RESISTANT STARCH CONTENT OF COMMERCIAL UNRIPE BANANA FLOUR: UNEXPECTED VALUES?


1Food Science Pos-Graduation Program, Department of Food and Experimental Nutrition – Faculty of Pharmaceutical Sciences (FCF), University of São Paulo - USP, Av. Prof. Lineu Prestes 580, 05508-000, São Paulo, Brazil.
2Scientific Initiation Program, Department of Food and Experimental Nutrition, FCF, USP, São Paulo, Brazil.
3Department of Food and Experimental Nutrition, FCF, USP, São Paulo, Brazil.

Unripe banana flour (UBF) with high content of resistant starch (RS) has been evaluated about its positive physiological effects. Based on scientific evidences of these effects and stimulated by media reports, some industries have developed 100% UBF products. Those were not classified as functional food ingredients, however they claim health properties and use specific merchandizing. Therefore it becomes necessary to evaluate the actual RS content of the UBF available. Nine UBF commercial brands were selected and evaluated on RS, total starch (TS), soluble sugars (SS) content, wet weight (WW), and optical microscopy (OM) characterization. None of those brands identified the green banana variety used. In the literature a mean value of 50% RS in different sources of UBF was found; only three UBF brands analyzed in the present study had a RS content of over 40%. Two brands indicated a TS content of 80% with less than 10% of RS, which combined with the OM analyzes confirmed the presence of corn starch. Another brand had 13% RS and 5% SS in its composition, indicating partial use of ripe banana, furthermore, the OM analyses indicate the presence of gelatinized starch. The UBF RS content is dependent on the banana ripeness stage and can be reduced by physical processes. It is a consumers right to have reliable information in the label of all food products, therefore it is of great importance to alert food safety authorities about the irregularities in UBF labeling and to improve UBF legislation.

Financing: Capes, CNPq, PIBIC/CNPq and NAPAN (Advanced Research Center in Food Science and Nutrition).