

**Title** Physio-chemical properties and antioxidant contents of sweet pepper cultivars and effects of grilling

**Author** Umezuruike Linus Opara and Majeed R. Al-Ani

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### **Abstract**

We studied the physico-chemical properties and micro-nutrients of four sweet pepper cultivars (yellow, red, green and orange related to their quality and antioxidant contents (vitamin C and carotenoids). Sweet pepper fruit samples were bought from markets in Muscat and for size, colour, firmness, sugar content, pH, titratable acidity, vitamin C, lycopene, total carotenoids, and total chlorophyll contents. The results showed significant variations in measured quality attributes, vitamin C content as well as antioxidant pigments. Green sweet pepper were generally firmer but contained significantly lower sugar (oBrix), titratable acidity, vitamin C (mg/100gFW) and antioxidant pigments. However, vitamin C content was highest yellow pepper (yellow>red>orange>green), while total carotenoids content was highest orange pepper (orange>red>yellow>green). Grilling resulted in about 30% reduction in vitamin C content, irrespective of sweet pepper cultivar, with slightly higher reduction in cultivars which had higher initial content. The effect of grilling on carotenoids content appeared to be dependent of cultivar.