INVESTIGATION OF METAL CONTENT IN CRUDE AND PETROLEUM PRODUCTS

by

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Abstract

The presence of trace metals in fuels, unless they are added purposely, is usually undesirable. Some of these metals may be responsible for the damage of the storage vessels and may contribute poor performance of the fuel.

Almost all elements in the periodic table are found in petroleum products. The presence of elements in crude oil is assigned to its marine animal and vegetative life deposited with sediment in the coastal waters in prehistoric times.

Atomic Absorption Spectrophotometer has been used to analyse the metals in crude and refined petroleum products.

In this study analysis was carried out to investigate the metal content in crude and refined petroleum products available at Ceylon Petroleum Storage Terminals Limited, Kolonnawa. Aqueous stock solutions were used to prepare the working standards with different concentrations. Then the concentrations of different fuel samples were measured by using appropriate lamp and a wavelength.

Metals were investigated for a few samples of Lanka Auto Diesel and gasoline (90 octane) which were obtained from newly constructed Indian Oil Company sales outlet and very old Ceypetco Sales outlet.

Then the concentrations of metal were compared between the pure refined petroleum products and sales outlet samples.