

TAN ASTM D664



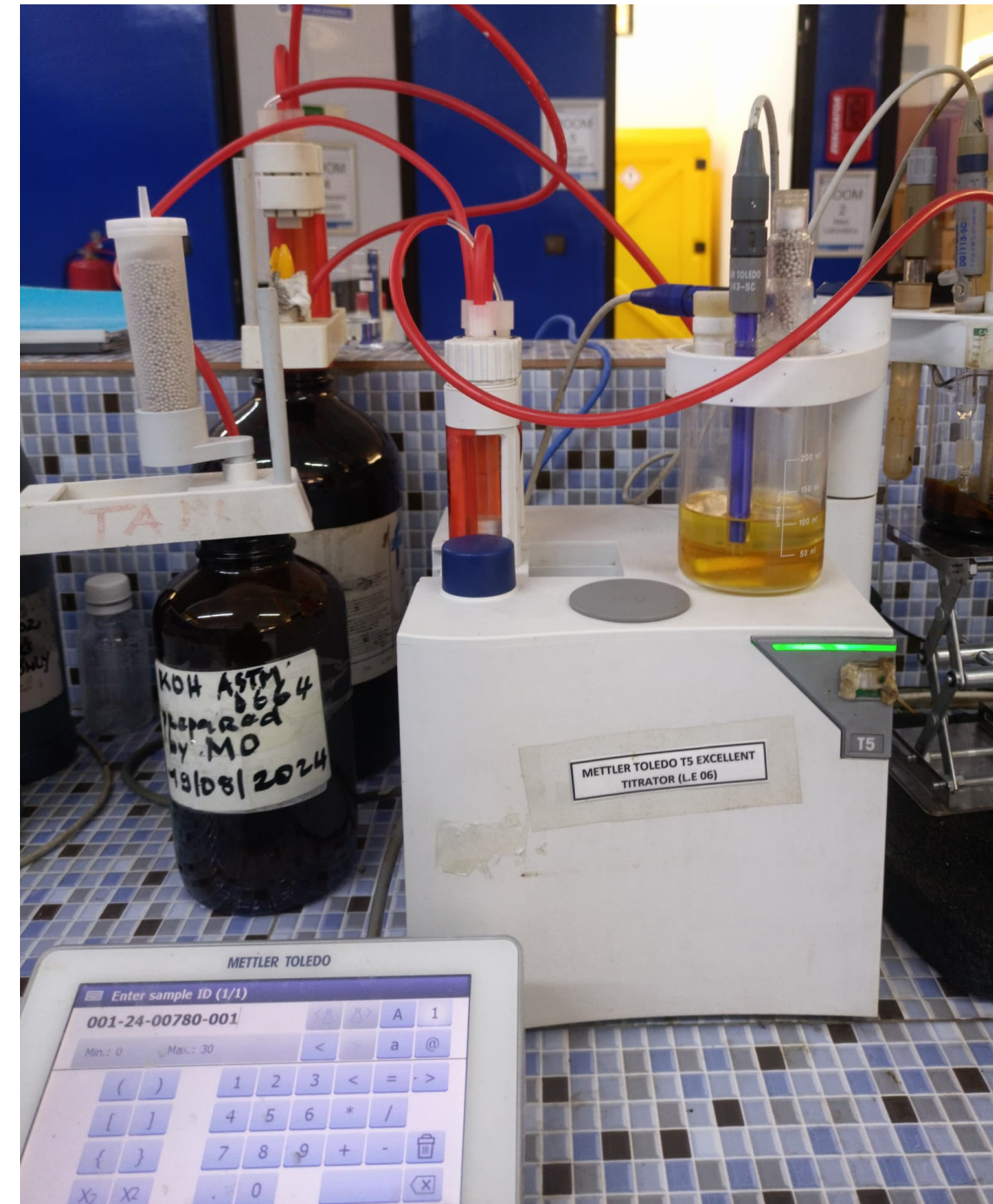
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What is Acid Number?

Acid Number is performed using ASTM D664 by analysing Petroleum, Lubricants and Biodiesel products.

Operational Efficiency

The significance of Total Acid Number lies in its ability to predict the health and performance of machinery and equipment. High TAN levels can indicate the presence of harmful acidic compounds that can accelerate the degradation of oil and lead to equipment failure. Regular monitoring TAN can identify potential issues and proactive measures to prevent costly breakdowns and extend the lifespan of the machinery.



Safety

Total Acid Number (TAN) is a measurement of acidic compounds in oil, which can result from oxidation, contamination, or degradation of Petroleum Products. Monitoring TAN levels is vital in various industries, including automotive, aviation, power generation, and manufacturing.

