottest granites he's tested has the potential to increase lifetime cancer risk, especially for young children. "It's a risk people could avoid if they wanted to."

Linda Kincaid, a California industrial hygienist and certified radon tester, said she first thought radiation-emitting granite was "a joke, like next it will be Elvis and the Martians." But after a spate of calls last summer, she took a Geiger counter to a granite yard, where it picked up a very active slab. The owner confronted her and told her that the radiation issue was "propaganda," she recalled. "I said, 'Look at my Geiger counter. This stuff is hot.'"

She has since tested about two dozen homes and found only two with granite that concerned her. In one, the homeowners removed their new Juparana Bordeaux granite and replaced it with a cooler stone after tests revealed hot areas and higher radon levels in the kitchen than elsewhere in the house. The kitchen radon level was just below the 4 picocuries per liter of air, at which the

EPA recommends radon mitigation. Its estimated risk is equivalent to smoking a half pack of cigarettes daily. But the owner, Debra Emerson, was still uneasy. "My husband's family is cancer-prone," she said.

Replacing the granite was "a big expense," she said, and she's angry that she and her husband weren't informed that the stone they'd selected so carefully emitted more radiation than others. "I would never choose to put uranium in my kitchen," she said. "It would have been so easy to avoid if we'd had information. People are not being given a choice."

But many in the industry believe that any risk is being wildly overblown by those with commercial motives. "A Geiger counter makes for great television, but it's not accurate science," said Guido Gliori, president of the Marble Institute. "It's more complicated than that. You have to determine emanation and how it's diluted by the exchange of air in your home."

Gliori pointed out that some of the research linking granite and radiation has been funded by manufacturers of competing countertop materials, including Cambria, an Eden Prairie company that produces quartz countertops. "It's a shame they want to trash the stone industry to support synthetic stone. Granite is safe and beautiful."

Cambria did fund a study, said Peter Martin, the company's director of marketing. But that was in response to calls from concerned consumers and fabricators, he said. Cambria now touts its product as "Radon Free," but he disputed that the controversy has been good for Cambria. "Quite the opposite," he said. "Most consumers don't have all the information. I worry this will drive them away."

The Marble Institute funded an independent study of more than 100 popular granites, including some that have been linked to higher radiation, and found not a single problem slab, Gliori said. Its "Home Approved Stone" logo will soon start appearing on slabs in showrooms to reassure consumers that the granite they're considering has been tested and certified safe for home use.

But some say that the program, while a good start, needs more work. "It's

premature," Steck said. "There's not enough detail."

Environmental Health & Engineering, the consulting firm hired by the institute to do testing and to develop protocols, defended its findings, which are based on "solid science and well-validated models," said Jack McCarthy, the firm's president and a certified industrial hygienist. The program is "evolving" in response to feedback from the scientific community, he said. He has yet to see evidence that any granites pose a risk, "but I'm not saying it doesn't exist. Let's see the data. Everyone wants the truth."

In the meantime, Minnesota homeowners are advised to test their homes for radon, regardless of whether they have granite. (Kits are available for $6.95 at www.radon.com/sub/mn.) Even if your home tests high for radon, the likeliest contributor is your soil, not your countertop. But if countertop concerns motivate people to test for radon, "that's a nice side benefit," Llope said.

Kim Palmer • 612-673-4784