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—Steve Allard, Sr. Group Leader, Quality Services & Microbiology,  
Amway

## SUMMARY

Amway wanted to reduce production time by getting microbial test results faster. Implementing a Celsis rapid detection system took days off its cycle times and also delivered unexpected benefits, both in lab efficiency and for Amway's company-wide sustainability program.



## OVERVIEW

Amway works hard to keep its customers satisfied. The 52-year-old company, headquartered in Ada, Michigan, has more than 14,000 global employees in more than 80 countries and territories, with more than 3 million distributors worldwide. Quality and service keep demand high for the company's 450 products designed for nutrition, beauty, personal care and home care. As a good business practice and to safeguard consumers, Amway conducts routine microbiological screening of its products. Like many companies, Amway was following traditional methods that date back more than 100 years.

## SITUATION

Product samples were mixed with growth media and incubated for several days, then monitored regularly to see if colonies of bacteria, yeast or mould had formed. “Microbiology testing tends to be lengthy,” says Steve Allard, senior group leader, Quality Services and Microbiology at Amway. “We needed to incubate samples for three to five days, so we were holding up products while waiting for test results.”

The lab's problems were magnified whenever one of the autoclave units went down for maintenance. Traditional methods generate a significant amount of material that must be disposed of or decontaminated.

At the same time, Amway's Sustainability Program Manager, Rick Van Dellen, is in the midst of leading a company-wide initiative. “Like many progressive companies, Amway wants to reduce risk and waste, including the waste coming out of the laboratory,” he explained. “We have a recycling goal of 95%, but it's hard to figure out how to recycle waste from a microbiology lab.”

## SOLUTION

Amway purchased a Celsis rapid detection system and has been relying on it increasingly over the past two years.

“If you move away from the recommended regulatory methods, there's a validation qualification process you go through,” explained Allard. “We did that very collaboratively with Celsis. They have a lot of great regulatory support on their side, and their technology is already well accepted in the industry; that was a selling point for us.”

Smart science for smart business™

## One Change, Huge Impact

A single broth is used for all Celsis-tested products. This significantly reduces the amount of media that Amway has to make on a daily basis with these results:

- Saves time making media
- Saves media and growth promotion costs
- Frees up media prep and storage space
- Uses less water
- Reduces media waste and disposal costs
- Frees up staff time for value-add activity

## Sustainability Impact

- Reduces non-recyclable waste
- Reduces janitorial costs for removal
- Reduces use of autoclave which also reduces water and energy use
- Reduces maintenance costs

For more information on Celsis systems, or the Financial and Environmental Impact Assessment, please contact Celsis at +1 312 476 1282 (Americas) or +32 (0) 2 534 08 91 (EMEA) or email [RDinfo@celsis.com](mailto:RDinfo@celsis.com).



Celsis rapid detection using Celsis AMPiScreen™ is a system for faster and reliable testing of raw materials, work-in-process and finished goods. It leverages an enzyme reaction to amplify ATP bioluminescence, making it the fastest rapid detection method for use in high-volume manufacturing environments.

The system includes the Celsis Advance®, a bench-top instrument for measuring luminescence, or light emissions. If microorganisms are present in combination with specialized Celsis AMPiScreen reagents, then an enzyme reaction is activated and produces light. The Advance.im software automates the assay, captures and records the testing data, and provides clear, non-subjective results in a color-coded display.

The Celsis system detects the presence—and confirms the absence—of bacteria, yeasts and moulds within 24 hours.

As part of a system purchase, Celsis includes three days of on-site training including the start of validation. “The implementation was smooth,” said Steve Allard. “Celsis has a ‘tried and true’ validation process and they provided us with a lot of technical support and guidance, including technical reports they had done for others in the industry with similar products.”

Today, more than 60% of the company’s products are currently being tested with the Celsis method, with more being validated regularly.

## RESULTS

“With the Celsis system, we were able to bring that three-to-five days of delay down to about a day,” said Allard. “We save at least two days of cycle time on each test. From a supply chain optimization standpoint, the reduced cycle time and inventory savings are important, and the Celsis system delivered.”

There were additional, unforeseen results from implementing the technology: increased lab efficiency and environmental benefits.

At Amway, the task of media preparation was extensive. Quality control procedures were lengthy. “After that,” said Allard, “there’s a significant amount of material you have to decontaminate

with traditional methods. Celsis has improved our processes on all those fronts, and reduced the amount of waste.”

“Having less lab waste to recycle is a big savings,” confirmed Rick Van Dellen. “It also reduces costs on our janitorial side. They don’t have to manage as much waste.”

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Van Dellen’s seen the environmental benefits of the Celsis system in other areas of the lab as well. There’s the ongoing issue of the autoclave. “We were down an autoclave for a while, and having Celsis was a big help,” he said. “We use less electricity, less steam. Our water needs are reduced.”

To quantify its savings, Amway is working with Celsis on an Environmental Impact Assessment that captures reductions in solid and liquid waste, as well as savings from reduced water and energy consumption. The Impact Report can also project additional savings from testing more of Amway’s products with the Celsis system.

Would Allard and Van Dellen recommend the Celsis system?

“You always have to consider the regulatory environment,” advises Allard. “That’s where we had a lot of confidence in Celsis. The technology has been out there and Celsis has done a great job improving the technology over the past few years.

“From a supply chain optimization standpoint, reducing cycle time and increasing efficiency in the lab are both very important for us,” said Allard. “The Celsis system has certainly done that. We’ve seen the results.”

Van Dellen adds, “The environmental savings have been a great benefit, and one that exceeded our expectations.”

“An unforeseen benefit,” agrees Allard.

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