Comparison of Hanby Kit Method with PetroFlag

The primary difference between these two methods of analysis is that one (Hanby) is a method that utilizes a chemical reaction that gives a specific color and intensity that is calibrated against a precise standard photograph of results for the contaminant (gasoline, diesel fuel, crude oil, etc.) The other method (PetroFlag) uses a physical property (the relative solubility) to produce a cloud of droplets of the contaminant.

The Hanby method utilizes a solvent that quantitatively extracts all of the petroleum from the sample. This extract undergoes an exact chemical reaction (Friedel-Crafts) that produces the precise quantitative reaction color density. The PetroFlag method uses methanol, which has limited solvent efficiency (particularly for heavier hydrocarbons). The methanol extract is then mixed with a water solution, which produces a cloud of droplets (an emulsion) of the petroleum contaminants in the water. A light is shined through the cloud of droplets and the amount of light reflected at 90 degrees. Is measured for the answer.

The Hanby method is obviously superior because:

1. It gives a good indication of what the contaminant is.
2. It gives a precise (chemical reaction) quantitative answer.