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Physicochemical, nutritive and safety evaluation of local cereal flours sold in areas of the District of Abidjan-Côte d'Ivoire

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SUMMARY

Objective: The aim of this work was to contribute to the food safety of Ivorian consumers by investigating the nutritive value and the microbial quality of local cereal flours offered for retail sale on different markets located on selected areas of the District of Abidjan.

Methodology and results: Local cereal flours samples were collected and their physicochemical and microbiological characteristics determined. Mean value intervals were as follow: moisture (22.53 – 35.36 %), pH (4.46 – 7.95), ash (0.38 – 1.93 %), proteins (3.93 – 7.46 %), lipids (1.20 – 3.84 %), carbohydrates (72.13 – 89.19 %). The cereal flours analyzed in this study contained remarkably high amounts of potassium (162.92 – 1363.93 mg/100 g) with highest value (718.08 - 1363.93 mg/100 g) for potash-treated samples. The calculated [Phytates]/ [Fe] and [Phyta

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Conclusion and application of results: Given the results obtained, awareness campaign on good hygiene practices and good manufacturing processing should be considered. Such initiatives need to be carried amongst local cereal producers to help minimize food safety risk and limit nutritive depletion in flour meals due to practices inherited from traditional processing methods.

Keywords: cereal flours, proximate composition, nutritive value, microbial quality.

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