

SUDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY



College of Graduate Studies

Nutritional Value of Doum Fruits and It's Effect on patients with High Blood Pressure

القيمة الغذائية لثمار الدوم ومدى تأثيرها على مرضى ارتفاع ضغط الدم

By

Sahar Abdallah Idress Mohamed

B.Sc. (Honours) In Food Sciences and Technology, University of Gezira (2008)

A Thesis Submitted to Sudan University of Sciences and Technology for fulfillment of the requirements of Master Degree in Food Sciences and Technology

> Department of Food Sciences and Technology, College of Agricultural Studies

Supervised

By

Prof. Hattim Makki Mohamed Makki

Co. supervisor: Prof. Abu Baker Osman Uro

(August, 2017)

بسم الله الرحمن الرحيم

قال تعالى

(وَهُوَ الَّذِي َ أَنزَلَ مِنَ السَّمَاء مَاء فَأَخْرَجْنَا بِهِ نَبَاتَ كُلِّ شَيْءٍ فَأَخْرَجْنَا مِنْ أَنْخُرِجُ مِنْهُ حَبَّا مُّتَرَاكِبًا وَمِنَ النَّخْلِ مِن طَلْعِهَا قِنْوَانُ دَانِيَةُ مِنْهُ خَضِرًا تُخْرِجُ مِنْهُ حَبًّا مُّتَرَاكِبًا وَمِنَ النَّخْلِ مِن طَلْعِهَا قِنْوَانُ دَانِيَةُ وَجَنَّاتٍ مِّنْ أَعْنَابٍ وَالزَّيْتُونَ وَالرُّمَّانَ مُشْتَبِهًا وَغَيْرَ مُتَشَابِهِ انظُرُواْ إِلَى وَجَنَّاتٍ مِّنْ أَعْنَابٍ وَالزَّيْتُونَ وَالرُّمَّانَ مُشْتَبِهًا وَغَيْرَ مُتَشَابِهِ انظُرُواْ إِلَى ثَمَرِهِ إِذَا أَثْمَرَ وَيَنْعِهِ إِنَّ فِي ذَلِكُمْ لَآيَاتٍ لِّقَوْمٍ يُؤْمِنُونَ)

صدق الله العظيم مسورة الأنعام الآية (99)

DEDICATION

To my Family,

Teachers

and Friends ...

With respect.

ACKNOWLEDGEMENTS

Prayers and thanks to **Allah**, who gave me good health and support to accomplish this study.

I am greatful thank to my supervisour **Prof.Dr Hattim Makki** who was too patient with me during this study, also for his unlimited assistance and guideness.

Also, I would like to thanks my co-supervisour **Prof.Dr Abu-Baker Osman Uro** for his kind assistances and continuous support during this study.

Thanks are also extended to my husband and my family who supported me, moratly emotionally, **Dr. Abdalla A. Elrahman** (my husband), my parents.

Finally but not least I would like to thanks are extended to my great family in Mezagela Village for their great help and support, friends who supported me in achieving this degree.