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Antioxidant activities and total phenolic content of four blueberries cultivars grown in New Zealand
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Background – Blueberries are considered a healthy addition to the diet as a rich source of antioxidants. Although the nutritional content of blueberries is highly affected by environmental growing conditions, no research has been published on New Zealand grown blueberries varieties.

Objective – To investigate antioxidant activities and total phenolic content of four NZ grown blueberry cultivars.

Design – Atlanta, Burlington, Jersey and Stanley blueberries were harvested from one commercial producer in Canterbury, New Zealand. Total phenolic content (TPC) was measured using Folin–Ciocalteu reagent and antioxidant activities using the superoxide anion (O₂⁻) scavenging activity (SASA) method and the DPPH method.

Outcomes – TPC of NZ blueberries ranged from 230.10 ± 18.00 to 497.10 ± 63.20 mg GAE/100g. Burlington blueberries had significantly (P<0.001) higher TPC than other varieties. Antioxidant activity (SASA) was significantly (P<0.05) different between cultivars. Burlington showed highest activity (1369 ± 141GAE mg/100 g).

There was a significant correlation between TPC and SASA (r = 0.58, P<0.05). Antioxidant activity by DPPH showed no differences between cultivars (P >0.05).

Conclusion – TPC of NZ blueberries is similar to blueberries grown in America. This study suggests Burlington may offer a slight advantage in antioxidant content over Atlanta, Jersey and Stanley cultivars.

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Total phenolics content and antioxidant activities from commercial coffee drinks
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Background – Coffee is a very popular beverage and it contains several bioactive compounds. Antioxidant activities have been reported in coffee, however, little is known on the level of phenolics and the antioxidant capacity in commercial coffee drinks.

Objective – To determine the phenolics content of six commercial coffee drinks (espresso, long black, filtered, flat white, latte and cappuccino) from 4 different coffee retailers, and to investigate their antioxidant activities.

Design – Six commercial coffee drinks were purchased from 4 different retailers on 3 different days. Total phenolics concentration (TPC) was determined using the Folin–Ciocalteu method. Antioxidant activities of the coffees were estimated using the DPPH and the superoxide anion (O₂⁻) scavenging activity (SASA) methods.

Outcomes – Black coffee (espresso, long black, and filtered) was higher (P < 0.001) in TPC /g freeze-dried extract compared with white coffee (flat white, latte and cappuccino). Based on the serve of coffee, TPC (GAE/ cup) from different retailers was not different (P > 0.05), whereas white coffee had higher (P < 0.001) TPC GAE/ cup compared with black coffee. The overall %SASA per serve is higher (P < 0.001) in white coffee than in black coffee. A similar trend was seen using DPPH assay. Significant correlations were found between TPC, SASA and DPPH.

Conclusions – The data show that coffee is a good source for antioxidants, but variation between retailers and within retailers can affect the daily intake of phenolics from coffee.