

Title Effect of semi-drying on the antioxidant components of tomatoes  
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### Abstract

Three tomato cultivars (Excell, Tradiro, and Flavourine) grown under hydroponic conditions in a commercial greenhouse in New Zealand were semi-dried at 42 °C. The semi-dried tomatoes contained low levels of 5-hydroxymethyl-2-furfural and were significantly ( $p < 0.05$ ) darker (lower CIELAB  $L^*$  values) and had a higher mean  $a^*/b^*$  value (1.6) than the fresh tomatoes (1.2). The mean total phenolics in the semi-dried samples of tomatoes (300 mg gallic acid equivalents, GAE/100 g dry matter (DM)) was significantly lower than that of fresh tomatoes (404 mg GAE/100 g DM). The mean total flavonoid, and lycopene contents in the fresh samples (206 mg rutin equivalents/100 g DM, 63 mg/100 g DM, respectively) also showed a significant decrease after semi-drying (179 mg rutin equivalents/100 g, 54 mg/100 g DM, respectively). Ascorbic acid content in fresh tomatoes (284 mg/100 g DM) decreased to 223 mg/100 g DM after drying. The total antioxidant activity of the semi-dried tomatoes (1783  $\mu$ mole trolox equivalents antioxidant capacity (TEAC)/100 g DM) was significantly ( $p < 0.05$ ) lower than that of the fresh samples (2730  $\mu$ mole TEAC/100 g DM).