



IMPACT OF TOMATO BY-PRODUCTS ADDITION ON THE OXIDATIVE STABILITY OF PUMPKIN OIL

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Abstract: *Lately, there has been a significant surge in the processing of botanical resources, specifically involving grains, fruits, and vegetable crops. Extracted by pressing high-grade, roasted seeds, pumpkin seed oil (*Cucurbita pepo* L) is a dark, unrefined culinary oil frequently utilized as a dressing for salads.*

• Introduction

During the manufacturing of tomato-derived goods, approximately 10% to 35% of the initial raw material is discarded as waste.

• Material and method

To assess long-term stability, pumpkin oil enriched with tomato by-products was monitored for six months at a controlled ambient temperature of 20°C. Tomato skins and seeds, rich in bioactive compounds, were dried at 50°C using a hot-air oven. The resulting powder was added to pumpkin oil in various proportions (0.1, 1, 1.5, and 2% w/v) to maintain its quality.

To evaluate the oxidative status of food lipids, chemical analysis was conducted by measuring peroxide (PV) and p-anisidine (p-AV) values, followed by the calculation of the total oxidation (TOTOX) index.

• Results and discussions

High levels of linoleic acid, an omega-6 fatty acid found in pumpkin oil, are associated with better cardiovascular health and regulated blood sugar levels.

• Conclusions

The findings suggest that tomato by-products can serve as effective natural antioxidants to enhance the stability of pumpkin oil.