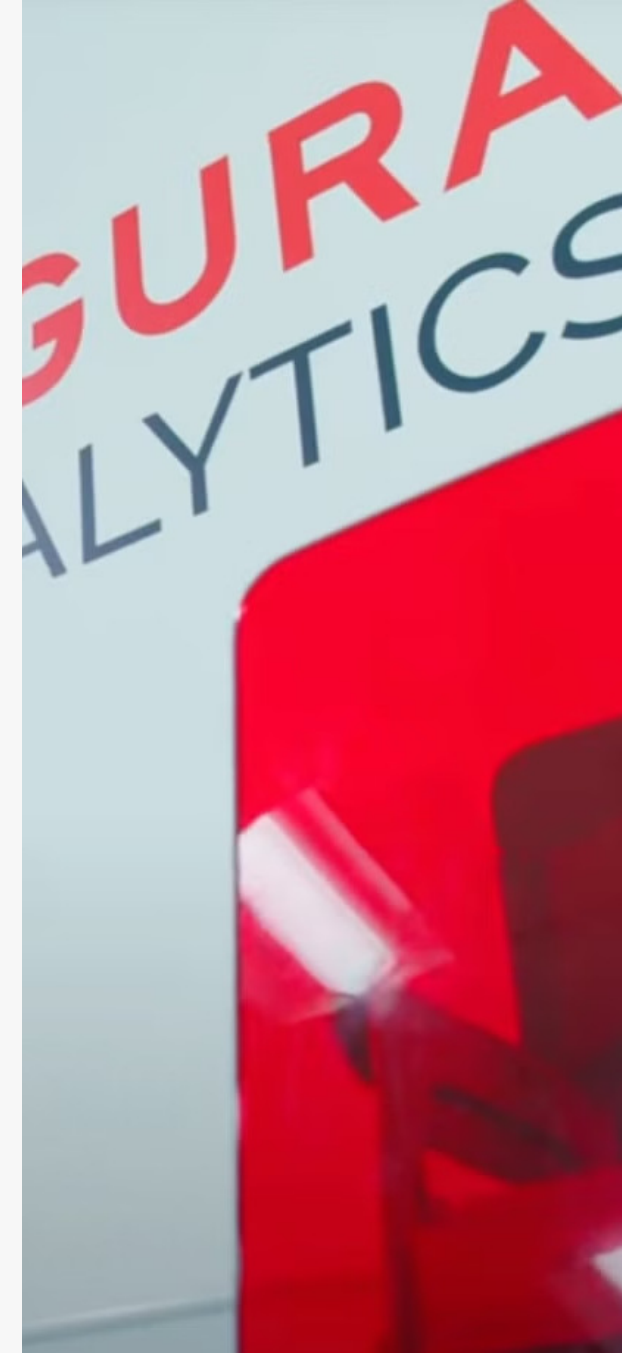




24 HOUR MICRO DETECTION METHOD FROM FIGURA

Advanced nanotechnology for rapid microorganism detection in drinks





OUR TECHNOLOGY PLATFORM

Our patented nanopore platform analyzes all particles in liquids, delivering precise results in minutes with remote access through proprietary software



FullHD-26MB.mp4



▶ 01:18

<10

Yeast Cells

Detection threshold in 440ml

10

Bacteria Cells

Detection threshold in 440ml

24h

Incubation

For accurate results



INTRODUCING THE FIGURA MICRO METHOD (FMM)

Our new, patent pending method detects micro contamination in liquids with unprecedented precision



