

## Chemicals of Interest: What's in the News

### NEWSFLASH, CHEMICALS OF INTEREST

By LANA BECKETT, December 2, 2016

**Citrus-Scented Candles Could Be Harmful** Research suggests scented candles could actually be far more harmful than previously thought, giving off potentially dangerous levels of the toxic substance formaldehyde.

**TimesofMalta.com**<sup>1)</sup> reported that the research was carried out by **Alastair Lewis of the National Centre for Atmospheric Science at the University of York**<sup>2)</sup>. Lewis found that an ingredient commonly used to give candles their scent mutates into formaldehyde upon contact with the air.

The ingredient in question is limonene, which is used to give citric-scented candles their aroma. In its unaltered state limonene is considered so safe that it is used to flavour food, as well to give cleaning products and air fresheners a lemony scent.

But limonene also reacts with naturally occurring ozone when released into the air, causing one in every two limonene molecules to mutate into formaldehyde.

**Emulsifiers in Food Products Can Cause Cancer in Animals****Time Magazine**<sup>3)</sup> reported "What's good for keeping food products stable and safe on the shelf may not be healthy for the body. Researchers report in the journal **Cancer Research**<sup>4)</sup> that emulsifiers create the ideal conditions for triggering colon cancer in mice."

Emulsifiers are chemicals added to blend oily and water-based ingredients in processed foods and to keep them consistently mixed so they do not separate. The article pointed out that processed foods often contain several of them. Food regulations limit the amount of each emulsifier present in a particular food product to 1% to 2%, but they do not restrict the number of emulsifiers allowed. Emilie Viennois from the Institute of Biomedical Sciences at Georgia State University, who led the new research, showed in earlier work that emulsifiers changed the good bacteria living in the guts of mice.

These changes promoted metabolic syndrome, which is a risk factor for certain chronic diseases such as diabetes, obesity heart disease, and inflammation; those in turn have been connected to inflammatory bowel disease (IBD). Some cases of IBD can trigger tumors to grow.

### Resources for this article

1. [TimesofMalta.com](http://TimesofMalta.com)

<http://www.timesofmalta.com/articles/view/20161106/business-news/Citrus-scented-candles-could-be-harmful.630185>

**2. Alastair Lewis of the National Centre for Atmospheric Science at the University of York**

<https://www.york.ac.uk/chemistry/news/deptnews/lewisbbcprog/>

**3. Time Magazine**

<http://time.com/4559107/processed-food-additive-emulsifier-cancer/>

**4. Cancer Research**

<http://cancerres.aacrjournals.org/content/early/2016/11/05/0008-5472.CAN-16-1359>