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Research Article

Electromagnetic waves affects on the Parkinson disease

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Abstract

The study was conducted to evaluate electromagnetic waves affected on Parkinson disease function in human in Iran. Today experiments showed that low frequency electromagnetic fields were useful for diagnostics and curing human disease including MRI technology. ELF (Extra Low Frequency) also other useful electromagnetic field ranges for this mater. One of human disease Parkinson with no curing relevant method, using drugs could decrease only the symptom of disease. The most important disease element was Dopamine with its enzyme named Tyrosine Hidrocylaze which decreasing tends to Dopamine decreasing in turn intending the progress of disease in human. Although in Parkinson disease Dopamine element decreased in human brain, the electromagnetic field absorption of the Dopamine would lead to an increasing increment of Dopamine in human brain. ELF frequency ranges radiation about 200HZ ,500HZ,1KHZ and 100KHZ in the magnetic fields about μT. It should be noted that the field affected on Dopamine absorption amounts considered while its absorbed spectra in visible and UV (ultra violet) without the electromagnetic fields compared with the same mater when it exposed to different ELF waves and fields with spectroscopic method. At the end it was concluded that ELF absorption trend in Dopamine was increasing it could be together with decreasing phase of the Parkinson.

Keywords: Parkinson: disease, Electromagnetic (EM) waves, Absorption spectra, Dopamine.

Introduction

Parkinson degenerative disease with its prevalence in human age about 60 years old and above. This was first diagnosed by Dr Ceimz Parkinson an English medicine in 1817. It was about 60 years later that 4 disease symptoms were diagnosed which these included tremors of body at rest time, sereneness and slowness of muscles and lack of equilibrium which are achievements of the noron destruction and their death in parskampecta of brain black cells. The disease in human is sporadically occurred while in familial occurring is about 15% [1] .EM field occurrences and effects in human body is voltage dependence [2],[3]. One of most important EM effects in human body is increasing the blood currents [4] mechanism. Last century it was cleared that death of the brain cells in perception of Dopamine would led to Parkinson disease which is an achievement of blockage perpetrating of tyrosine hydroxide enzyme in other hand an increment of Alfa Citocayen protein with an increased its sedimentation in brain cells at last lead to the death of the brain cells[5].The EM absorption could increase the Dopamine value in brain as our research showed in turn could lea d to the well being and healthiness of the patients in other hand. For Parkinson disease symptoms one should referred to the medical text [1].

Dopamine

This is a neural messenger from Celokolamin with detention role that its neural works is like

Amphetamine [6]. Some nutritional matters could increase the Dopamine in brain [7] and in other part of human blood section [8]. Physical specification of Dopamine is tabulated as bellow table-1 [8]:

Table-1 Dopamine specification

formula	$C_8H_{11}CLNO_2$
Mass formula	153.18
Melting point	218
Boiling point	306℃
Solubility (water)	Highly soluble

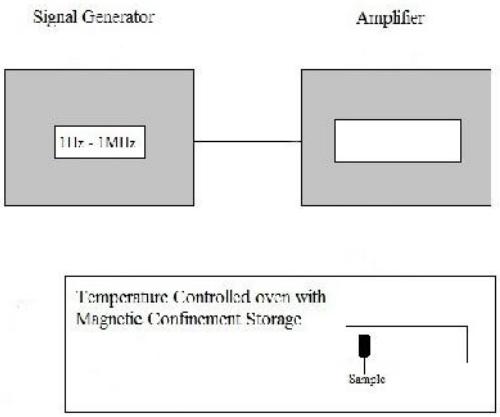
It is believed that EM radiation absorption could lead to the increased of this element in human brain depending to the level of radiation absorption [5]

Instruments

a-The devices that are used in this survey are as bellow:
1-Dopamine obtained from Merk Germany .
2-Water as buffer.
b-The electronic devices that we used are:
1-a home maid device for producing EM waves and fields.
3-different sizes samplers.

Our home maid EM wave and field producer is shown in Fig-1.

Fig -1.An EM producing device.



The EM waves could be produced by a signal generator. The highest magnetic produced field is 1.9 µT in value. In our researches this is most important devices.

Material method

In this research we used Dopamine in the form 1000 PPm while it was calculated in 280 nanometer spectroscopy.

For the second part, again we used dopamine with 1000PPm density exposed to different range of EM wave and field mentioned earlier at the time of 15, 30, 45 and 60 minutes respectively.

These are shown in Figs-2 to-21.

Conclusion remarks

EM wave and field effects are important on human body in ELF range in 2 point of views:

1-for the diagnostics and
2-curing

Both are in progress now a day.

In our research for Parkinson disease especially the Dopamine values were the best absorbed EM-ELF frequency rang in the time about 15 minutes.