Superior Detection

Detects **<10 yeast cells and 10 bacteria cells** in a 440ml beer can



Confirmed Live or Dead

Only viable cells and their effect are validated using our method



Industry-Leading Speed

Lower detection limits and faster live/dead **delivered in 24 hours**

1

Testing

Successfully tested across various beverage samples

2

Validation

External validation confirms effectiveness

3

Implementation

Ready for real-world applications

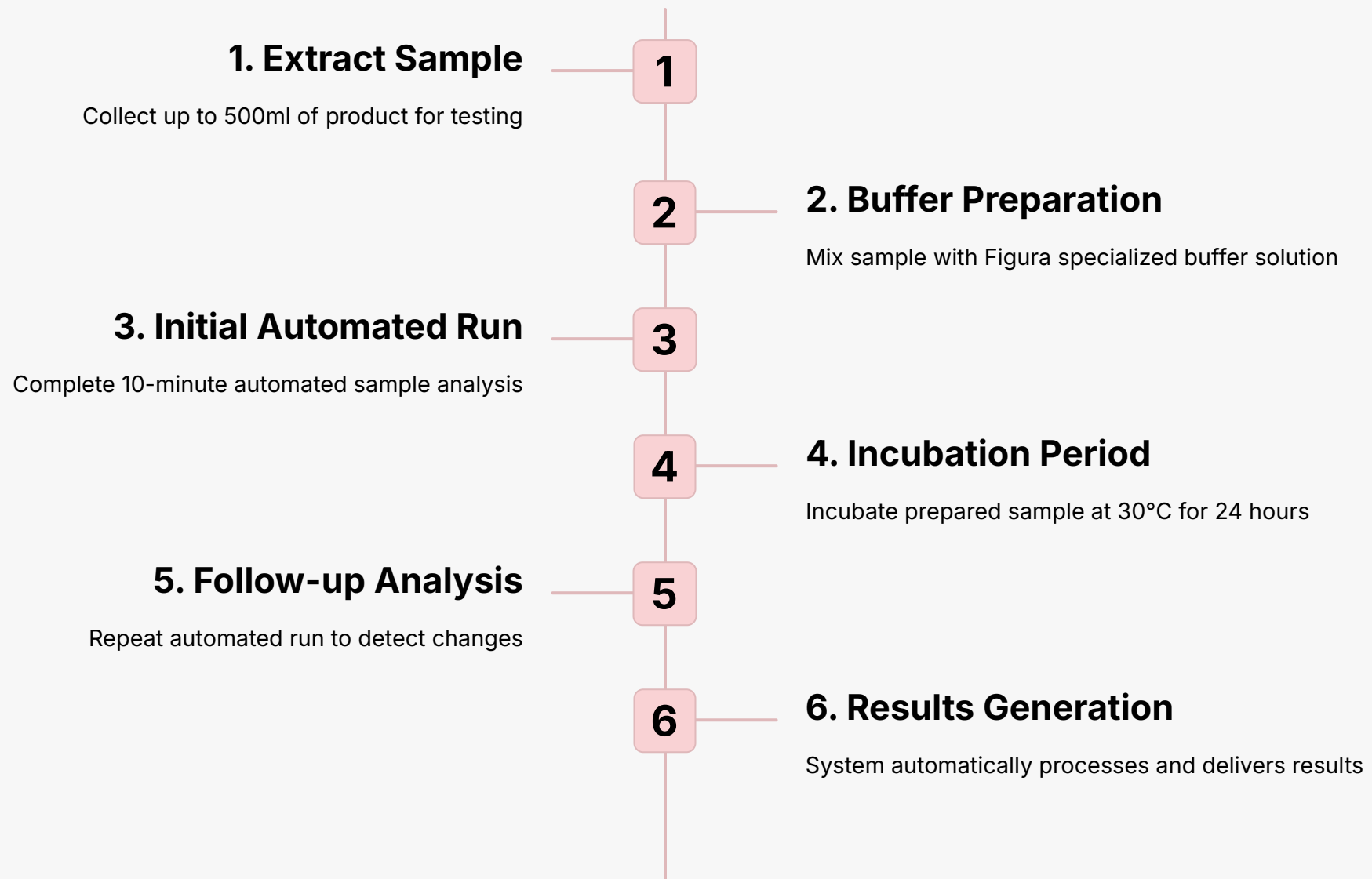
"We have been working with Figura on the study and the results are an exciting new approach to the detection of microorganisms"

Murphy & Son



MICRO STUDY METHODOLOGY

Our streamlined process delivers accurate microbiological results through a validated 24-hour protocol



Methodology and results validated with leading industry partners:





MICRO RESULTS IN 24 HOURS

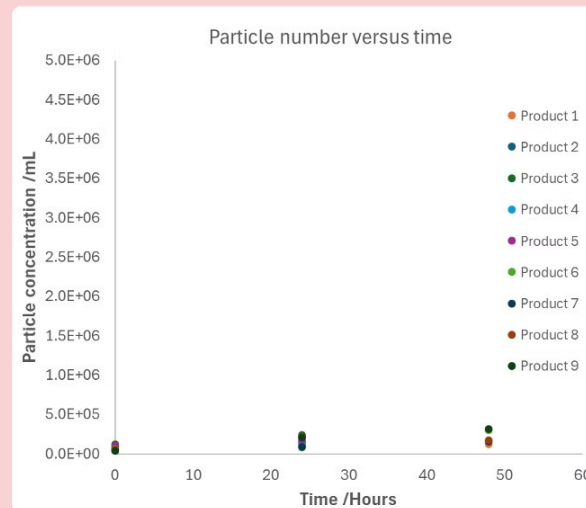
Uncontaminated products show stable particle counts, with consistent results across multiple beverage types in the 24-hour testing protocol

Key Finding

No contaminant = no significant particle count change

Minimal particle drift occurs only due to atmospheric exposure and ingredient oxidation

Consistent Data



Validated Product Types

Lager
Ale
Hazy Beer
LoNo
Dairy
Stout
Cider

The Figura rapid detection system provides consistent results across multiple beverage categories, allowing for reliable 24-hour contamination screening.

