

# Improving Turnaround Time

## A Case Study



## Introduction

This case study was carried out in a laboratory in Europe. A workflow analysis was performed by a team of expert consultants who employed LEAN/Six-Sigma principles. They conducted unbiased, in-depth, real-time observation and analysis of laboratory assets, processes and methods. With a clear understanding of the laboratory's current operation, the consultants provided innovative, tailored solutions and actionable insights designed to reduce cost and increase laboratory efficiency and productivity.

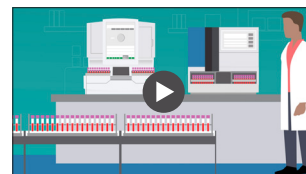
### The Challenge

In this case, the lab experienced delays in reporting results due to the limited capacity and throughput of their existing HbA1c systems. A faster, more streamlined solution was required.

### The Solution

The D-100 System significantly decreased turnaround time due to its ability to process samples without interruption. Results were then available on the same day.

[View the Turnaround Time video](#)



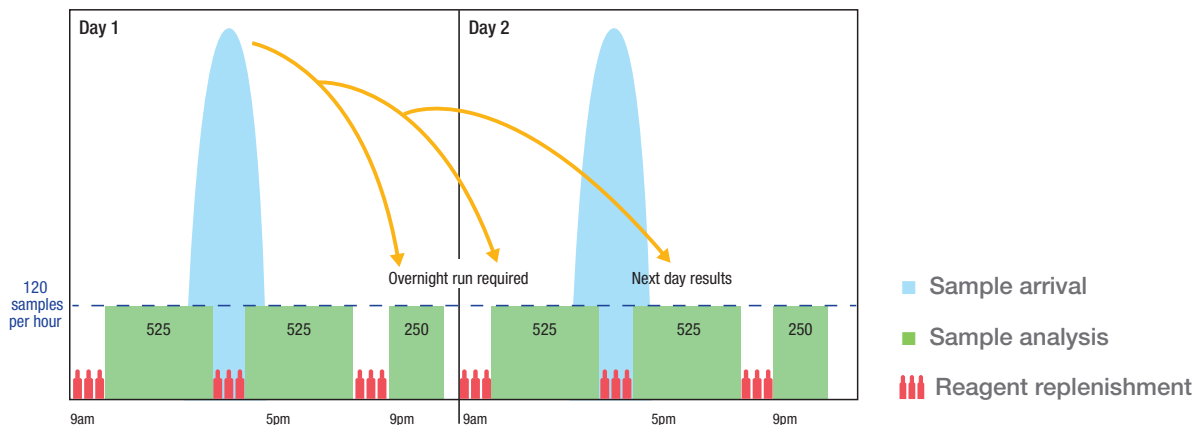
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## The Analysis

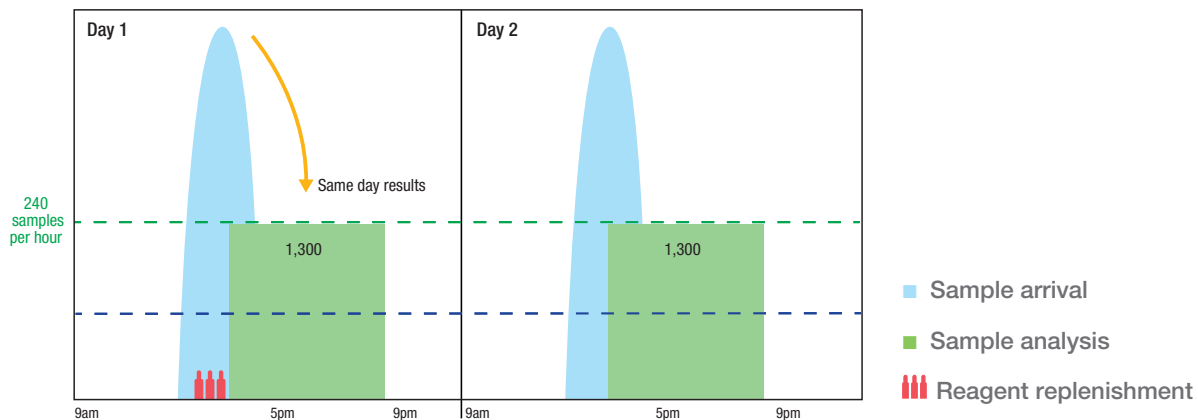
The consultants analyzed the sample arrival and sample analysis patterns throughout the day. The lab ran A1c during the day and afternoon shifts. 1,300 samples arrived in the early afternoon, but due to the low sample throughput of their existing HPLC equipment (three systems running 40 samples/hour), compounded by multiple stoppages to maintain and replenish the systems, it was impossible to finish the samples in one day. In fact, analysis did not start until 9pm when the previous days' samples were done processing.

When run on the D-100 System, with double the throughput of their existing HPLC equipment, and with no need to replenish reagents throughout the day, the sample analysis could start right away. Three D-100 Systems capable of a combined 240 samples/hour were able to finish the sample analysis before the end of the day, allowing all results to be released to the physicians in under 24 hours.

### Existing HPLC equipment needs overnight processing, so results are delayed.



### The D-100 Systems can run the samples on the day they arrive and provide same day results.



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