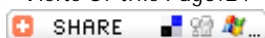




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## Research Details :

Research Title	: <u>EFFECT OF THE FUEL-ADDITIVE METHYL-TERT-BUTYL ETHER (MTBE) ON BLOOD COMPONENTS OF RATS</u> تأثير المادة المضافة للوقود ميثيل ثلاثي بيوتيل الإيثر (م. تي. بي. إي) على مكونات دم الجرذان
Descriptipn	: In 2001, Saudi Arabia replaced lead in car gasoline by methyl-tert-butyl ether (MTBE). MTBE is a synthetic organic compound added to gasoline. MTBE dissolves readily in water and evaporates quickly. Since blood is considered to be a good bio-indicator for many toxic-induced ailments. This study focused on the possible health hazards of MTBE in drinking water as manifested by changes in blood composition of 120 male wistar rats exposed to five different MTBE concentrations (0.0, 1,000, 1,500, 2,000, 2,500 ppm) for 60 days. The results of the rats' weight, organ (heart, liver, kidney, lung, and testis) weight, blood chemistry, and hematology profiles were statistically analyzed. At higher MTBE concentration, animals' weight was lost, and liver weight was reduced as evidence of hepatic injury. This injury reduced plasma glucose, increased ALT, AST, and GGT activity, elevated sodium and chloride in plasma. Also, MTBE increased phosphorus, and decreased magnesium and calcium plasma level. MTBE decreased the level of CHOL, HDL-C, and LDL-C and urea in blood plasma. MTBE causes inflammation because it alters NE and LY counts. On the other hand, MTBE did not affect hematologic parameters related to anemia indicating a non-anemic condition.
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