MICRO CONTAMINATION RESULTS

440ml cans of lager were contaminated with known contaminant concentrations

70

Brevis Cells per can

Initial contamination - led to..

5M

Particles / ml

Generated in 24 hours

10

Saccharomyces Cells per can

Initial contamination led to...

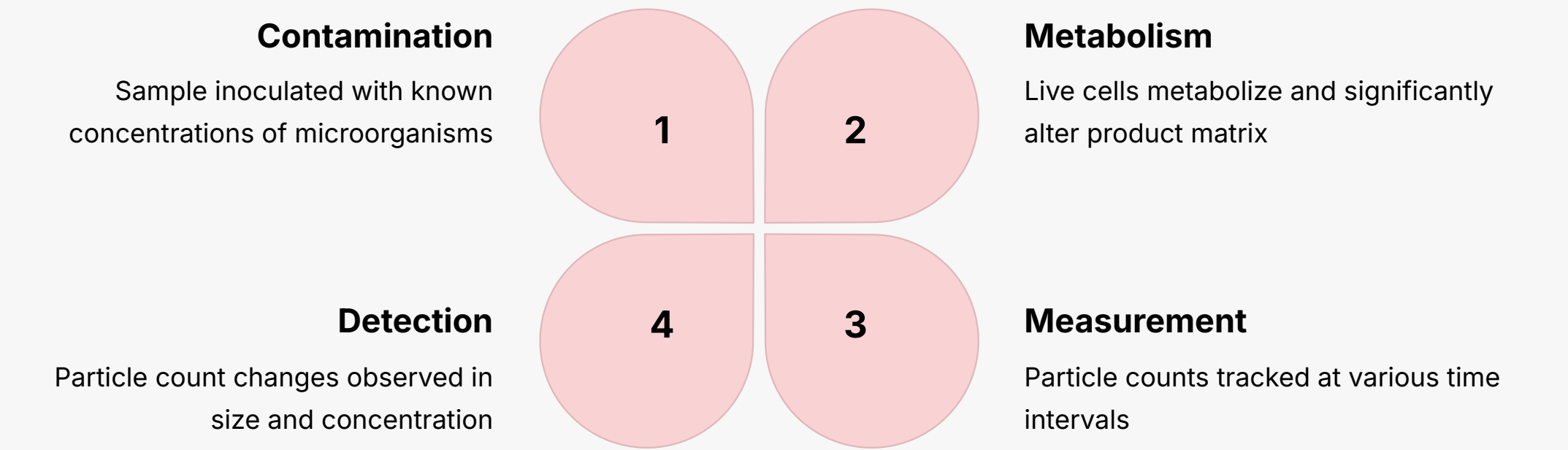
10,000

Particles / ml

Generate in 24 hours

We don't just count the increased number of microorganisms present

Rather the effect that these microorganisms have on the overall liquid





MICRO RESULTS – ONSITE WITH CUSTOMERS

Across three weekly visits, we tested samples from different points on a large brewery's kegg line. In summary:

