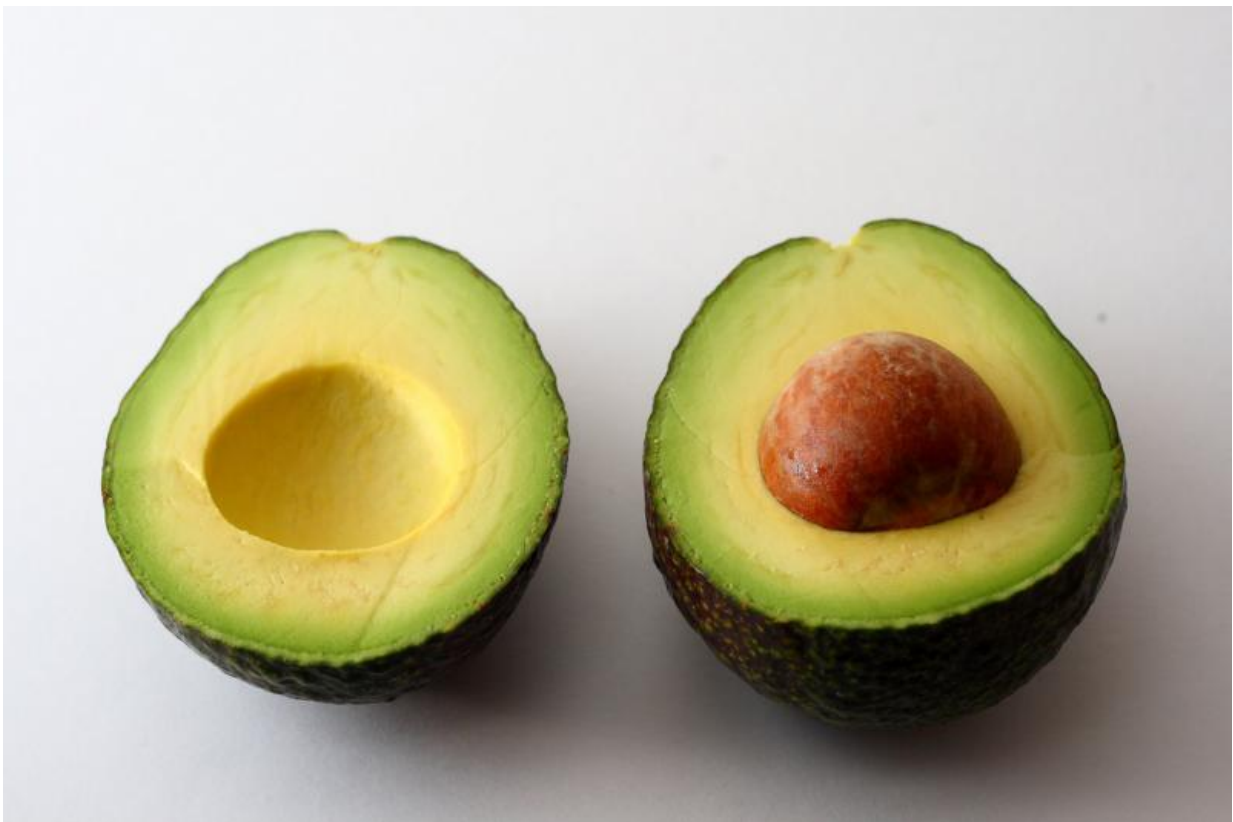


# Don't panic, but your avocado is radioactive—study eyes background radiation of everyday objects

October 7 2016, by Robert Hayes

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Credit: arsheffield/Flickr

Most people assume all radioactive materials are dangerous, if not deadly. But a new study on the radiation emitted by everyday objects

highlights the fact that we interact with radioactive materials every day. The goal of the work is to give people a frame of reference for understanding news stories or other information about radiation and nuclear safety.

"We did this study because understanding how much radiation comes off of common household items helps place radiation readings in context – it puts things in perspective," says Robert Hayes, an associate professor of nuclear engineering at North Carolina State University. "If people understand what trace levels of radiation mean, that understanding may help prevent panic."

The researchers used a portable [gamma radiation](#) meter to measure the external gamma radiation emitted in a North Carolina home. The radiation was measured in microgray per hour ( $\mu\text{Gy/hr}$ ).

Avocados, for example, gave off  $0.16 \mu\text{Gy/hr}$  of gamma radiation – slightly less than the  $0.17 \mu\text{Gy/hr}$  emitted by a banana. Bricks gave off  $0.15 \mu\text{Gy/hr}$ , while smoke detectors (with their americium components) gave off  $0.16$ . By way of comparison, natural uranium ore measured  $1.57 \mu\text{Gy/hr}$ .

"If you're surprised that your fruit is emitting gamma radiation, don't panic," Hayes says. "The regulatory level for workers – which is safe – is exposure to  $50,000 \mu\text{Gy}$  per year. The levels we're talking about in your household are incredibly low."

**More information:** Richard D. Milvenan et al. Contributions of Various Radiological Sources to Background in a Suburban Environment, *Health Physics* (2016). [DOI: 10.1097/HP.0000000000000564](#)

Provided by North Carolina State University

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