



RAISING STANDARDS IN SKINCARE MICROBIAL TESTING

BUNNYROO'S PATH TO ADVANCING MICROBIAL QUALITY TESTING WITH BIOCALORIMETRY

INTRODUCTION

Bunnyroo Inc. is a Toronto-based, family-owned skincare company focused on developing formulations that combine clinically validated natural extracts with the latest advancements in dermal science. Founded and managed by Jessica Schwaber, a PhD scientist trained in biomedical engineering, the company is devoted to delivering safe, effective, and sustainable skincare backed by scientific integrity.

CONTAMINATION TESTING REQUIREMENTS IN BOUTIQUE SKINCARE PRODUCTION

Central to Bunnyroo's mission is the commitment to ensuring that skincare can be both safe for sensitive populations, including pregnant women, and produced in small, carefully controlled batches. This requires not only stringent quality assurance, but also innovative methods of microbial testing that are viable at small production scales.

With advanced formulations that minimize additives and preservatives, ensuring the absence of pathogenic microorganisms becomes a critical requirement.

Company: Bunnyroo

Industry: Skin care

Application: Microbial detection

Instrument: calScreener™



Figure 1. The calScreener, enabling rapid and sensitive microbial detection through biocalorimetry technology.

To live up to the highest quality standards, it is not enough to merely comply with regulations that require absence of a selected group of pathogenic bacteria and limits on the overall microbial load.



"Symcel's technology provides the sensitivity required to validate the integrity of small-batch formulations, while aligning with Bunnyroo's broader commitment to transparency in testing and evidence-based product development,"

Jessica Schwaber, PhD
Founder of Bunnyroo Inc.

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Bunnyroo has set the bar higher, aiming for products entirely free from detectable bacteria.

Depending solely on external laboratories using traditional plating tests is also very problematic, as it often means weeks of waiting for results, delaying the ability to safely release products to customers.

Traditional microbial protocols are often designed for high-throughput pharmaceutical manufacturing, which can present challenges for companies that prioritize artisanal, low-volume production without compromising safety.

MICROBIAL SAFETY DETECTION WITH THE CALSCREENER SYSTEM

Bunnyroo set out to find methods that offered a combination of the highest accuracy, sensitivity, and time to results. Their journey brought them to Symcel's calScreener™ biocalorimeter system. Based on isothermal microcalorimetry, the calScreener detects the heat released from growing microorganisms, enabling sensitive and automated detection of potential contaminants within hours, compared to the days or weeks required by standard plating tests.

The system is particularly well-suited to identifying bacteria and fungi commonly found in environmental exposures, but which must be rigorously excluded from skincare products to guarantee safety. It can test finished products as well as raw materials by inoculating samples directly into growth media vials, eliminating cumbersome handling steps that could introduce variability or error.

With low sample volume requirements, the calScreener is ideally suited for testing high-value skincare products produced in limited premium batches. With a limit of detection down to a few colony-forming units (CFU) and detection restricted to viable cells, it minimizes the risk of both missed contaminants and false positives.

CONCLUSION

Through its collaboration with Symcel, Bunnyroo has adopted an advanced approach to microbial testing that enables rapid, precise assessment of contamination in real-world production conditions.

"Symcel's technology provides the sensitivity required to validate the integrity of small-batch formulations, while aligning with Bunnyroo's broader commitment to transparency in testing and evidence-based product development," says Jessica Schwaber, founder of Bunnyroo.

Through this integration of philosophy and practice, Bunnyroo demonstrates that scientific rigor, consumer safety, and small-batch production can co-exist. By embracing transparent microbial testing strategies, the company sets a new standard for how skincare brands can deliver clinically responsible products without sacrificing scale, ethos, or consumer trust.

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