Product Quality

Maintains the Quality and consistency of Petroleum Products by ensuring they meet Industry Standards and Specifications.

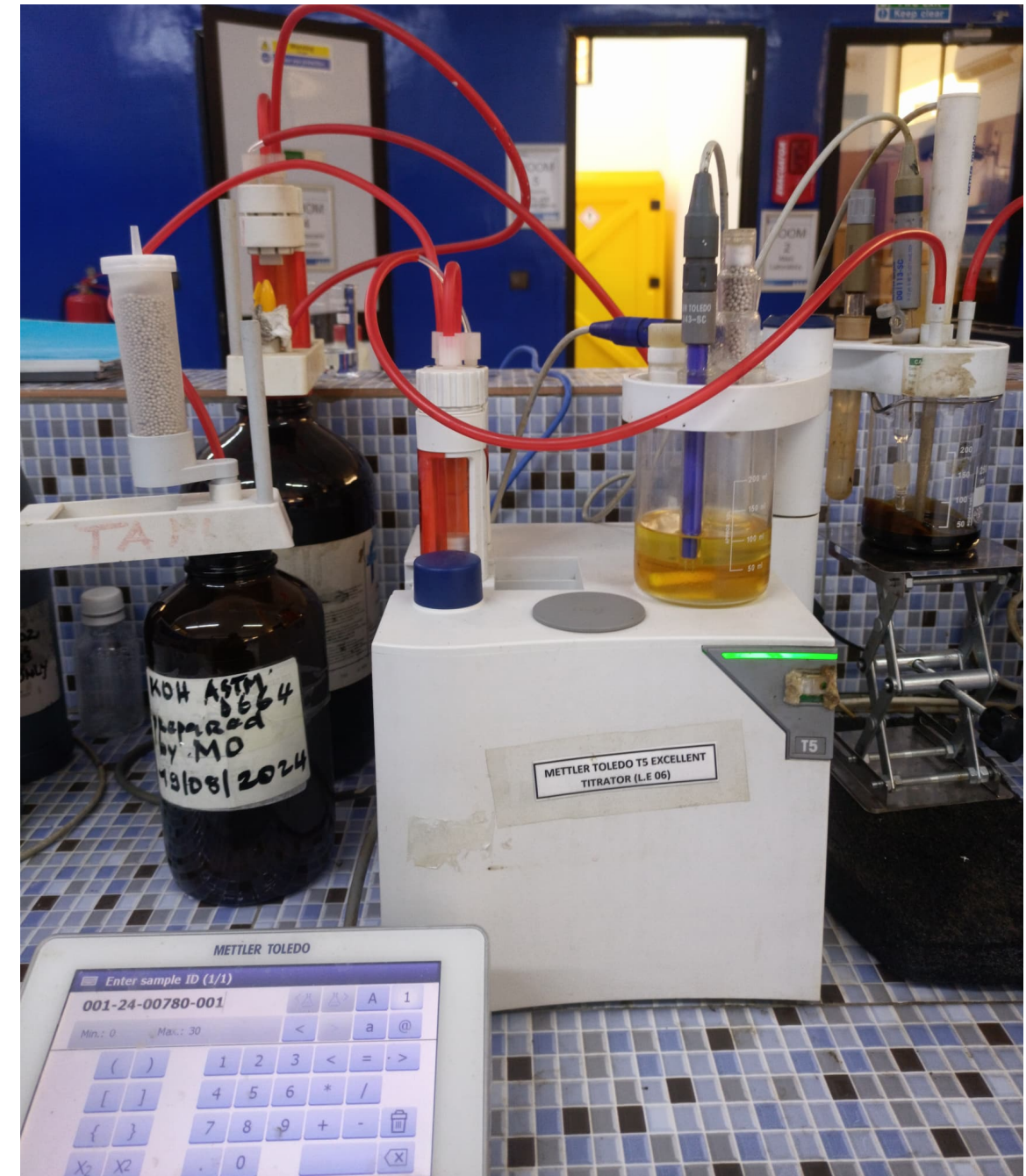
Cost Saving

Reduces maintenance costs and downtime by preventing equipment failures and operational disruptions.



Environment Compliance

Monitoring the Total Acid Number levels Industries can mitigate these risks by identifying and addressing potential sources of equipment failure. This proactive approach to maintenance helps create a safer work environment minimising the chances of accidents or injuries caused by equipment malfunction.



