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# Biological Assessment, Heamatological Study, and Environmental Detection of Eugenol

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**Abstract :** Eugenol is found in essential oils of many plants. It belongs to a class of naturally occurring phenolic monoterpenoids, chemically it is an allyl chain-substituted guaiacol. A study was conducted on the compound of Eugenol, which included different studies. The first study was the determination of eugenol in body fluid, which includes serum, saliva and urine has been found the highest concentration was in urine then serum and saliva. The second study was the hematological study. Complete blood count was accomplished on the volunteers alredy administrated with eugenol contained mouthwash the analysis was accomplished before and after the mouth wash use. The result observed a slightly negative results and was not that significant, which confirms the strict blood system to resist the toxicity of the compound or the fact that the time period of giving was short.The third study included a histological study on the effect of this compound on the tissues of the animal body by conducting experiments on albino male albino male mice. The side effects were found after 10 days of rat infusion, with yellow spots on the skin and hepatomegaly. The fourth study was the environmental analyses and the effect of this compound on the environment. The eugenol was stable and persistent in water and had found of 11 mg/L concentration in the main tank of wastewater for the dental hospital swage.

**Keywords :** Eugenol; Biological Assessment; Heamatological Study.

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