


Oenology

Microbiological control by flow cytometry

React faster!

- 
- A close-up photograph of red wine being poured into a glass. The wine is a deep red color and is captured in motion, creating a dynamic, swirling effect. The background is a soft, warm gradient of orange and yellow, suggesting a sunset or sunrise. The glass is partially filled with wine, and the liquid is bubbling and splashing.
- Gain 3 to 5 days in microbiological culture time
 - Results reported the same day
 - Easy handling
 - Low cost in use

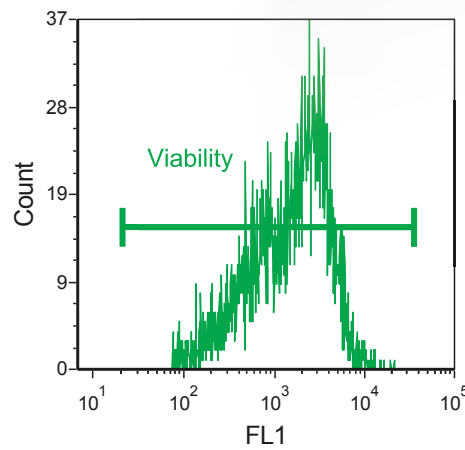
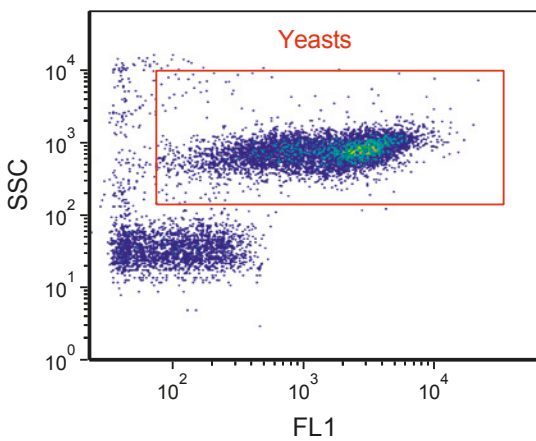
CyFlow® Cube 6 & OenoYeast™ kit

Rapid yeast counting

- Indigenous live yeasts in must
- Monitor *Saccharomyces* in alcoholic fermentation
- Monitor *Brettanomyces* after alcoholic fermentation
- Assess yeasts' metabolic activity
- Monitor yeasts in fermentation and in fermentation starters
- *Prise de mousse* (sparkling wines)



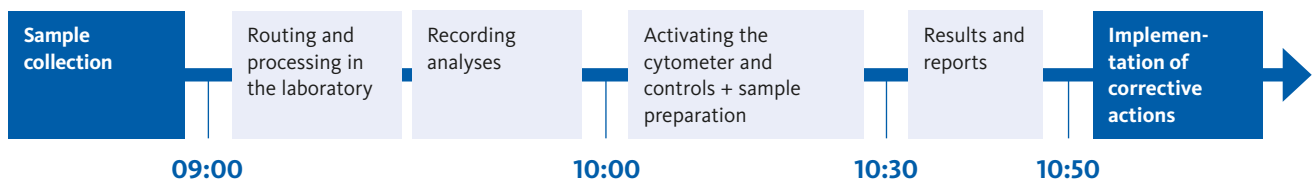
Analysis example using the OenoYeast™ kit



Live concentrations	57297 / mL
Esterase activity	1415 yeast population MFI*

*Mean Fluorescence Intensity

Typical sample processing



Sysmex order codes

Reagent	Sysmex order code	Suitable flow cytometer systems
OenoYeast™	05-6001	<ul style="list-style-type: none"> ■ CyFlow® Cube 6 (CY-S-3060_V2) ■ CyFlow® Space (CY-S-3001R_VS01)

Flow into the next level of quality control

Fast and reliable *Brettanomyces* spoiler monitoring



Unpleasant taste or smell?

CyFlow BrettCount helps to recognise and prevent *Brettanomyces* contaminations.

At the ageing stage, wines are prone to a well-known threat to quality: contamination by *Brettanomyces bruxellensis* yeast. Without early detection of *Brettanomyces*, the production of undesirable volatile compounds with unpleasant aromas can mask or affect a wine's bouquet.

If detected early enough, swift corrective actions can be made to ensure the sensory quality of the wine is maintained.

Assurance of quality in wine production – with CyFlow BrettCount

The CyFlow BrettCount Solution is a highly specific and automated detection system that enables fast and reliable quality control testing for *Brettanomyces*.

It allows for the detection of these spoilers much faster and with less effort than classical culture methods. In addition, it detects the viable but not cultivable (VBNC) *Brettanomyces*, which are not detected even after seven days of culture.