Mean while in Parkinson the value of Dopamine in brain cells in neither of the offered frequency

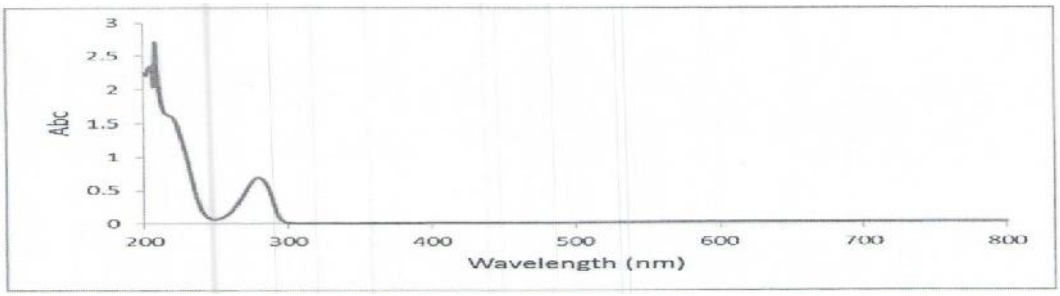


Fig-2. Far uv-visible Dopamine absorption in the absent of EM field .

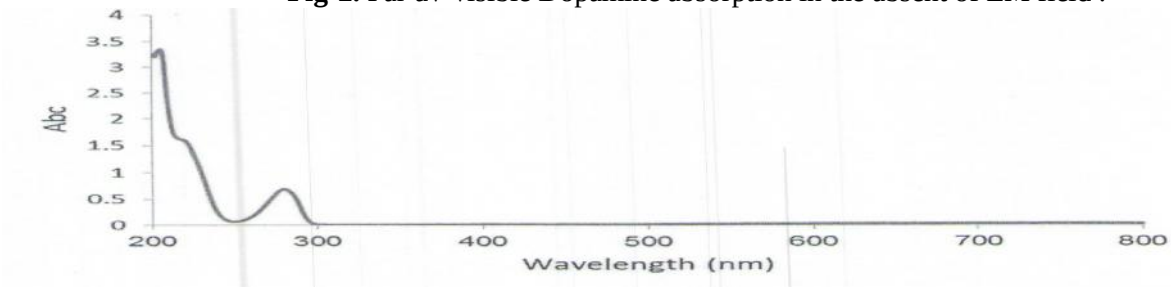


Fig-3.uv-visible Absorption spectra of Dopamine in the present of EM wave in frequency 100HZ.

The maximum absorption in this wave length is 280nm; the time of exposure is 15min and the enzyme temperature is 37℃

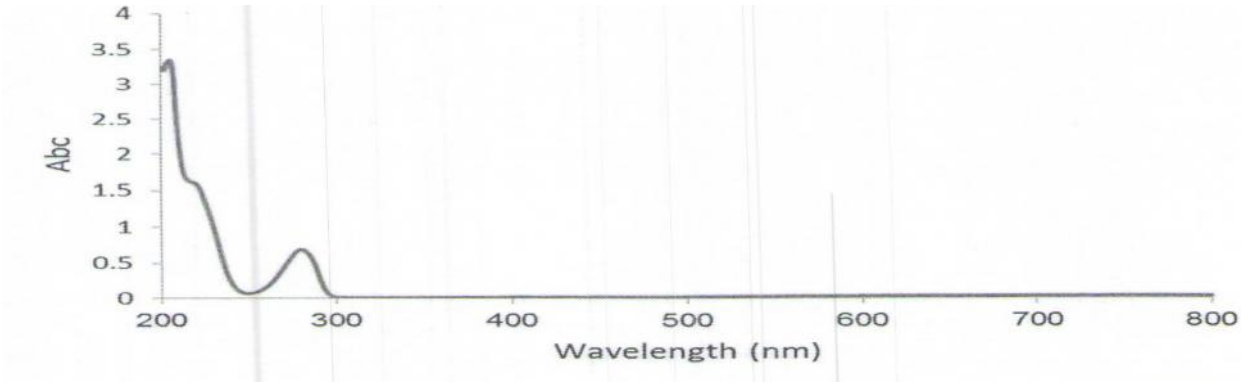


Fig-4.uv-visible absorption spectra of Dopamine in the present of EM in the frequency 100HZ.

The maximum absorption wave length is 280nm; the time of exposure is 30 min and the enzyme temperature 37℃

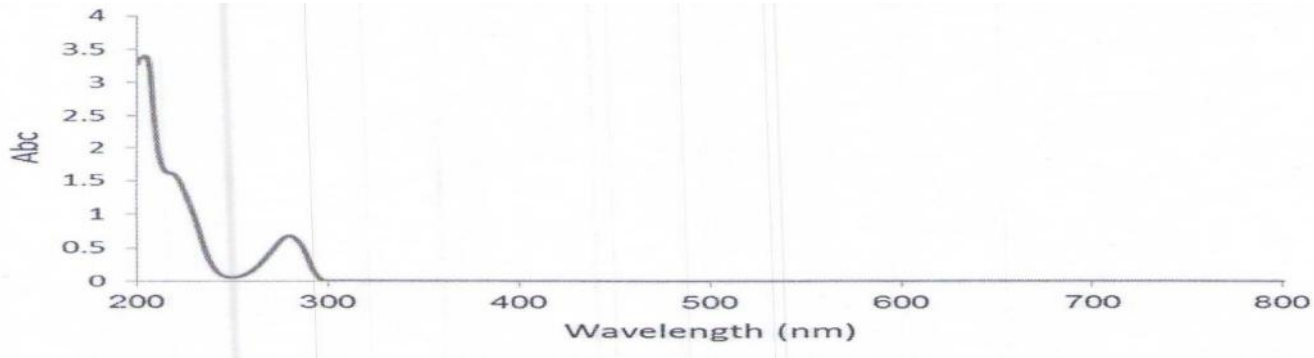


Fig-5.uv-visible absorption spectra of Dopamine in the present of EM wave in the frequency 100HZ.

