

Two food additives with previously unrecognized estrogen-like effects in two food additives

March 2 2009



Scientists have identified two food additives with previously unrecognized estrogen-like effects. One of the additives, 4-hexylresorcinol, is used to prevent discoloration in shrimp and other shellfish. Image: National Cancer Institute, Renee Comet

Scientists in Italy are reporting development and successful use of a fast new method to identify food additives that act as so-called "xenoestrogens" — substances with estrogen-like effects that are stirring international health concerns. They used the method in a large-scale screening of additives that discovered two additives with previously unrecognized xenoestrogen effects. Their report appears in the current edition of ACS' *Chemical Research in Toxicology*.

In the study, Pietro Cozzini and colleagues cite increasing concern about identifying these substances and about the possible health effects.

Synthetic chemicals that mimic natural estrogens (called "xenoestrogens," literally, "foreign estrogens") have been linked to a range of human health effects. They range from reduced sperm counts in men to an increased risk of breast cancer in women.

The scientists used the new method to search a food additive database of 1,500 substances, and verified that the method could identify xenoestrogens. In the course of that work, they identified two previous unrecognized xenoestrogens. One was propyl gallate, a preservative used to prevent fats and oils from spoiling. The other was 4-hexylresorcinol, used to prevent discoloration in shrimp and other shellfish. "Some caution should be issued for the use of propyl gallate and 4-hexylresorcinol as food additives," they recommend in the study.

More information: "Identification of Xenoestrogens in Food Additives by an Integrated in Silico and In Vivo Approach", *Chemical Research in Toxicology*

Provided by ACS

Citation: Two food additives with previously unrecognized estrogen-like effects in two food additives (2009, March 2) retrieved 10 April 2024 from <https://phys.org/news/2009-03-food-additives-previously-unrecognized-estrogen-like.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.
