



OPTIMISATION OF A READY TO USE “NUTRITIOUS MIX” INCORPORATING INDIAN HERBS USING RESPONSE SURFACE METHODOLOGY

Monika Jain^{1*}, Chetna Singh¹, Somya Singhal¹, Khushboo Gupta¹

¹Department of Food Science and Nutrition, Banasthali Vidyapith, Rajasthan, India-304022

*drmonikajain2000@gmail.com

ABSTRACT

Indian medicinal herbs are the natural and healthy alternative source of medications possessing side effects for various ailments. Their incorporation in food products can make it both nutritious and healthful. Nutritious mix was formulated as an instant food that can be reconstituted for consumption effortlessly. The purpose of the study was to optimise the amounts of Indian herbs as functional foods for incorporation in the powder to enhance its nutritional and functional properties. RSM (response surface methodology) and CCD (central composite rotatable design) were utilised for optimisation with three process variables (namely, amounts of apple powder, *Rauwolfia serpentina* and black cumin seeds) and potassium, sodium, fibre and overall acceptability as response variables. The response surface plots along with regression models were produced and regression coefficients and lack of fit tests were used to test the adequacy. The optimum levels that were attained for in range potassium (477.71 mg), minimum sodium (39.85 mg), maximum fibre (4.09 g) and maximum overall acceptability (87.61) were: 5.00 g apple powder, 0.70 g *Rauwolfia serpentina* and 10.00 g black cumin seeds powder. Optimum recipe was nutritionally adequate and highly acceptable. Nutritious mix can provide beneficial roles to the people in maintaining their health without changing their regular diet patterns.

Keywords:

Apple;

Black cumin seeds;

Central composite rotatable design;

Rauwolfia serpentina.