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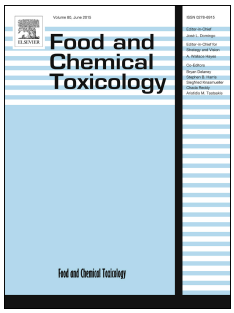

Stability of dietary polyphenols: It's never too late to mend?

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Letter to editor

Stability of dietary polyphenols: It's never too late to mend?

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Abstract

We have comprehensively investigated the structure-stability relationship of natural polyphenols in DMEM medium without cells. Polyphenols with catechol or pyrogallol structure were evidently instable in DMEM medium without cells. Herein, we further investigate stability of polyphenols when incubated with cancer cells and its related mechanism. After incubated with SK-28 cells and A549 cells at 37 °C in 5% CO_2 for 72 h, the new products of quercetin and 5,7,3',4'-tetrahydroxyflavone were found to quite different from different cells. It is time to investigate what really happened for polyphenols and the new products of polyphenols in cancer cells, as well as the related mechanism. It is very important to further check the bioactivity of these new products, which will avoid erroneous conclusions for what's the really bioactive compounds.

Keywords: stability; dietary polyphenols; cells; quercetin; 5,7,3',4'-tetrahydroxyflavone; new products

The benefits of polyphenols in diets such as flavonoids, isoflavonoids, catechins, tannins, phenolic acids, stilbenoids and procyanidins have been widely studied for decades. The function