Because CyFlow BrettCount directly counts living yeast cells, as one would see under a microscope, the result is not affected by inhibiting factors that can lead to an underestimation in other techniques. It also avoids false-positive results that can occur when using molecular biological methods, such as qPCR, in which stable fragments of DNA from dead yeast are amplified as well.

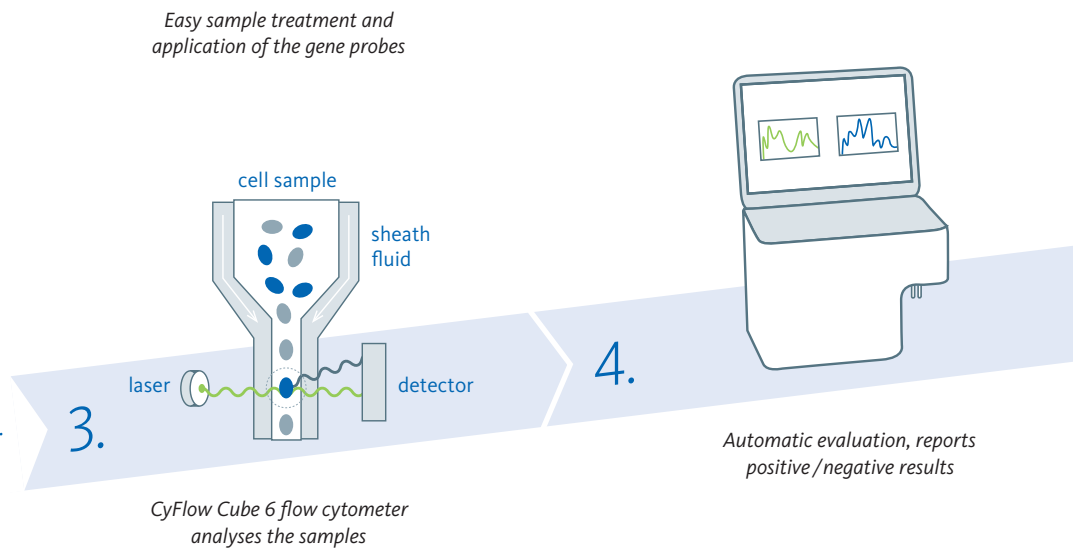
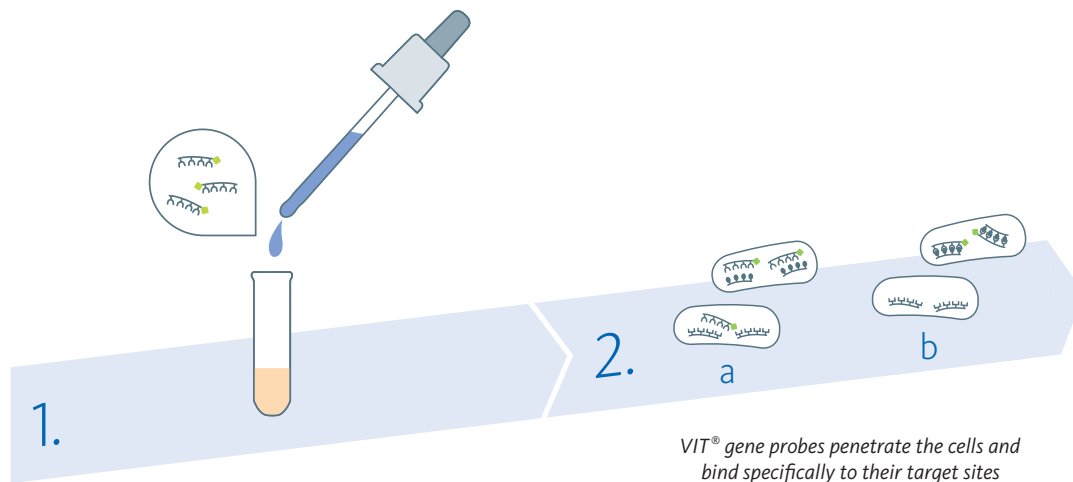
The CyFlow BrettCount Solution

