

Antioxidant Activity of Green Coffee Conserves

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SUMMARY

Antioxidant-rich fractions were extracted from green coffee using methanol plus water mixtures. In arabica and robusta, methanol to water ratio of 60:40 gave highest yield of conserves followed by 70:30 and 80:20. The extracts were screened for their potential as antioxidants using in vitro models, such as β -carotene-linoleate and 1,1-diphenyl-2-picrylhydrazyl (DPPH) model systems. The methanol to water ratio of 60:40 robusta coffee conserve showed 70 and 73% antioxidant activity at 200 ppm using the β -carotene-linoleate and DPPH model systems, respectively. Similarly, the methanol to water ratio of 70:30 extracts of arabica coffee conserve showed 65 and 70% antioxidant activity at 200 ppm using the same model systems, respectively. The results showed that the ferulic and *p*-coumaric acids, made a greater contribution to total antioxidant activity than chlorogenic acids. The conserves exhibited maximum antioxidant activity than individual chlorogenic acids. An HPLC method has been developed to determine chlorogenic acids in green coffee extracts and this method has repeatability, precision, and rapidity.