The maximum absorption wave length is 280nm; the time of exposure is 45 min and the enzyme temperature 37℃

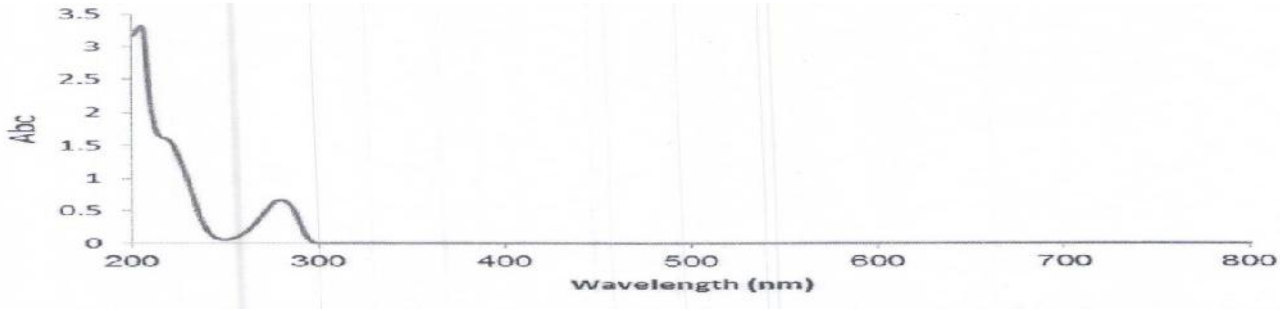


Fig-6.uv-visible absorption spectra of Dopamine in the present of EM wave in the frequency 100HZ.

The maximum absorption wave length is 280nm; the time of exposure is 60 min and the enzyme temperature 37℃.

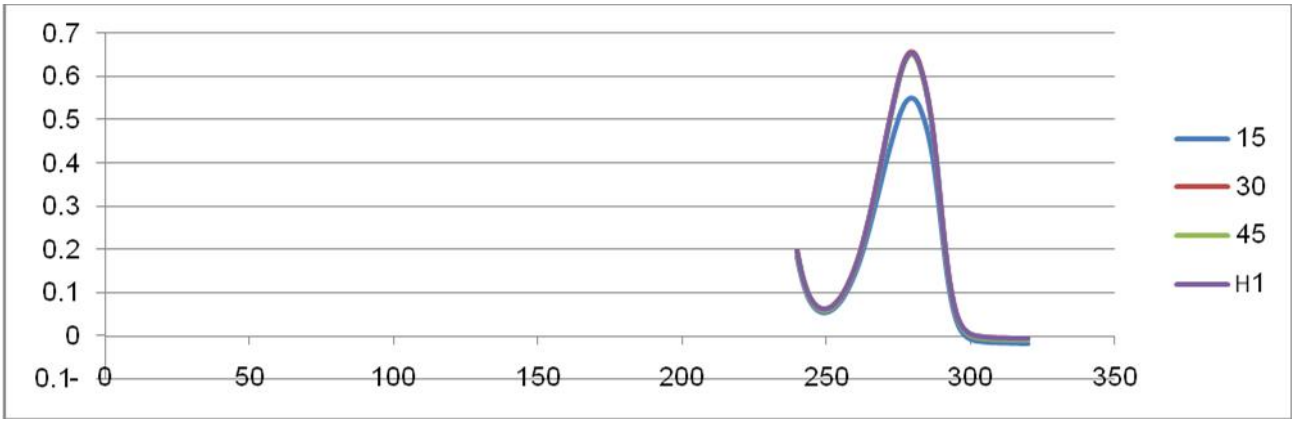


Fig-7.UV-Visible absorption specters of Dopamine in the present of E M wave in the 100Hz frequency ,the time of exposure 15-60 min for comparison the enzyme temperature again is 37℃.

