

# Effect of domestic cooking on physicochemical parameters, phytochemicals and antioxidant properties of Algerian tomato (*Solanum Lycopersicum* L. Var. Marmande)

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## Description

Most of the vegetables are consumed after being cooked. Tomatoes are widely consumed either raw or after processing and can provide a significant proportion of the total antioxidants in the diet. This study was performed to investigate the influence of the traditional cooking methods of Algerian people (frying, griddling and baking) on the physicochemical properties (pH, moisture, acidity, Brix, total sugar, ash and non enzymatic browning index), phytochemicals contents (phenolics, flavonoids, anthocyanins, flavonols vitamin C, carotenoids and lycopene) and the antioxidant activity of tomato (*S. lycopersicum*) cultivated in Algeria. Cooking treatment affect positively their physicochemical properties (pH, acidity, Brix, total sugar, ash and non-enzymatic browning index) except the moisture content which decreases significantly. After cooking, the number of phenolics, flavonoids and anthocyanins increase significantly, nevertheless vitamin C, carotenoids and lycopene contents decrease for all cooked samples. Finally, DPPH and ABTS free radicals scavenging activities increased in cooked tomato extracts, while a slight decrease was recorded in ferric reducing power (FRP) due to the reduction of vitamin C contents. Consequently, the antioxidant activity of tomato depends on the cooking procedure and griddling, frying seems to be the best cooking way that enhances its antioxidant activity.

## Total citations

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