CyFlow Cube 6 with
CyFlow BrettCount test kit

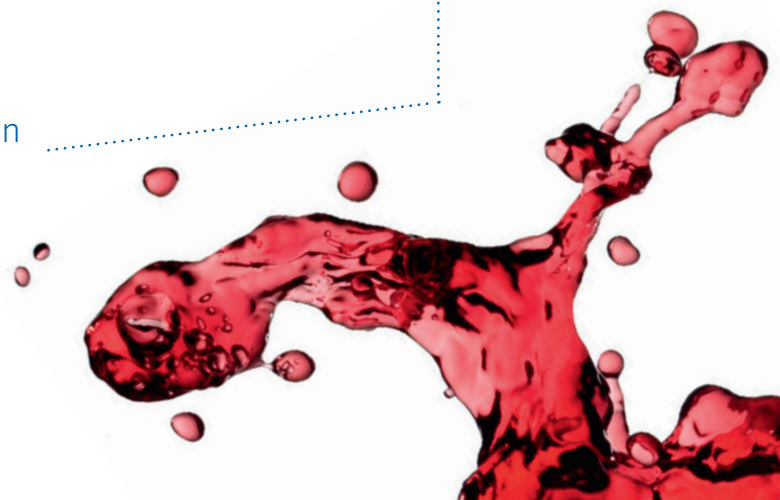


Fast & easy workflow

The workflow is fast and easy and allows highly specific detection of living microorganisms in a short time, automatic evaluation included!



Final evaluation within
3 minutes!



CyFlow BrettCount – the next level of microbiological analysis

The CyFlow BrettCount Solution is the perfect combination of VIT[®] gene probe technology and flow cytometry. By the use of the CyFlow BrettCount Solution, microbiological quality control is elevated to a higher level, paving the way for a fast and cost-effective microbiological monitoring of production processes.



The advantages

- Highly specific
- Low limit of detection
- Counts only living yeast
- Rapid and clear-cut release decisions
- Automated read-out of the results
- Reliable results even on challenging samples
- Easy handling
- Perfect for routine analysis
- Installation and Operational Qualification (IQ/OQ) protocols

Partnering to deliver new microbiological testing solutions

The CyFlow BrettCount Solution has been developed in a collaboration between vermicon AG, known for its expertise in industrial microbiology applications, and Sysmex Partec GmbH, a pioneer in flow cytometry measurement

technologies. Through this partnership we aim to create more effective and economical solutions for industrial microbiology testing.

VIT[®] = vermicon identification technology

www.sysmex-flowcytometry.com

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Authorised representative: Sysmex Europe GmbH

Bornbarch 1, 22848 Norderstedt, Germany · Phone +49 40 52726-0 · Fax +49 40 52726-100 · info@sysmex-europe.com · www.sysmex-europe.com

Manufacturer: Sysmex Partec GmbH

Am Flugplatz 13, 02828 Görlitz, Germany · Phone +49 3581 8746-0 · Fax +49 3581 8746-70 · info@sysmex-partec.com · www.sysmex-partec.com


Sysmex Corporation

1-5-1 Wakinohama-Kaigandori, Chuo-ku, Kobe 651-0073, Japan · Phone +81 78 265-0500 · Fax +81 78 265-0524 · www.sysmex.co.jp

Fermentation process control

Yeast microbial monitoring by flow cytometry

Check your performance!

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- A close-up photograph of a glass of beer with a thick, white head of foam. The beer is a golden-orange color, and the glass is covered in condensation droplets. The background is white.
- Rapid results
 - Yeast viability
 - Yeast glycogen content
 - Yeast trehalose content
 - Yeast neutral lipid content
 - Yeast cell cycle
 - Easy handling

CyFlow Cube 6 & YeastControl kits

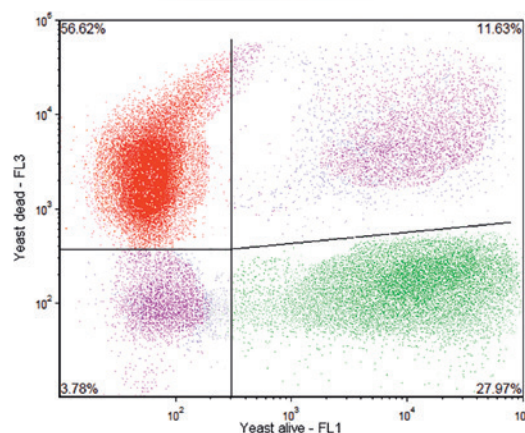
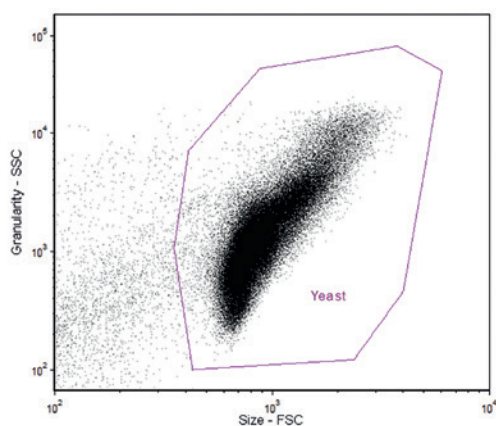
Rapid yeast counting