88%

Match Rate

Correlation with traditional microbiology testing methods

8

Sample Points

Different locations in brewing process

3

Weekly Visits

Consistent testing across multiple production cycles

Analysis Methodology

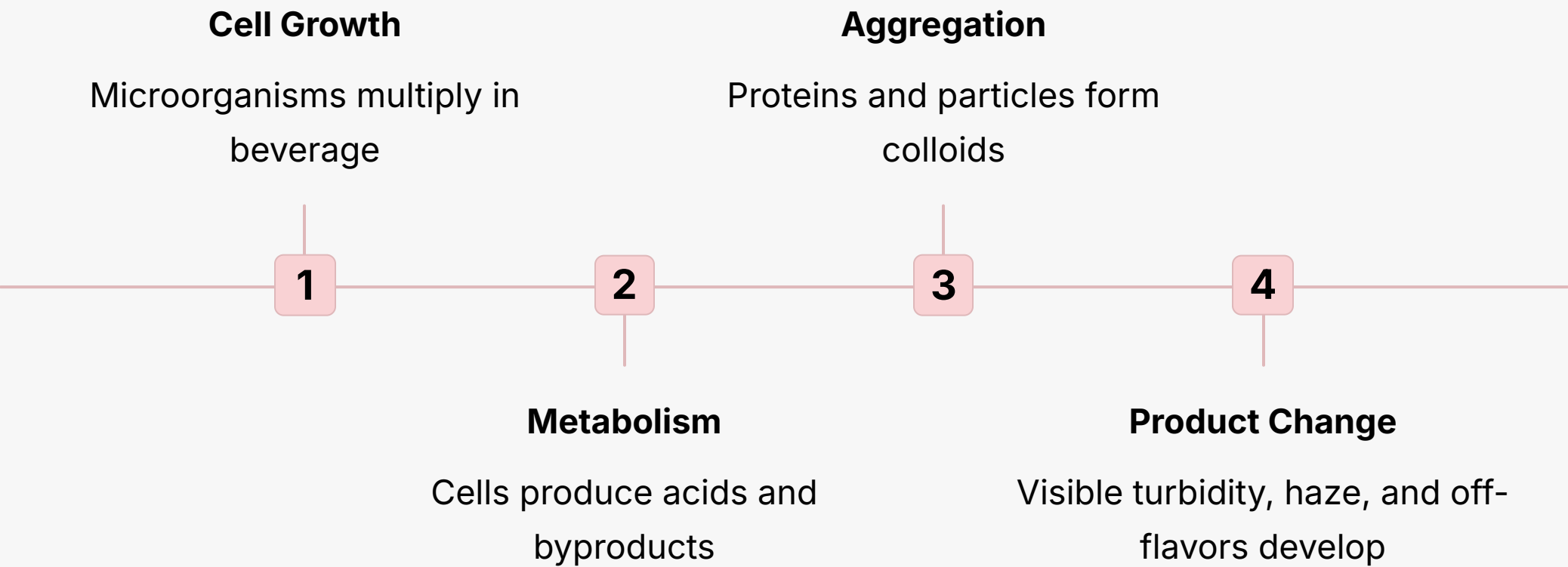
Samples tested using both Figura technology and traditional methods for comparison

Detection Capabilities

Successfully identified yeast and bacterial contaminants, and byproducts, when counts exceeded background levels

WHAT IS HAPPENING TO THE PRODUCT

Figura measures critical product changes where 1 cell $\neq$ 1 particle and particle numbers change as a function of cells and time



Beverage Impact

This phenomenon occurs in beer, dairy, and other beverages where cell metabolism and protein conversion lead to haze formation and particle aggregation.



Detection Advantage

Figura uniquely detects product changes caused by any spoilage organism, not just specific bacteria.

RESEARCH EVIDENCE

Historical Impact

"In 1980–2002, 60–90% of microbiological spoilage in Europe was caused by *Lactobacillus* and *Pediococcus*, creating haze, sediment and acidification" **Suziki, J. *Inst. Bre. (2011)***

Quality Issues

"Some microorganisms still manage to grow in beer leading to turbidity and off-flavors" **Li et. al. *Ann MicroBiol (2017)***

Colloidal Formation

"Lactic acid from *Lactobacillus brevis* can form colloidal particles." **Dr Yishen Lee, *Research Fellow***

Growth Conditions

"Lactic acid bacteria grow at pH 4-5, causing changes in turbidity and acidity." **Buiatti et. al. *J. Institute of Brewing (2011)***



METHOD COMPARISON AND BENEFITS

Figura offers superior microbial detection with 24-hour results, simple automation, and advanced capabilities at competitive costs compared to other methods



Rapid Results

24-hour detection time versus 3-14 days for traditional methods



Advanced Detection

Low detection limits unlike PCR



Live and Dead

Figura can tell the difference between live and dead cells unlike PCR



Cost Effective

Competitive test and ongoing costs



Simplified Process

Automated sample preparation requiring minimal manual intervention and training



Other Applications

Figura technology can be used for a number of other uses through the production process



SUMMARY

Figura offers a rapid, highly sensitive microbial detection system that's user-friendly and versatile, revolutionizing quality control across the beverage industry



Fast Results

Figura's validated method detects micro contamination in 24 hours



High Sensitivity

Features low detection limit



Advanced Differentiation

Distinguishes between live and dead microbes



User-Friendly

User-friendly with minimal operating costs



Versatile Applications

Versatile applications throughout brewing process



THE FIGURA MICRO-DETECTION METHOD

To find out more contact Nick Whitehurst: nick@figura-analytics.co.uk

[Website](#)

[LinkedIn](#)