

## عنوان مقاله:

Optimising drying conditions for maximum nutritional quality and bioactivity of Cucurbita pepo L var. fastigata flesh and seeds

## محل انتشار:

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## خلاصه مقاله:

**Purpose:** Transformation of pumpkin flesh and seeds into dry flours increases their shelf stability and versatility. This study sought to optimise drying conditions for production of flour with high nutritional and nutraceutical value from flesh and seeds of *C. pepo* L var. *fastigata* using Response Surface Methodology, I optimal design. **Research Method:** Pumpkin flesh and seeds were dried following temperature time combinations got using I optimal design. All dry samples were tested for ascorbic acid, total carotenoids, total antioxidant capacity and starch digestibility. Seeds were also tested for in vitro protein digestibility, trypsin inhibitor activity, alpha tocopherol, beta tocopherol, and alpha tocotrienol. **Findings:** The predicted optimum drying conditions for production of *C. pepo* L var. *fastigata* flour with maximum nutritional quality and bioactivity were 57°C; 6.9 hours for flesh and 60°C; 3.15 hours for seeds. The most influential model terms were temperature for resistant starch, in vitro protein digestibility, trypsin inhibitor activity, total carotenoids, alpha tocopherol, beta tocopherol and alpha tocotrienol; quadratic term of temperature and time for ascorbic acid; and drying time for total antioxidant activity of the flesh and temperature for antioxidant activity for seeds. **Research limitations:** Dryer air flow rate was not included as a variable. **Originality/Value:** Results give, for the first time, an objective basis for choice of the drying conditions *C. pepo* L var. *fastigata* flesh and seeds for maximum nutritional and health benefits.

## کلمات کلیدی:

Antioxidant activity, Optimisation, Pumpkin, Starch digestibility

## لینک ثابت مقاله در پایگاه سیویلیکا:

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