

## Investigation of laser induced inhibition and stimulation in biological samples

### Abstract

In this research, some experimental measurements have been carried out to study the biological effects induced by laser irradiation on bacterial samples prepared by different ways and at different conditions. Considering the induced samples, the effect of laser irradiation has been investigated through analyzing some of the properties of the transmitted and scattered laser beam for determining the stimulation or inhibition experienced by the investigated sample. In this study absorbance and scattering values have been measured as indicators of sample response to the irradiation laser beam. Absorbance and scattering have been investigated for different irradiation and sample parameters. Significant responses related to inhibition and stimulation effects of the investigated samples have been obtained. These results may significantly contribute in determining the effective utilization of the laser beam as a therapeutic tool for accelerating the wounds and burns healing of diabetic patients whom their response to anti-biotic is not appropriate. The simultaneous irradiation of samples with the use of anti-biotic shows significantly positive effect and fast response.