

## Evaluation of biochemical properties and mineral elements of five strawberry cultivars in soilless culture system

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### Abstract

This experiment was conducted to evaluate some biochemical characteristics and mineral elements of commercial strawberry cultivars available in Iran. Daughter plants of Selva, Queen Eliza, Paross, Aromas and Kurdistan cultivars were planted in Dcember 2014 in greenhouse with soilless culture system. Fruits of these cultivars were harvested at the commercial stage of maturity and some of their biochemical characteristics and mineral elements were measured. Results showed significant difference between cultivars for all the studied traits. The highest soluble solids (9.16 °Brix) and titrable acid (1.04 %) was measured in Paros and Queen Eliza cultivars. Aromas and Queen Eliza had the highest amount of vitamin C (81.96 mg/100 g FW) and electrical conductivity (4.94), respectively. Also, the highest pH and flavor index (TSS/TA) were observed in Kurdistan cultivar. Queen Eliza and Paross cultivars had the highest concentration of potassium, magnesium, iron and phosphorus. The highest amount of calcium and Manganese was measured in Kurdistan cultivars. Although we cannot recommend a cultivar which has large amounts of biochemical compounds and mineral elements, but according to this research, Kurdistan cultivar could be recommended in terms of flavor index, calcium, magnesium and manganese and Queen Eliza cultivar in terms of titrable acid and content of iron, magnesium and potassium.

**Keywords:** Strawberry, Qualitative traits, Soilless culture.

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