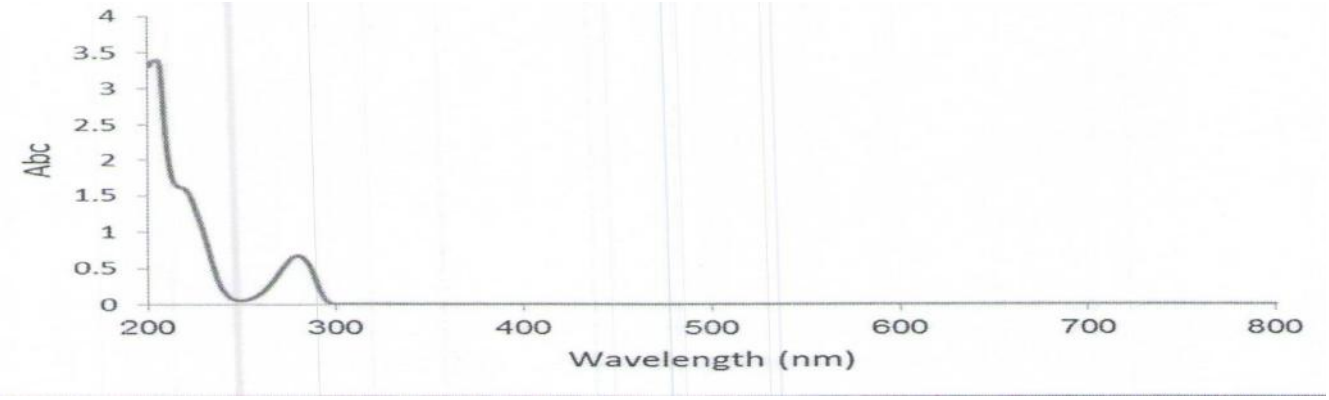


Fig-8.uv-visible absorption spectra of Dopamine in the present of EM wave in the frequency 200HZ. The maximum absorption wave length is 280nm and the time of exposure is 15 min and the enzyme temperature 37Ć

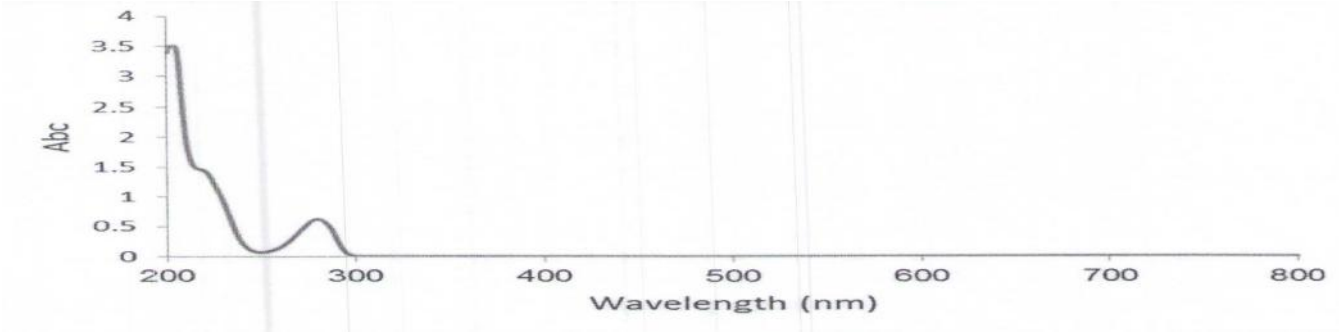


Fig-9.uv-visible absorption spectra of Dopamine in the present of EM wave in the frequency 200HZ. The maximum absorption wave length is 280nm and the time of exposure is 30 min and the enzyme temperature 37℃.

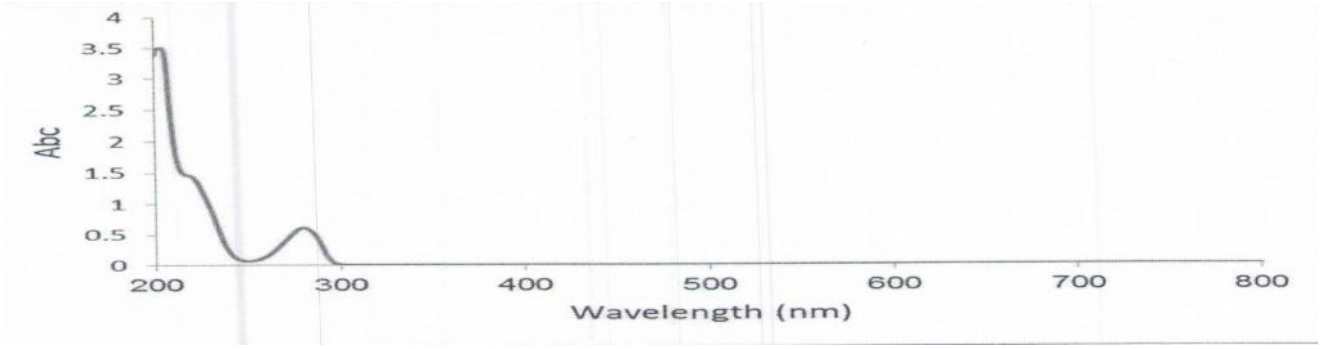


Fig-10.uv-visible absorption spectra of Dopamine in the present of EM wave in the frequency 200HZ.

The maximum absorption wave length is 280nm; the time of exposure is 45 min and the enzyme temperature 37℃.

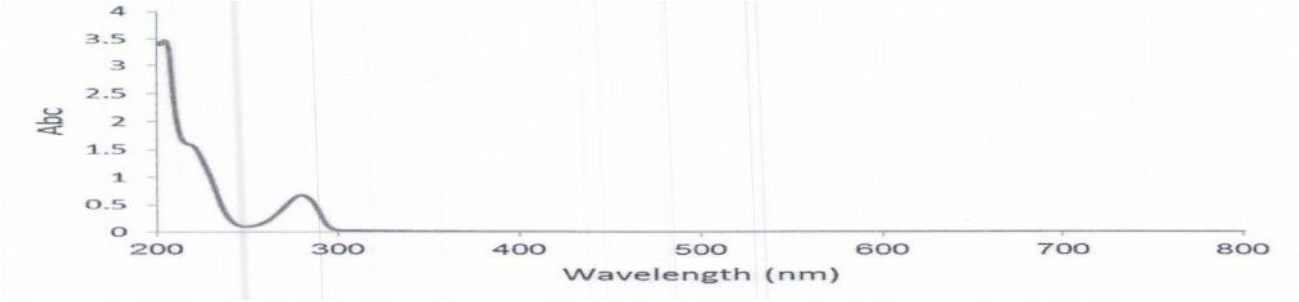


Fig-11.UV–Visible absorption spectra of Dopamine in the present of EM wave in the frequency 200HZ.

