

# Researchers investigate natural compounds in cranberries

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ARS scientists closely examined the types and amounts of interesting compounds in cranberry pomace (center), which is the stems, skin, and pulp left over after the berries are pressed to make juice or canned products. Photo: Peggy Greb.

(Phys.org)—Cranberries are already known to be rich in fiber, and to provide vitamin C and potassium, both of which are essential nutrients. But the tart, colorful berries are also a source of natural compounds known as polyphenols. These compounds have been the focus of a series of studies by former U.S. Department of Agriculture (USDA) chemist Ronald L. Prior and his colleagues.

Previously with the USDA Agricultural Research Service (ARS) at the Arkansas Children's Nutrition Center in Little Rock, Prior is now an adjunct professor of [food science](#) at the University of Arkansas at Fayetteville. ARS is USDA's chief intramural scientific research agency.

In one investigation, the researchers closely examined the kinds and amounts of compounds in cranberry pomace—the stems, skins, seeds, and pulp that are left over when the berries are pressed to make juice or canned products. According to Prior, cranberry processors are looking for new, value-added uses for these [byproducts](#).

Much is already known about the major polyphenols in fresh cranberries. But the Arkansas study was apparently one of the first to extensively investigate and document the kinds and amounts of major cranberry pomace polyphenols.

The researchers used sophisticated analytical procedures to measure the molecular weight of pomace constituents and, from that, to determine their identity. If appropriate reference standards were available, the quantity of the constituent was determined.

Among other findings, the team determined that the pomace contained appreciable levels of flavonols, a class of polyphenols that includes, for example, [quercetin](#) and myricetin.

Fresh whole cranberries are already known to contain high levels of flavonols—more than most berries and, in fact, more than most fruits or vegetables. But the research was the first to show that nearly half of the total flavonol content of whole berries was left behind in the pomace.

Prior collaborated on the research with Luke R. Howard of the University of Arkansas at Fayetteville, and with food technologist Brittany L. White, formerly at the university and now with ARS in Raleigh, N.C.

Published in the *Journal of Agricultural and Food Chemistry*, this 2010 study is still the most up-to-date analysis of its kind for cranberry pomace. The findings are a readily accessible reference for medical and

nutrition researchers, food processors, and others, Prior noted.

Provided by Agricultural Research Service

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