

QTA provides various competitive advantages compared to other ways to conduct analyses

1 Build a lab



2 Buy own MIR/NIR




3 Outside contract lab



VS





4



- Fast, easy, non-destructive
- No reagents or waste disposal
- No sample preparation reduces error and time
- Multi-component in a single test
- Immediate, actionable results
- Low training and resource costs

Example for cost savings by using QTA: Quality control a biodiesel plant

Stronger Advantages?

	Cost per month	Other considerations
<p>1 Build a lab</p> 	<p>\$15,348</p>	<ul style="list-style-type: none"> ■ One shift chemist coverage only ■ Costs increase as more samples are run ■ Turnaround time per sample > 45 minutes
<p>2 Buy own MIR/NIR</p> 	<p>\$11,000</p>	<ul style="list-style-type: none"> ■ Calibration process would normally take 2 months to collect samples ■ Calibrations not as robust as QTA
<p>3 Outside contract lab</p> 	<p>\$9,501</p>	<ul style="list-style-type: none"> ■ Only 10 samples per month ■ Turnaround time = 2 – 3 days minimum
<p>4</p> 	<p>\$5,500</p>	<ul style="list-style-type: none"> ■ Can run an unlimited number of samples ■ Turnaround time per sample < 2 minutes ■ No training needed to analyze samples, so 3 shift coverage is easy ■ Packages for oil and glycerine can be added

Not only for cost reasons it is favorable to use QTA instead of purchasing an MIR/NIR instrument



- For biodiesel, customer is able to use QTA at start up. With other MIR/NIR systems, they have two months worth of calibration building plus primary data expense, before they can use
- No IR expert is needed at customer. Often, even if an IR expert is identified and trained by the customer, they only do IR part time, so not as skilled. Also, turnover/promotion is a factor if only one IR expert at the company.
- Easy user interface for operators to use
- Ongoing 24 x 7 monitoring by QTA
- Full time, skilled chemometricians and spectroscopists with QTA have more experience in diagnosing problems
- For BD, QTA calibrations cover more types (RMs and processes) of BD so calibrations are more robust
- For multi-location applications (like seed treatment, seeds & BD), centrally controlled calibrations provide site to site standardization