- Simultaneous differentiation and count of living and dead yeast cells
- Glycogen synthesis and consumption
- Trehalose as an indicator of stress resistance
- Neutral lipids as a measure of stress resistance and protection
- DNA distribution of growing yeast cultures



CyFlow Cube 6

Analysis example using the YeastControl – Viability kit




Yeast concentration	108 357/mL
Viable yeast	27.97%

Sysmex order codes

Reagent	Sysmex order code	Number of tests	Suitable flow cytometer systems
YeastControl – Cell Cycle	05-6000-01	50	<ul style="list-style-type: none"> ■ CyFlow Cube 6 (CY-S-3060R_V2m) ■ CyFlow Space (CY-S-3001R_VS01)
YeastControl – Viability	05-6000-02	100	
YeastControl – Glycogen	05-6000-03	50	
YeastControl – Trehalose	05-6000-04	50	
YeastControl – Neutral lipids	05-6000-05	50	

Flow into the next level of quality control

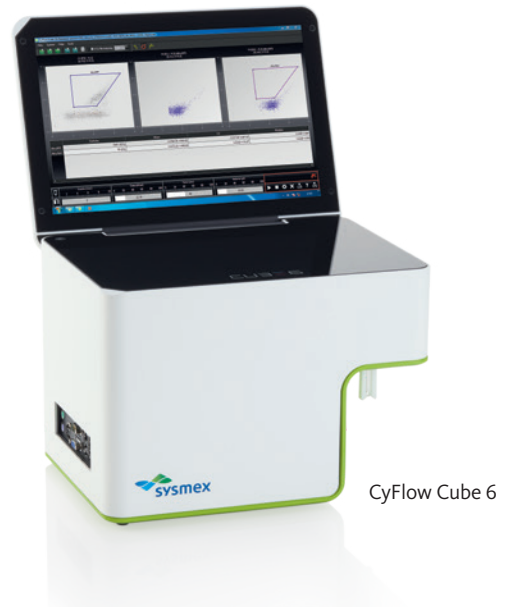
Alicyclobacillus spoiler monitoring by flow cytometry

- 
- Highest specificity for *Alicyclobacillus* spp. and *A. acidoterrestris*
 - Low limit of detection
 - Detects only living *Alicyclobacillus* bacteria
 - Rapid and clear-cut decisions
 - Easy handling
 - IQ/OQ protocols

CyFlow Cube 6 & Flow VIT[®] Alicyclobacillus test kit

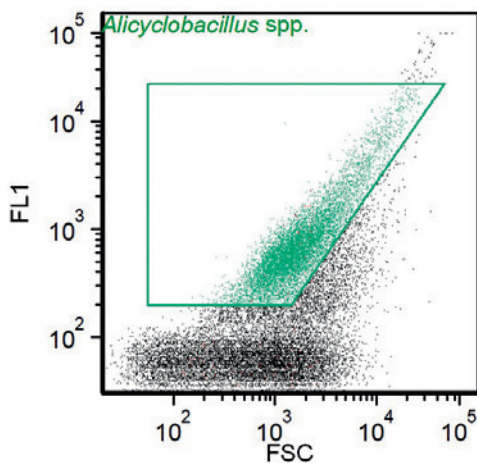
Assurance of quality in beverage production

- Parallel detection of *Alicyclobacillus* spp. and *A. acidoterrestris*
- Enumerate only living alicyclobacilli
- Low limit of detection
- Easy interpretation of the results
- Reliable results even on challenging fruit juices and concentrates
- Fast and easy workflow
- Installation and Operational Qualification (IQ/OQ) protocols

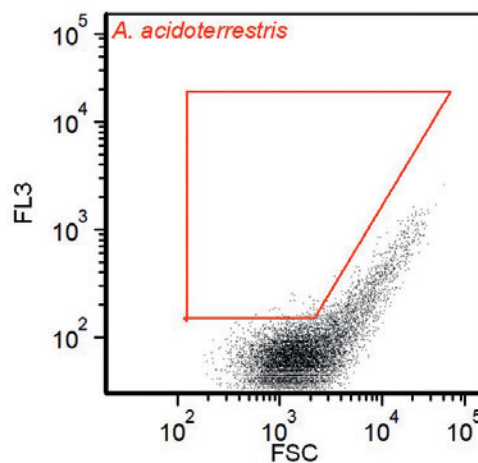


CyFlow Cube 6

Analysis example using the Flow VIT[®] Alicyclobacillus test kit



Alicyclobacillus spp.:
positive result



Alicyclobacillus acidoterrestris:
negative result

Sysmex order codes

Reagent	Sysmex order code	Number of tests	Suitable flow cytometer system
Flow VIT [®] Alicyclobacillus	01150001	50	■ CyFlow Cube 6 (CY-S-3060R__V2m)