The maximum absorption wave length is 280nm; the time of exposure is 60 min and the enzyme temperature 37℃.

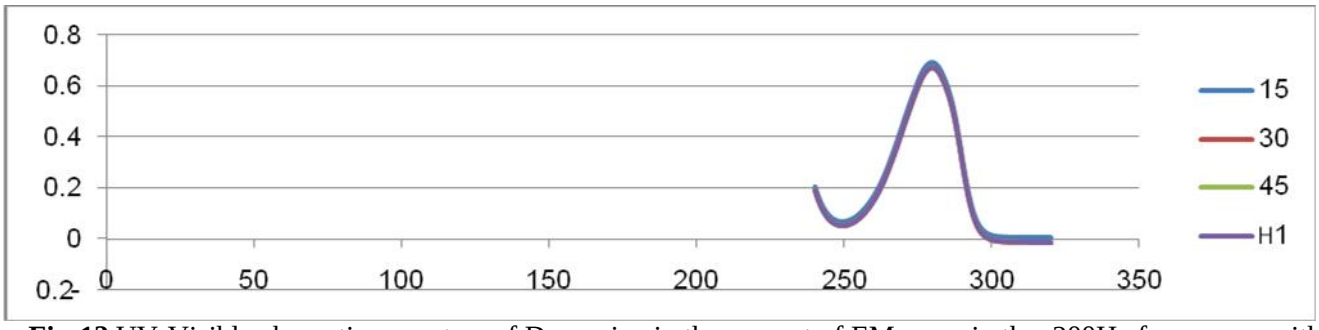


Fig-12.UV-Visible.absorption specters of Dopamine in the present of EM wave in the 200Hz frequency **,**with the time15-60 min exposure for comparison, the enzyme temperature again is 37℃.

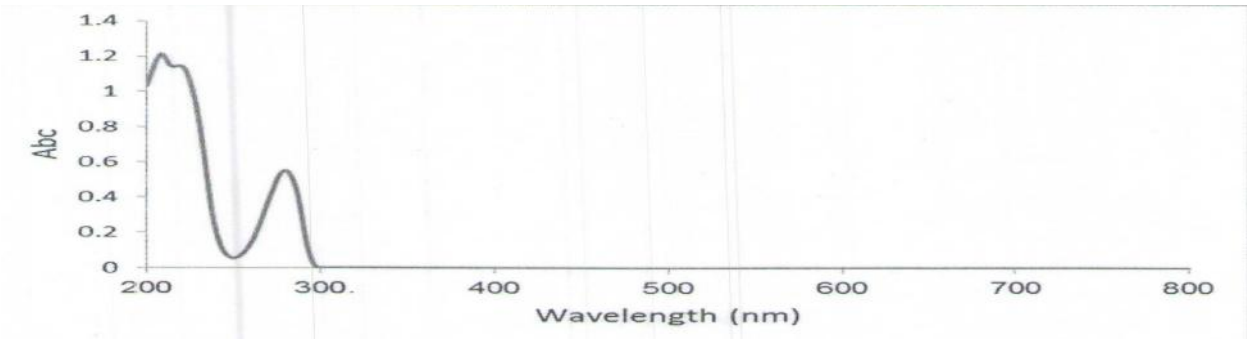


Fig-13-.uv-visible absorption spectra of Dopamine in the present of EM wave in the frequency 500HZ.

The maximum absorption wave length is 280nm; the time of exposure is 15 min and the enzyme temperature 37℃.

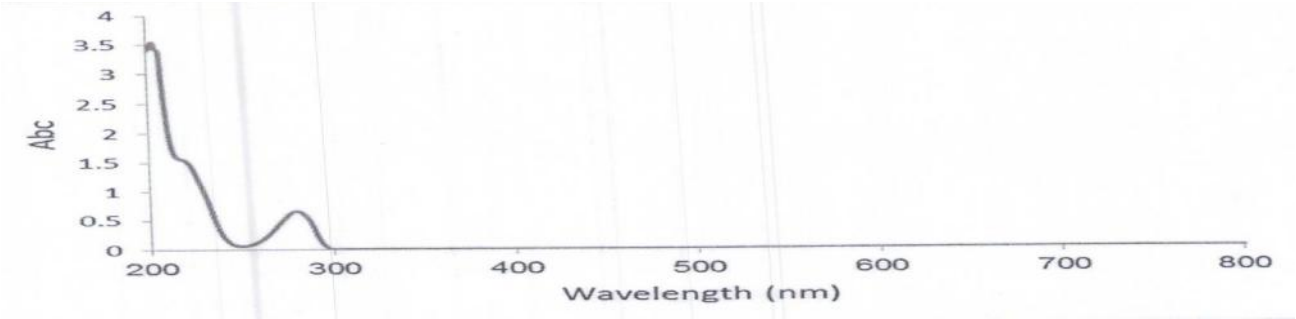


Fig-14.uv-visible absorption spectra of Dopamine in the present of EM wave in the frequency 500HZ.

