

A B S T R A C T

METHOD FOR PREDICTION OF CETANE NUMBERS OF GASOILS

A method for prediction of cetane numbers of gasoils, wherein the following steps are carried out:

- a) measuring the I.R. spectra of a large set of gasoils, from a wide variety of sources;
- b) selecting in the spectral region a range of wave numbers; and converting a number of the wavelengths in question to absorption data and using said absorption data as an input to multivariate statistical analysis or a neural network;
- c) analyzing the spectral data using multivariate statistical techniques or neural networks;
- d) determining cetane number of the gasoil by conventional measurement;
- e) selecting a training data set comprising measured I.R. data and conventionally measured cetane number data and correlating the obtained absorbance values with cetane number, generating a set of predictive data; and subsequently
- f) applying these data to infra-red spectra, taken under the same conditions, for gasoils of unknown cetane number, thus providing the cetane number of the unknown gasoil.