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Authorised representative: Sysmex Europe GmbH
Bornbarch 1, 22848 Norderstedt, Germany · Phone +49 40 52726-0 · Fax +49 40 52726-100 · info@sysmex-europe.com · www.sysmex-europe.com

Manufacturer of CyFlow Cube 6: Sysmex Partec GmbH
Am Flugplatz 13, 02828 Görlitz, Germany · Phone +49 3581 8746-0 · Fax +49 3581 8746-70 · info@sysmex-partec.com · www.sysmex-partec.com

Flow VIT[®] test kits developed and manufactured by: vermicon AG
Emmy-Noether-Str. 2, 80992 Munich, Germany · Phone +49 89 1 58 82-0 · Fax +49 89 1 58 82-1 00 · info@vermicon.com · www.vermicon.com

Sysmex Corporation
1-5-1 Wakinohama-Kaigandori, Chuo-ku, Kobe 651-0073, Japan · Phone +81 78 265-0500 · Fax +81 78 265-0524 · www.sysmex.co.jp

Bacterial count in routine quality control

CyStain™ BacCount

Quantify bacteria in
minutes instead of days



CyStain BacCount tests: Know within minutes that your process is under control

For routine quality control of water samples in industrial processes, CyStain BacCount tests offer a rapid alternative to conventional plate counts. The CyStain BacCount reagents, used on the CyFlow™ Cube 6 V2m analyser, provide an easy-to-use and cost-effective test system to enumerate bacteria in many types of water-based samples, taken for example from industrial water, cleaning-in-place units, household settings, aquaculture facilities, and environmental sources.

The **CyStain BacCount Total kit** enables detecting the total amount of bacteria in water samples. This is crucial to assess the microbial status of process control samples. The **CyStain BacCount Viable kit** discriminates between live and dead microorganisms, which is important to assess their physiological state. Both kits are designed for the quality control of water-based samples from different sources.



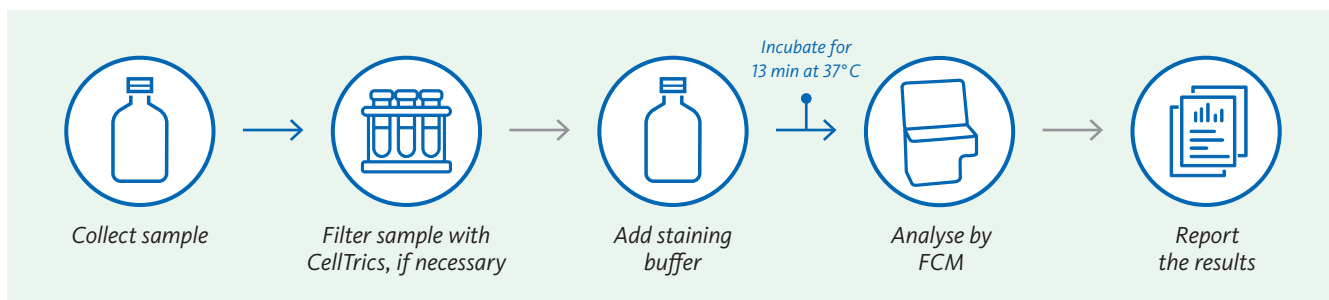
CyFlow Cube 6 V2m and CyStain BacCount Total kit – a true alternative to culture plates

Key benefits

- Fast quantification of bacteria in water samples
- Cost-effective solution
- Low limit of detection
- Enumeration of all bacteria, including viable and non-culturable cells
- Automated read-out of the results
- Perfect for routine analysis

Item	Sysmex order code
CyStain BacCount Total	05-5008
CyStain BacCount Viable	05-5028
CyFlow Cube 6 V2m	CY-S-3061R_V2m

Typical analysis workflow: results within 20 minutes



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Distributor EMEA: Sysmex Europe GmbH
Bornbarch 1, 22848 Norderstedt, Germany · Phone +49 40 52726-0 · Fax +49 40 52726-100 · info@sysmex-europe.com · www.sysmex-europe.com

Manufacturer: Sysmex Partec GmbH
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You will find your local Sysmex representative's address under www.sysmex-flowcytometry.com