The maximum absorption wave length is 280nm; the time of exposure is 30 min and the enzyme temperature 37℃.

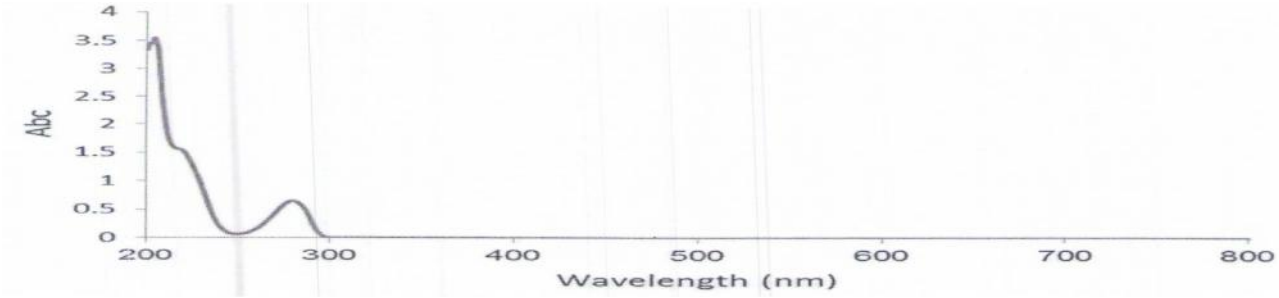


Fig-15.uv-visible absorption spectra of Dopamine in the present of EM wave in the frequency 500HZ.

The maximum absorption wave length is 280nm; the time of exposure is 45 min and the enzyme temperature 37℃.

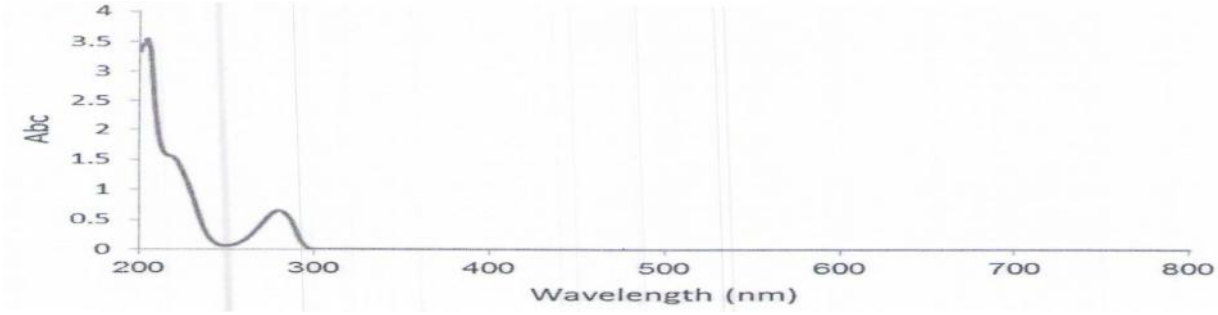


Fig-16 .uv-visible absorption spectra of Dopamine in the present of EM wave in the frequency 500HZ.

The maximum absorption wave length is 280nm; the time of exposure is 60min and the enzyme temperature 37℃.

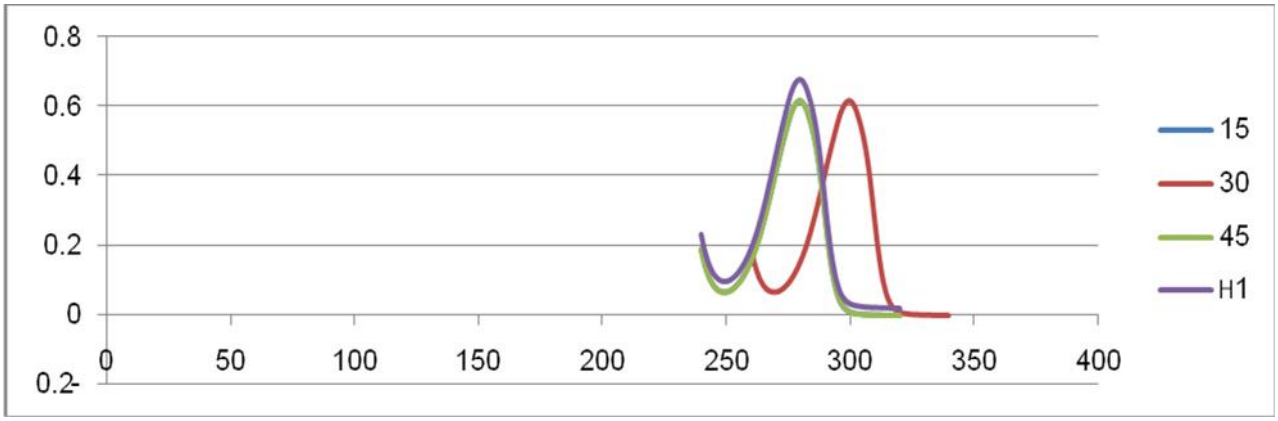


Fig-17.UV-Visible.absorption specters of Dopamine in the present of EM wave frequency 500Hz frequency .with the time15-60 min for comparison, the enzyme temperature again is 37℃.

