الآية

قال تعالي:

(وَمِن ثَمَرَاتِ النَّخِيلِ وَالْأَعْنَابِ تَتَّخِذُونَ مِنْهُ سَكَرًا وَرِزْقًا حَسَنًا ۗ إِنَّ فِي ذَٰلِكَ لَآيَةً لِّقَوْمٍ يَعْقِلُونَ)

صدق الله العظيم
سورة النحل اية 67

Dedication

First of all thanks to God for guiding me to conduct this study

I Dedication this work to my family who care much in my live

I Dedication especially to my parent

To the sole of my dear father seddig abdllah

To the my lovely mother maruim salih

To the my sisters makarem , asma,Esra,eslam

maysa ,maryam essia and adlah mohammed

To the my best friends noha, and all my friends

To may grandmother azza abdllah

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ABBREVIATIONS

ADC	Analogue to Digital converter
FBG	Fasting blood glucose
NI	Non-Insulin Dependent Diabetes Mellitus
HB	Hemoglobin
IDDM	Insulin Dependent Diabetes Mellitus
NIDDM	Non – insulin Dependent Diabetes Mellitus
MHC	Metabolic heat conformation
OCT	Optical coherence tomography
NIR	Near infrared
IR	Infrared
PA	Photo acoustic
PAS	Photo acoustic spectroscopy
NI	Non – Invasive
LCD	Liquid crystal Display

Abstract

in this research I monitoring the concentration of glucose and I made simulation of the glucose blood patients how have diabetes or have not to get the sound from the transilluminated optical single is converted in to electrical signal an the obtained difference signal is processed by signal processing unit (photo acoustic spectroscopy) also I detected this signal by ultrasonic sensor.

I made this device with different compound to detect the ultrasonic levels which have different value, when I increase the value of the glucose concentration the value of the ultrasonic levels were increasing according to it .

الملخص

تناول مشكله الالام المسببه لمريض السكري عن طريق الوخذ ،باخذ عينات مختلفه من الجلكوز كمحاكاه لجلكوز الانسان بنسب مختلفه للانسان المصاب بالسكري وغير المصاب للحصول علي ظاهره توليد الصوت من الضوء وتم تحويل الاشاره الضوئيه الي اشاره كهربيه وقيست بواسطة كاشف الموجات فوق الصوتيه،ومن ثم تم عمل جهاز لاكتشاف الموجات فوق الصوتيه، لقد تبين ان شدة الموجات الفوق الصوتيه تتزايد مع زيادة نسبه الجلكوز.