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## The Colombian core collection of *Solanum tuberosum* group phureja as a source of protein and dietary fibre for breeding programs

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Potato tubers are one of the most consumed foods in Colombia with a daily intake of 231 g per person. Recently, we published a manuscript describing the nutritional content of both commercial cultivars and advanced breeding clones of *Solanum tuberosum* group phureja. We found that the nutritional content of the advanced breeding clones was higher as compared to the commercial cultivars. Within the breeding program of Universidad Nacional de Colombia, we evaluated the fat, protein, ash, soluble dietary fibre (SDF) and insoluble dietary fibre (IDF) of 94 whole boiled potato tubers from the *Solanum tuberosum* group phureja Colombian Core Collection (CCC) and compared those values against criolla Colombia, the main commercial cultivar of *S. tuberosum* group phureja. Fat, protein, ash, SDF and IDF (if expressed as g/100 g fresh weight, FW) in criolla Colombia were 0.2, 4.0, 4.5, 3.0 and 12.3 respectively. When accessing those contents in the CCC the values came up to 0.6, 17.2, 6.9, 6.5 and 20.8 respectively. The high level of protein, SDF and IDF in some genotypes of the CCC represents an opportunity for potato breeding programs when the nutritional value is taken into account. For instance, the contents of protein found in the CCC would represent up to 16% for male and up to 19% for female of the recommended intake values considering a serving portion of 231 g boiled potato per day.

### Biography

Carlos-Eduardo Narvaez-Cuenca has completed his PhD from Wageningen University in The Netherlands. He is an Assistant Professor at Universidad Nacional de Colombia, where he teaches food chemistry, analytical chemistry and food analysis. He has published more than 35 papers in reputed journals. His interests are on the nutritional and functional composition of fresh and processed food as well as on the health benefits of pecticpolysaccharides. He is currently the Editor of *Revista Colombiana de Química*, a Colombian journal that publishes peer reviewed articles in chemistry.

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