



## **Characterization of Sudanese reformat gasoline blended with acetone**

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**Abstract:** Sudanese reformat gasoline (produced in Khartoum refinery located in Algily, at North of Khartoum city in Sudan) was characterized before and after the addition of acetone. Samples were tested according to the American Society for Testing and Materials (ASTM), in which the properties distillation, sulfur content, density, vapor pressure, oxidation stability, copper strip corrosion, gum existence, lead content, and octane number of the reformat gasoline (before and after addition of acetone) were characterized.

The addition of acetone (5 and 10% (v/v)) improved the properties of the Sudanese reformat gasoline to the limits assigned by (ASTM) and Khartoum refinery.

The Motor Octane Number (MON) of the reformat gasoline was determined initially by the Cooperative Fuels Research engine (CFR engine) (which was found 88.5. Results showed that the addition of acetone 5 and 10 % (v/v) to the Sudanese reformat gasoline raise the value of the (MON) to 89.6 and 92 respectively.

**Keywords :** Sudanese reformat gasoline, Characterization, Acetone, Motor octane number.

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