

California Watch

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UC researchers: LED lights contain lead, arsenic

February 11, 2011 | [Susanne Rust \(/user/susanne-rust\)](#)



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LED light bulbs are the green alternative to standard halogen light bulbs, right?

Wrong, says a new study from UC Irvine and UC Davis that suggests those good-for-the-environment light bulbs contain lead, arsenic and a dozen other potentially toxic and hazardous substances.

“LEDs are touted as the next generation of lighting,” said Oladele Ogunseitan, [the study's](#)

<http://www.scribd.com/doc/48605520/LEDs>

author and chair of UC Irvine’s Department of

Population Health and Disease Prevention. “But as we try to find better products that do not deplete energy resources or contribute to global warming, we have to be vigilant about the toxicity hazards of those marketed as replacements.”

To see what LED lights contain – small Christmas-strand LED lights, in particular – Ogunseitan and his team smashed up some bulbs and tested their contents.

They found that low-intensity red lights contained up to eight times the legally allowed level of lead in California.

In general, however, the higher-intensity, brighter bulbs had more contaminants than lower-intensity ones.

“We find the low-intensity red LEDs exhibit significant cancer and noncancer potential due to the high content of arsenic and lead,” the researchers wrote in their study, published in the journal [Environmental Science and Technology](#) (<http://pubs.acs.org/journal/esthag>).

The team also looked at larger light bulbs – such as those in car headlights and traffic lights – but haven’t yet published those results. Ogunseitan said in a press statement that the results were similar.

Lead and arsenic have been linked to cancer and other noncancerous health concerns, such as neurological damage, kidney disease and other illnesses.

If an LED light bulb breaks at home, Ogunseitan suggested using a special broom to clean it up, as well as wearing gloves and a mask. He said emergency teams dispatched to clean up car crashes should take special precautions.

Currently, there are no restrictions on putting LEDs into the trash. The team has sent their findings to state officials and federal health regulators.

California law requires traditional halogen light bulbs [to be phased out](#) (<http://californiawatch.org/dailyreport/state-phase-out-energy-sucking-light-bulbs-7558>) over the next few years.

This leaves consumers with the choice of buying LEDs or compact fluorescent bulbs, which contain mercury.

In 2009, Los Angeles [announced a plan](#) (<http://www.ci.la.ca.us/bsl/>) to replace 140,000 existing streetlight fixtures with LED units.

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