

etermination of catechins in matcha green tea by micellar electrokinetic chromatography *

Weiss, Anderton • Published 2003 • Chemistry, Medicine

TLDR A rapid method of analysis of five catechins and caffeine in matcha using micellar electrokinetic chromatography is developed and results indicate that the concentration of epigallocatechin gallate available from drinking matcha is 137 times greater than the amount of EGCG available from China Green Tips green tea, and at least three times higher than the largest literature value for other green teas.

Abstract Catechins in green tea are known to have many beneficial health properties. Recently, it has been suggested that matcha has greater potential health benefits than other green teas. Matcha is a special powdered green tea used in the Japanese tea ceremony. However, there has been no investigation to quantitate the catechin intake from matcha compared to common green teas. We have developed a rapid method of analysis of five catechins and caffeine in matcha using micellar electrokinetic chromatography. Results are presented for water and methanol extractions of matcha compared with water extraction of a popular green tea. Using a mg catechin /g of dry leaf comparison, results indicate that the concentration of epigallocatechin gallate (EGCG) available from drinking matcha is 137 times greater than the amount of EGCG available from China Green Tips green tea, and at least three times higher than the largest literature value for other green teas. © 2003 Elsevier B.V. All rights reserved.

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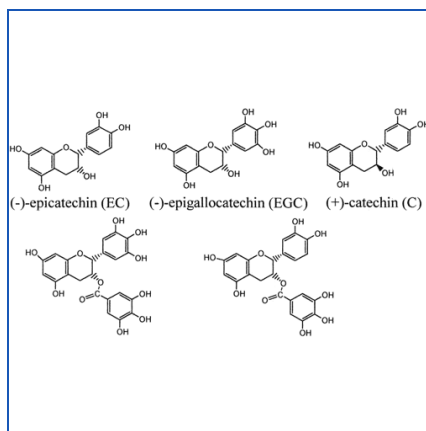


Figure 1

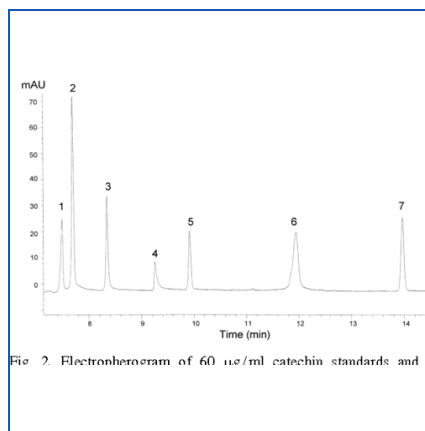


Figure 2

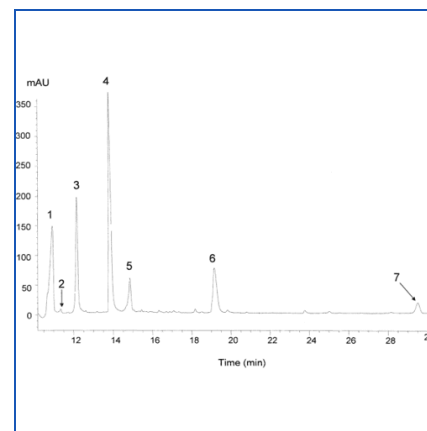


Figure 5

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