

# i-Series BioEthanol Analyzer®



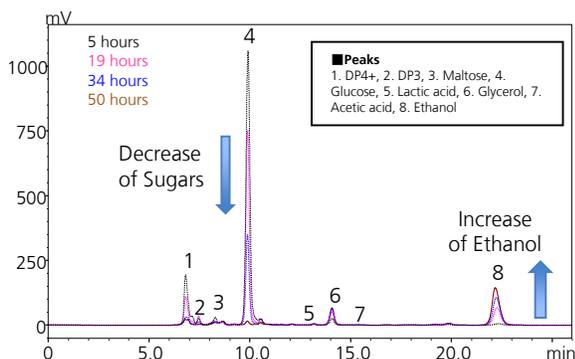
## Real-Time Monitoring of the Fermentation Process in Bioethanol Production

### ❖ System Configuration

In the bioethanol production plant, a High Performance Liquid Chromatograph is typically used to profile the carbohydrate, alcohol, and organic acid contents of the fermentation broth.

Introducing the new turn-key Shimadzu BioEthanol Analyzer®. It includes the i-Series Prominence HPLC system with a quaternary pumping system, the new RID-20A refractive index detector, ultra-fast SIL 20A autosampler, large-capacity column oven, and clean CHATA Solvent system.

### ❖ Checking the Amount of Ethanol Produced by the Passage of Fermentation Time



### ❖ Space-saving Fully Integrated System

The Shimadzu BioEthanol Analyzer is a complete space-saving integrated HPLC system that houses its components in a neat and easily accessible single unit. The closed system is air filtered to minimize contamination that is prevalent in most renewable fuel labs.

### ❖ Quicker Equilibration with the NEW RID-20A

The Shimadzu RID-20A Refractive Index Detector reduces stabilization time by housing the optical system inside a dual-temperature-controlled block with the temperature of the incoming mobile phase controlled in two stages. This proprietary design helps to greatly minimize typical baseline drift often encountered when using competitive models. In addition, the amount of mobile phase can be reduced by returning column eluent to the mobile phase bottle when no peaks are eluted, thereby saving solvent purchase and disposal costs.\*



\* Optional recycle valve kit required

# i-Series Bioethanol Analyzer

## Innovative open access autosampler creates a more efficient laboratory

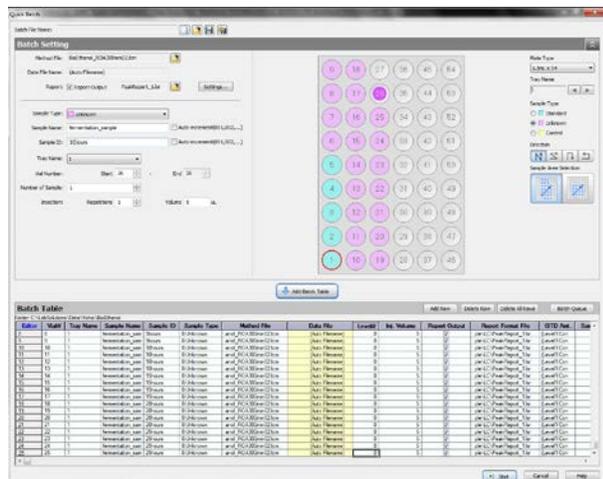
A direct access mechanism makes it possible to set sample vials easily. Since one of the racks is always available to open even when the other rack is under analysis, the sample vials can be placed on the rack anytime. In the ethanol production laboratory, samples of each fermentation time are taken from various tanks and these fermentation conditions are checked by using HPLC. The autosampler versatility allows convenient sample loading that provides a stress-free experience.



## Improved, smart interface experience

### ❖ Quick Batch Function Simplifies Batch File Creation

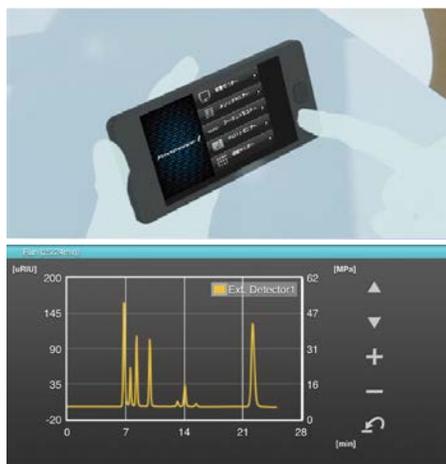
A Quick Batch window displays the sample rack mounted on the system. Since operators can check vial positions while watching a display, it is possible for an unskilled user to easily create a batch file.



Quick Batch Window

### ❖ Remote Monitoring Regardless of Operating Environment

Taking immediate action when issues arise is very important in the ethanol production laboratory. The operating status of your system can be viewed from a smart device without using any special software. This feature allows you to monitor the current system status and chromatograms from anywhere. Abnormal results can be observed immediately while away from the lab.



Remote Monitoring Using a Smartphone



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