

EFFECT OF COOKING IN PHENOLIC CONTENT AND ANTIOXIDANT CAPACITY BIOFORTIFIED CULTIVARS OF COWPEA (*Vigna unguiculata* (L.) Walp.)

BARROS, N. V. A. [1]; NETO, I. M. C. [2]; Leal, M. J. B. [3]; ROCHA, M.M [4]; Araújo, M. A. M [5]; Moreira-Araújo, R. S. R [6]

[1] Universidade Federal do Piauí / Departamento de Nutrição; [2] Universidade Federal do Piauí; [3] Universidade Federal do Piauí; [4] Embrapa Meio-Norte; [5] Fundação Municipal de Saúde - Teresina; [6] Universidade Federal do Piauí

Contato: Graduate Program in Food and Nutrition. Federal University of Piauí. Campus Petrônio Portela without number. Nutrition Department, Block 13. Neighborhood: Ininga. Postal code: 64049-550. Teresina, Piauí. nara.vanessa@hotmail.com

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With the development of genetically improved cultivars of cowpea, legume with high nutritional value and functional, this has been the object of studies related to the chemical composition before and after processing. Thus, was evaluated the effect of cooking on the content of phenolic compounds and antioxidant capacity of cultivars of cowpea. Were analyzed three genetically improved cultivars of cowpea: BRS Xiquexique, BRS Aracê and BRS Tumucumaque. The raw beans were triturated using a mill and sieved (30 mesh) and was performed the cooking of the beans in domestic pressure cooker, using a proportion of 1:4 (w/v) for 13 minutes. The compounds phenolics were determined by the spectrophotometric method with Folin Ciocalteu. The antioxidant capacity was evaluated by the capture of the radicals DPPH(2,2-diphenyl-1-picrylhydrazyl), ABTS(2,2-azino-bis(3-ethylbenzenothiazoline-6-sulfonic acid), FRAP(Ferric Reducing Antioxidant Potential) and results were expressed in $\mu\text{mol TEAC}$ (Trolox equivalent antioxidant activity)/100g sample. All analyzes were performed in triplicate and results were expressed as mean \pm standard deviation. Comparing the three methods, the cultivars showed high antioxidant capacity. The raw grains showed percentage inhibition DPPH around 50%, especially the cultivars Aracê (614,72 $\mu\text{mol TEAC}/100\text{g}$) and Xiquexique (575,56 $\mu\text{mol TEAC}/100\text{g}$). There were differences in phenolic content in raw grains, showing the highest content cultivar Aracê (195,14 mg/100g) followed cultivars Xiquexique (192,81 mg/100g) and Tumucumaque (162,96 mg/100g). As reported in the literature, the cooking affected the levels of phenolic compounds, causing a reduction in the grains, probably due to changes in the molecules caused by the temperature rise, turning the other phenolic substances.

Palavras-chave: Bioactive compounds; antioxidant activity; Thermal processing

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