



بسم الله الرحمن الرحيم

**Sudan University of Science and Technology
College of Agricultural Studies
Department of Foods Science and Technology**

**Effect of heat cooking on chemical
composition of two local varieties of Dried
Okra**

**تأثير حرارة الطبخ على الخواص الكيميائية لصنفين
من البامية المجففة المحلية**

A dissertation submitted in partial fulfillment for the
requirements of the degree of B.Sc in Food Science and
Technology (Honor)

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الآية

قال تعالى:

وَفِي الْأَرْضِ قِطْعٌ مُتَجَاوِرَاتٌ وَجَنَّاتٌ مِنْ
أَعْنَابٍ وَزُرْعٌ وَنَخِيلٌ صِنْوَانٌ وَغَيْرُ صِنْوَانٍ
يُسْقَى بِمَاءٍ وَاحِدٍ وَنُفِصِّلُ بَعْضَهَا عَلَى بَعْضٍ
(فِي الْأَكْلِ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِقَوْمٍ يَعْقِلُونَ)

صدق الله العظيم

(سورة الرعد الآية 4)

DEDICATION

We dedicate this study to our fathers, affectionate mothers, brothers, sisters, friends and all relatives. Also we dedicate this work to everyone who helps in the edition of this study.

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Abstract

This experiment was conducted to study the nutritive value of two varieties of dried Okra (Sara and Khartoumia). Samples were taken (dried Okra) from Alsoug Alshabi Omdurman. The proximate chemical composition of variety Sara (total carbohydrates, moisture content, crude protein content, ash content, crude fiber content, fat content) was found to be 71.24%, 8.48%, 10.11%, 9.57%, 20.93%, 0.60%, respectively. On the other hand vitamin C content and tannins content were found to be 23.83 mg/100g, 0.26%, respectively.

The proximate chemical composition of variety Khartoumia (moisture content, crude protein content, total carbohydrates content, ash content, crude fiber content, fat content) was found to be 10.15%, 9.22%, 71.75%, 7.78%, 15.94%, 1.1%, respectively. On the other hand vitamin C content and tannins content were found to be 23.77 mg/100g, 0.21%, respectively.

Also experiment was conducted to study the effect of cooking temperature on the chemical proximate composition of the two varieties, and we found in variety Sara the (moisture content, crude protein content, total carbohydrates, ash content, crude fiber content, fat content) was found to be 11.64%, 19.87%, 55.35%, 9.97%, 20.16%, 3.17%, respectively. On the other hand vitamin C content and tannin content 15.3 mg/g 0.22%, respectively.

In variety Khartoumia the (moisture content, crude protein, total carbohydrates content, ash content, crude fiber content, fat content) was found to be 12.02%, 14.73%, 58.65%, 11.1%, 15.63%, 3.5%, respectively. On the other hand vitamin C content and tannin content 13.30 mg/g 0.20%, respectively.

الملخص

أجريت هذه التجربة لدراسة القيمة الغذائية لصنفين من البامية المجففة (ساره وخرطوميه). تم أخذ العينات (البامية المجففة) من السوق الشعبي أم درمان وكان التركيب الكيميائي التقريبي لصنف الساره (محتوى الرطوبة ومحتوى البروتين ومحتوى الكربوهيدرات الكلية ومحتوى الرماد ومحتوى الألياف ومحتوى الدهون) 8.48% و 10.11% و 71.24% و 9.57% و 20.93% و 0.60% و علي التوالي. من ناحية أخرى وجدنا أن محتوى فيتامين سي ومحتوى التانينات 23.83 ملليجرام/100 جم و 0.26% ، علي التوالي.

أما صنف الخرطوميه (محتوى الرطوبة ومحتوى البروتين ومحتوى الكربوهيدرات الكلية ومحتوى الرماد ومحتوى الألياف ومحتوى الدهون) 10.15% و 9.22% و 71.75% و 7.78% و 15.94% و 1.1% و علي التوالي. ومن ناحية أخرى وجدنا أن محتوى فيتامين سي ومحتوى التانينات 23.77 ملليجرام/100 جرام و 0.21% ، علي التوالي.

وأيضا أجريت التجربة لدراسة تأثير حرارة الطبخ علي التركيب الكيميائي التقريبي لهذين الصنفين، ووجدنا أن صنف الساره (محتوى الرطوبة ومحتوى البروتين ومحتوى الكربوهيدرات الكلية ومحتوى الرماد ومحتوى الألياف ومحتوى الدهون) 11.64% و 19.87% و 55.35% و 9.97% و 20.16% و 3.17% ، علي التوالي. من ناحية أخرى وجدنا أن محتوى فيتامين سي ومحتوى التانينات 15.3 ملليجرام/100 جرام و 0.22% ، علي التوالي.

أما في صنف الخرطوميه (محتوى الرطوبة ومحتوى البروتين ومحتوى الكربوهيدرات الكلية ومحتوى الرماد ومحتوى الألياف ومحتوى الدهون) 12.02% و 14.73% و 58.65% و 11.1% و 15.63% و 3.5% ، علي التوالي. من ناحية أخرى محتوى فيتامين سي ومحتوى التانينات 13.30 ملليجرام/100 جرام و 0.20% ، علي التوالي.