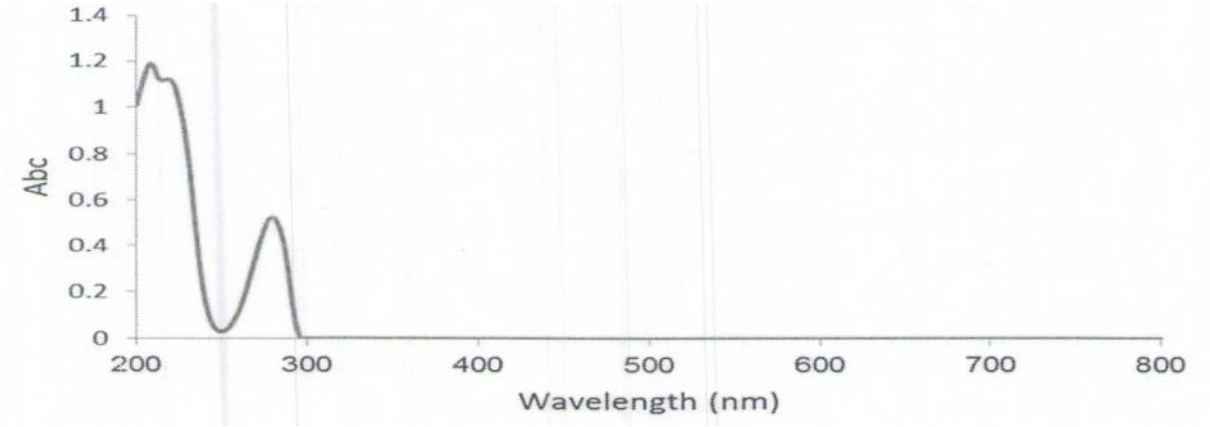


Fig-18. uv-visible absorption spectra of Dopamine in the present of EM wave in the frequency 1KHZ.

The maximum absorption wave length is 280nm; the time of exposure is 15 min and the enzyme temperature 37℃.

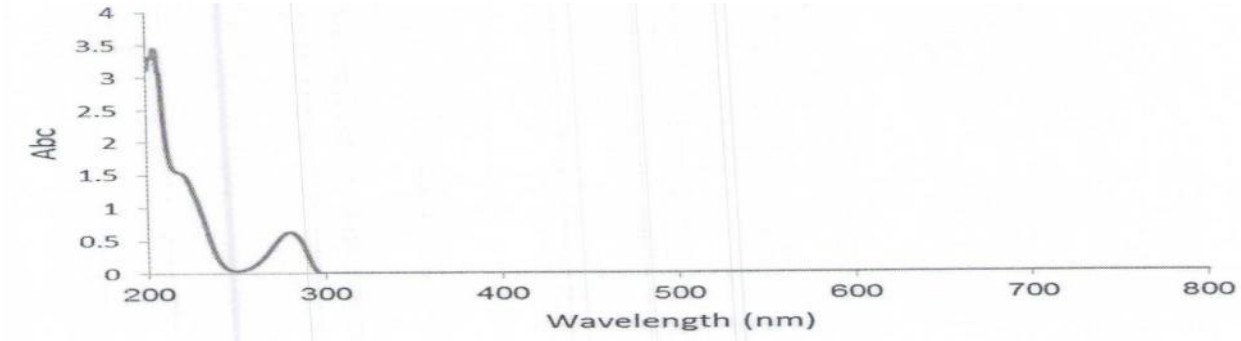


Fig-19 .uv-visible absorption spectra of Dopamine in the present of EM wave in the frequency 1KHZ.

The maximum absorption wave length is 280nm; the time of exposure is 30 min and the enzyme temperature 37℃.

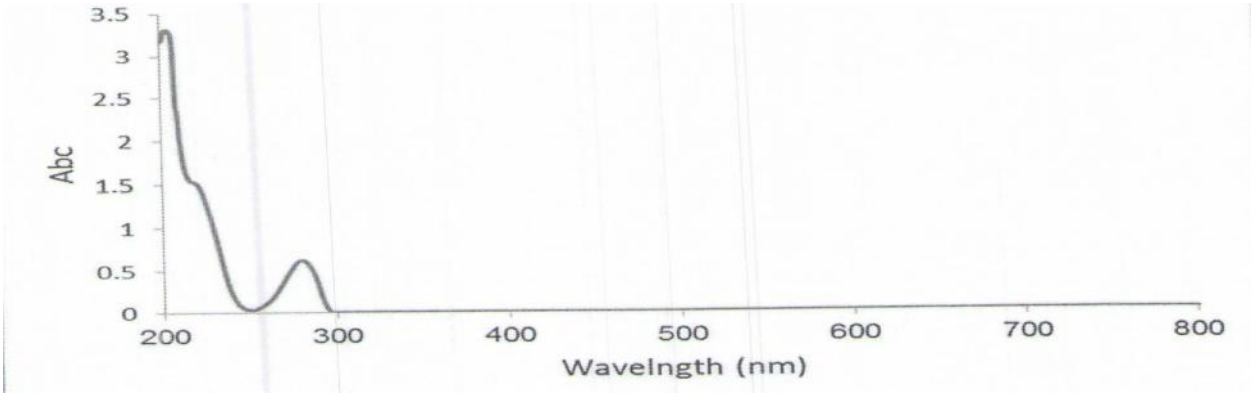


Fig-20.uv-visible absorption spectra of Dopamine in the present of EM wave in the frequency 1KHZ.

