

Potato peel flour: a potential ingredient for functional foods development

Milagros Moluenda¹, Beatriz Lozano¹, Fernando Villalva¹, Ana Paula, Olivares La Madrid²

¹Universidad Nacional de Salta, Argentina

² Instituto de Investigaciones para la Industria Química, INIQUI, Argentina

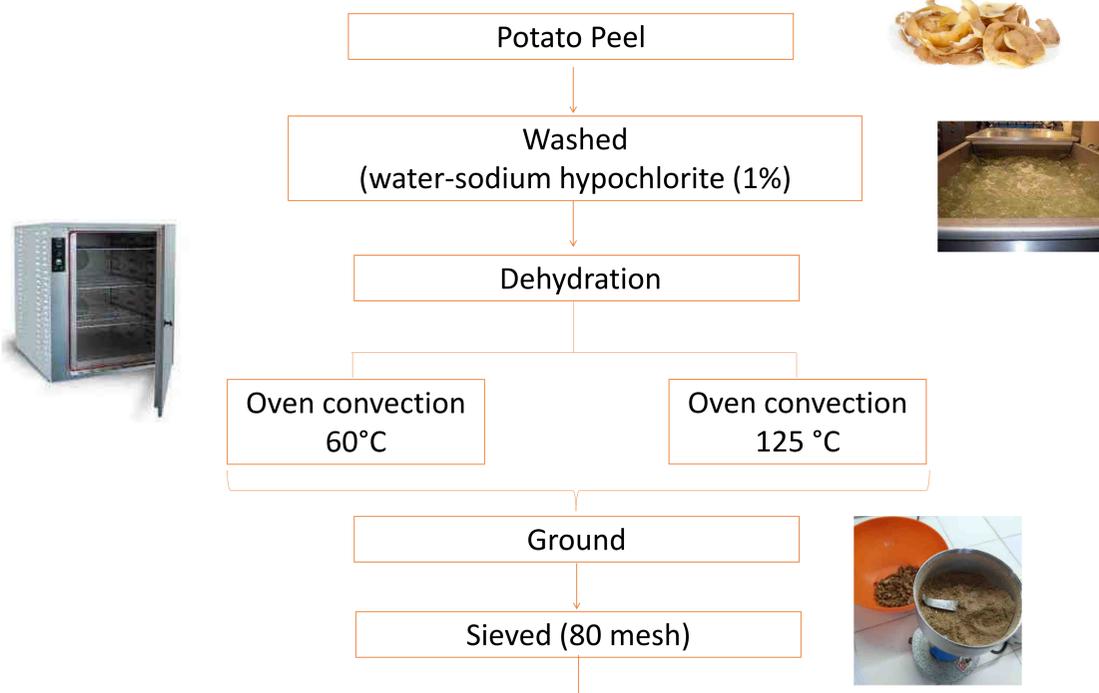
*apolivares@outlook.com.ar

INTRODUCTION

Potato peel. (PP) is an agroindustrial waste with a potential use in by products like flour and starch. Also, is a source of many bioactive compounds like fiber and phenolics compounds with antioxidant activity that's why it is an alternative ingredient for foods with functional properties. The aim of this work was to obtain potato peel flour and evaluate their physical and functional properties.



METHODOLOGY



Physico-chemical analysis

aw, pH, moisture, ash, water absorption index (WSA), water solubility index (WSI), swelling power (SP) were determined. Total phenols by Folin Ciocalteu and antioxidant capacity evaluated by ABTS assay

RESULTS



Samples	pH	Moisture (%)	aw	Ashes (%)	WAC	WSI	SP	PC (mgEAG/100g)	AA (% Inhibition)
FPP 60°C	6,63 ^c	13,23 ^d	0,66 ^c	7,18 ^b	4,00 ^b	4,11 ^a	4,17 ^c	195,28 ^b	95,15 ^b
FPP 125°C	5,60 ^b	5,38 ^a	0,36 ^b	7,00 ^a	4,95 ^d	6,39 ^c	5,37 ^d	216,7 ^d	97,02 ^c
PPP 60°C	7,02 ^d	10,48 ^c	0,38 ^b	7,50 ^d	3,45 ^a	5,06 ^b	3,63 ^a	169,5 ^a	93,16 ^a
PPP 125°C	5,54 ^a	10,38 ^b	0,27 ^a	7,45 ^c	4,76 ^c	5,05 ^b	4,00 ^b	201,13 ^c	96,30 ^{bc}

FPP: Flour potato peel; PPP: Potato pulp peel; WAC: Water absorption capacity; WSI: Water solubility index; SP: Swelling power; PC: Phenolic compounds; AA: Antioxidant activity.

Significant differences were found between the different parameters evaluated ($p < 0.05$). The pH and moisture values were adequate according to the Argentine food code. The WAC, WSA and SP values could be related to the degree of starch modification and its ability to form gels. PC and AA values would indicate that the dehydration process at 125°C of FPP would retain a greater number of bioactive fractions. It is concluded that PP can be a value-added raw material for the production of food products.



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