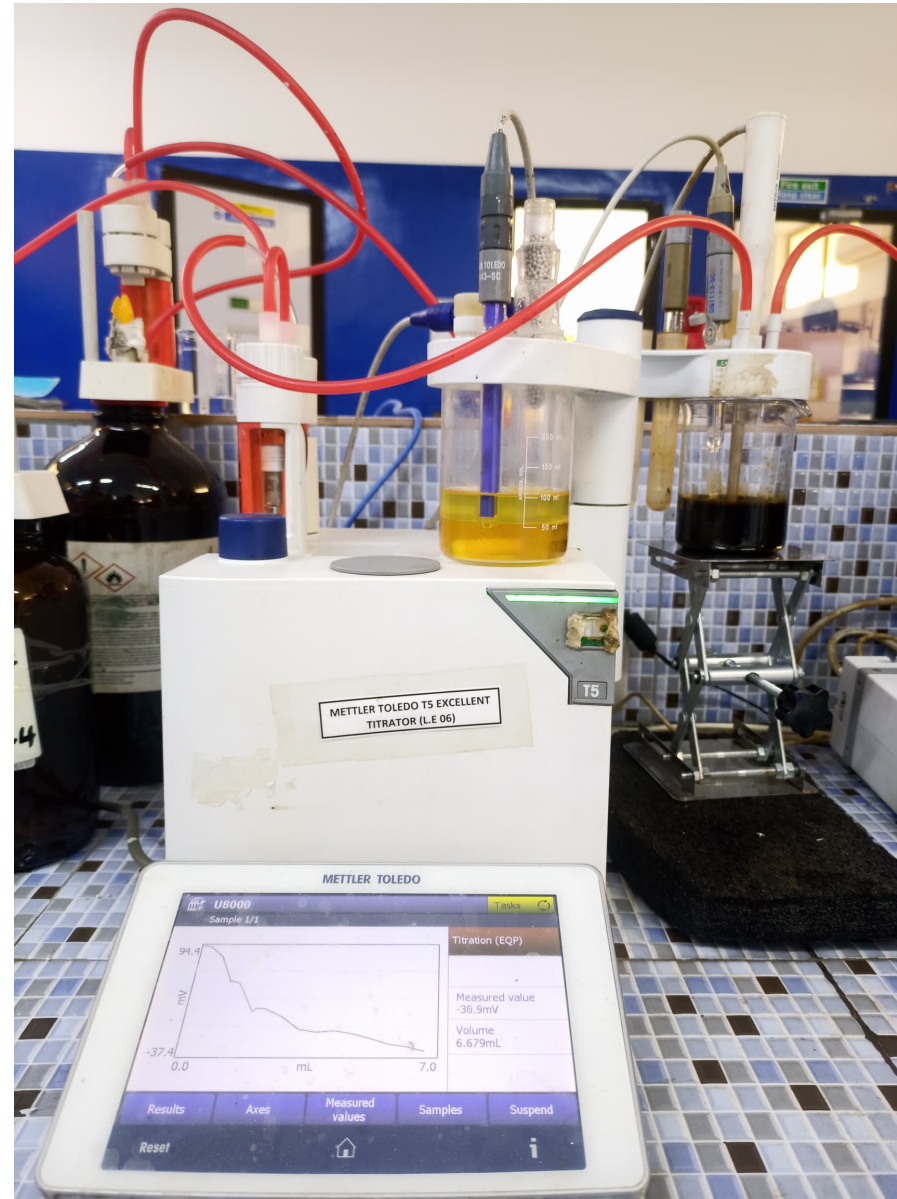
How does it work

Total Acid Number (TAN) is a measurement of acidity that is determined by the amount of Potassium Hydroxide in milligrams that is needed to neutralise the acids in one gram of oil. It is used to estimate the amount of additive depletion, acidic contamination and oxidation of Lubricant degradation.

To perform the analysis for ASTM D664 weigh sample as recommended in the ASTM D 664 method, add 125ml of titration. Place the titration vessel onto the titration stand and adjust its position so the electrodes are half immersed. Start the stirrer and stir throughout at a rate sufficient for the sample type.



Using the burette containing 0.1 mol/L alcoholic KOH solution immerse the tip at least 25mm into the titration vessel and press start. Whilst the test is running its important to check for no air bubbles and the sample doesn't splatter. The result will appear on the screen once the end point is reached.



Potential Issues and Solutions

Purity of Reagents shall be Reagent grade chemicals unless otherwise indicated, if can affect the accuracy of the analysis.

Suspected contamination might occur and to ensure this doesn't happen regular checks are performed with Buffer Solutions pH 4, pH7 and pH 10 before analysis is performed.

Care is needed when using a recommended sample size as this may foul the electrodes, a smaller sample size shall be used.



Potential Issues and Solutions

If electrodes are found dirty and contaminated may introduce uncertain erratic and unnoticeable liquid contact potentials, causing end points subjectively fixed cell potentials.

Cleaning the glass electrode at frequent intervals based on use and sample type can prevent this from happening.





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