The maximum absorption wave length is 280nm; the time of exposure is 45 min and the enzyme temperature 37℃.

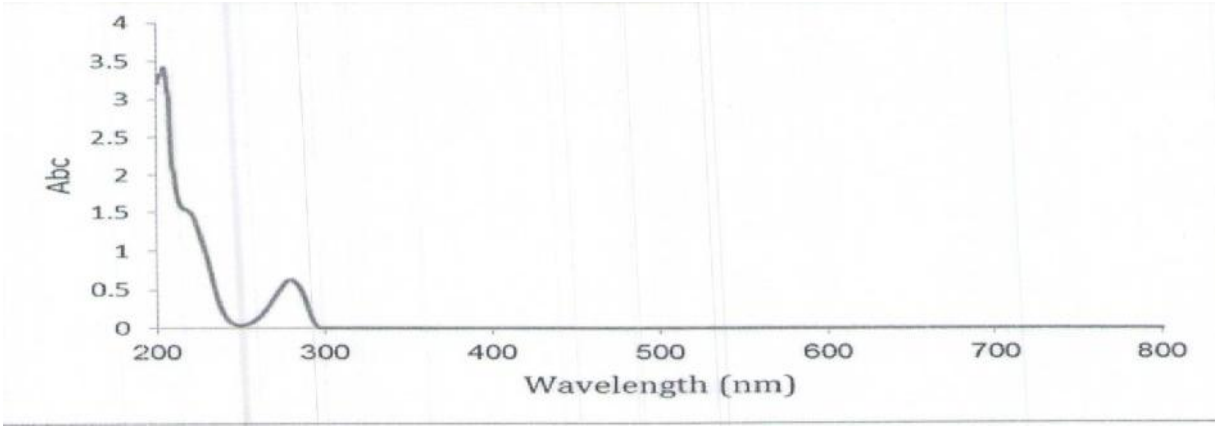


Fig-21.uv-visible absorption spectra of Dopamine in the present of EM wave in the frequency 1KHZ.

The maximum absorption wave length is 280nm; the time of exposure is 60 min and the enzyme temperature 37℃.

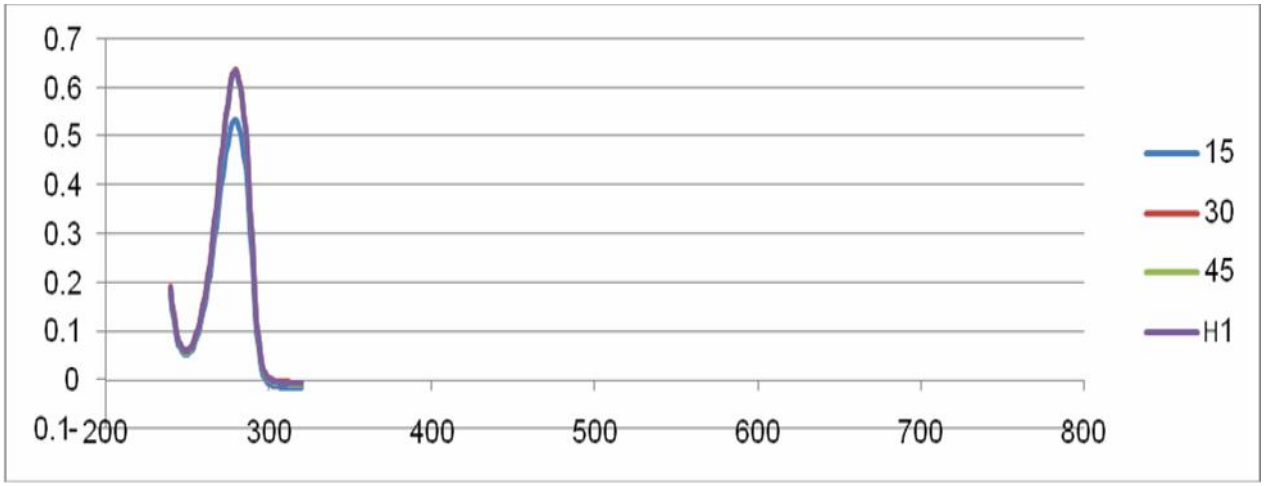


Fig-22.UV-Visible.absorption specters of Dopamine in the present of EM wave 1 KHz frequency with the time15-60 min for comparison, the enzyme temperature again is 37℃.

absorbed is not so heigh that we could conclude that this trend of curing is very important in reliving the disease.

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