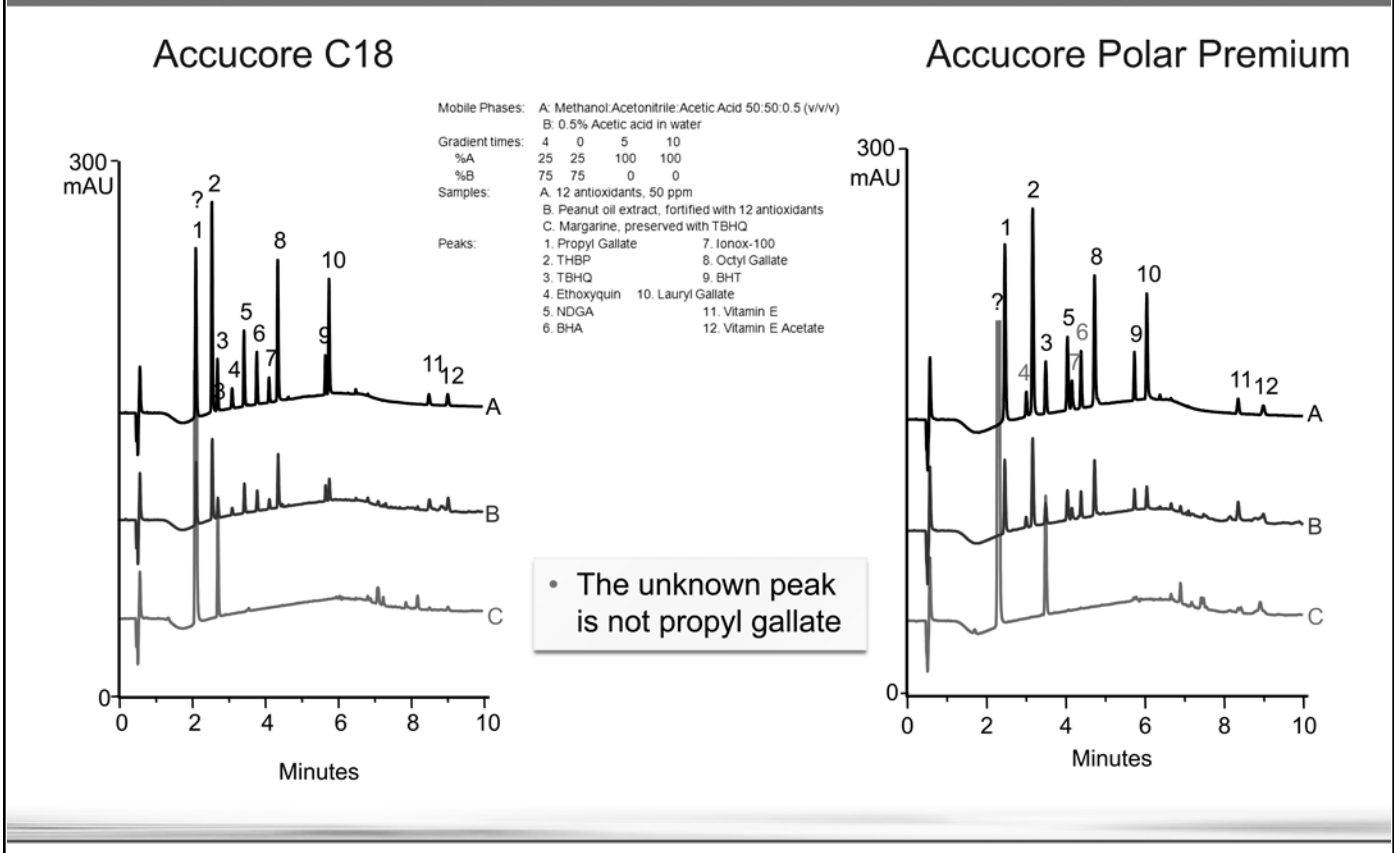
from nearby states such as Washington, Idaho, or Oregon, the contamination may be accidental, whereas seeds from more distant testing sites in Minnesota, Nebraska, or Illinois may imply that seeds were intentionally kept and released after the MON71800 trials ended in 2005. Monsanto representatives have said the seeds were planted as a form of company sabotage, but this theory has received little scientific support so far (http://tinyurl.com/Monsanto-sabotage). According to Monsanto, the seeds, planted on 400 hectares of land during field trials, were accounted for and either secured or destroyed. ■

[FAST FACT]



Courtesy of ThermoFisher Scientific

Mystery in the margarine

The analysis of antioxidants in edible oils is essential in determining whether an oil is fortified against oxidation (which can lead to rancidity) or if there are other components present in the oil.

Researchers at Thermo Scientific in Sunnyvale, California, USA, recently analyzed antioxidants in a household margarine by high-performance liquid chromatography according to the AOAC 983.15 method. Results obtained using a Thermo Scientific™ Accucore C18™ column revealed a peak that elutes at the same time as propyl gallate, but propyl gallate was not listed as an ingredient. The results (left figure) were compared against a peanut oil fortified with 12 antioxidants.

Was the mystery peak propyl gallate, which the manufacturer neglected to list on the label? Or was it the result of a matrix interference effect from another antioxidant or an unidentified constituent? To find out, researchers Mark Tracy, Paul Voelker, and Xiaodong Liu repeated the analysis with a second column type, an Accucore Polar PremiumTM. Results (right figure) show that the margarine mystery peak elutes earlier than propyl gallate and that the tert-butyl hydroquinone (TBHQ) in the margarine overlays with the TBHQ in the peanut oil. The conclusion is the mystery peak is an (as yet) unidentified constituent.