

# MicroDist provides boiling point analysis for a diesel blending application



## RESULTS

The refinery reported the following results after the 720-hour MicroDist evaluation:

- Repeatability that is superior to ASTM D86 lab standard
- Solutions for several process applications
- Fast analysis cycle of 4-7 minutes
- User-friendly equipment interface
- Easy installation

*"This analyzer surpassed by far our expectations, since the analyzer was evaluated in severe conditions, confronting other techniques that have been used for 14 years, including online chromatography with simulated distillation and the infrared technique (NIR) ... We recommend the analyzer implementation in direct distillation plants for monitoring and controlling of tower fraction cuts, in cracking plants, hydro treating units, and in diesel and/or gasoline blending systems."*

- Wallace Mauricio do Nascimento  
Supervisor - Process Analyzer  
Optimization - Quality of Products  
PETROBRAS - REPLAN

## APPLICATION

Boiling point analysis conducted on a refinery diesel blending application.

## CHALLENGE

A large refinery with a capacity of over 350,000 bpd evaluated options for boiling point analysis. The refinery's diverse output included diesel fuel, gasoline, LPG, naphtha, kerosene, coke, asphalt, solvents, and propene. As part of the challenge, the refinery installed the PAC MicroDist to test and evaluate the analyzer's capabilities.

## SOLUTION

The refinery evaluated potential solutions based on operability, robustness, response time, precision, accuracy, and ease of maintenance. The refinery tested the MicroDist on its repeatability through the distillation range at 5%, 10%, 85%, and 90%. They found that the MicroDist performed better than the ASTM D7345 standard (see Figure 1).

In addition to excellent repeatability, the refinery also noted the MicroDist's high availability. During the evaluation, the availability factor remained above 98% within a period of 720 hours of operation. The refinery was also pleased with the internal nitrogen generator, which greatly reduces the utility requirements for the plant.

From a usability standpoint, they found the user interface to be intuitive and easy to use, and it allows various parameters to be modified and customized for specific applications. Plus, they recorded a fast analysis time of 4-7 minutes, which meant they could calculate cut points as fast as the variables were changing. This allowed them to minimize product giveaway and maximize their profitability.

For more information about the MicroDist, visit us online at [www.paclp.com](http://www.paclp.com).

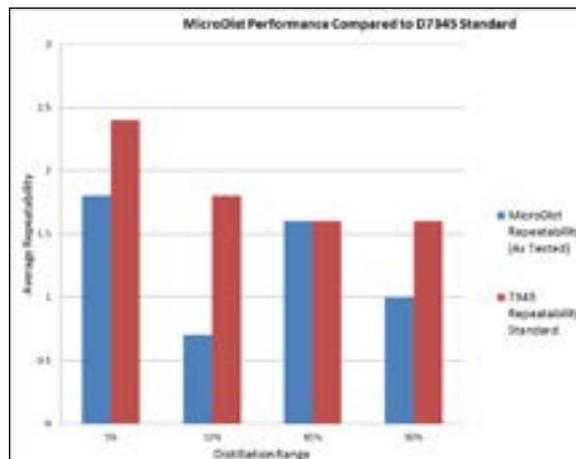


Figure 1