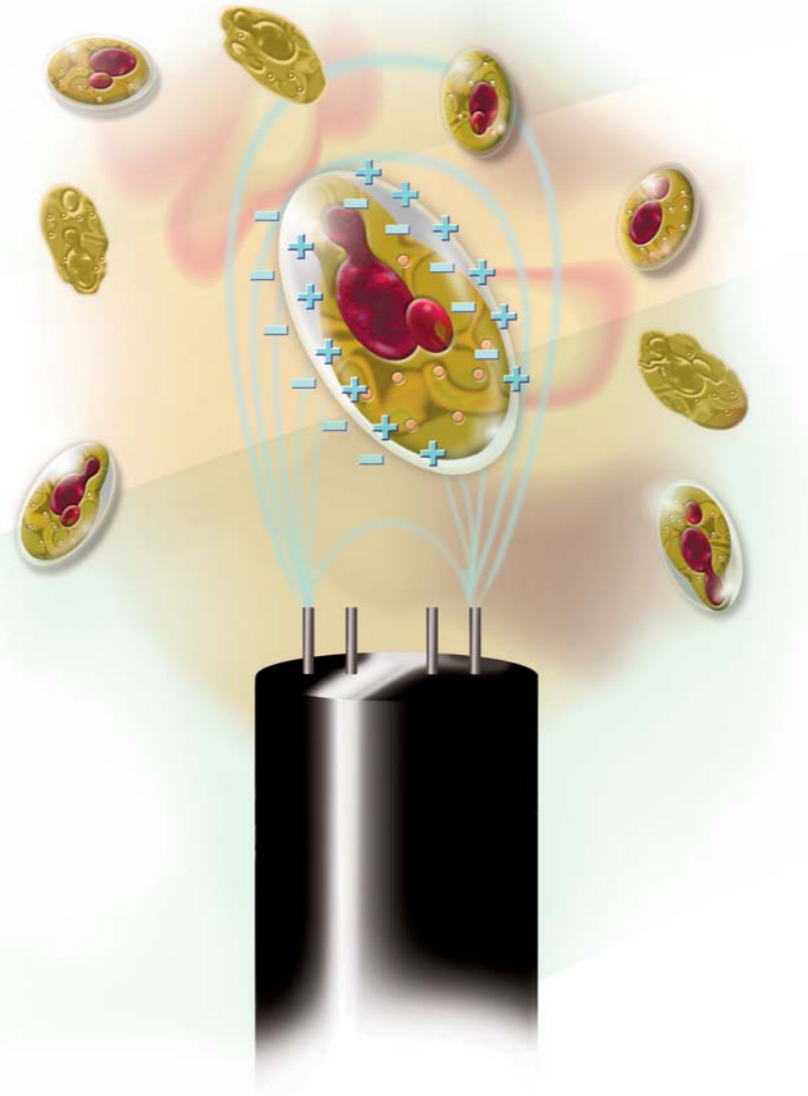


How the ABER yeast monitor works

The Yeast Monitor measures the concentration of LIVE yeast with an on-line capacitance probe with 4 electrodes. A radio frequency applied from the electrodes causes ions in the suspending medium (e.g. wort or green beer) and the cytoplasm of the yeast to move towards the two respective oppositely charged electrodes. As the plasma membrane is non-conducting i.e. ions can not freely move across it, a build up of charge will result and these cells are said to be polarised with the yeast cells acting as tiny capacitors within the medium.

Non-viable cells or cells with a damaged membrane do not interfere with the signal: a build of charge can not occur as the ions can freely move across the membrane and so the cells do not become polarised. Trub and other non-yeast solids also have no effect on the capacitance signal, as they do not possess a polarisable membrane. The measured capacitance is directly proportional to the amount of viable yeast within a sample over a wide concentration range.



NEXT GENERATION YEAST MONITORS

ABER
TRUSTED TECHNOLOGY

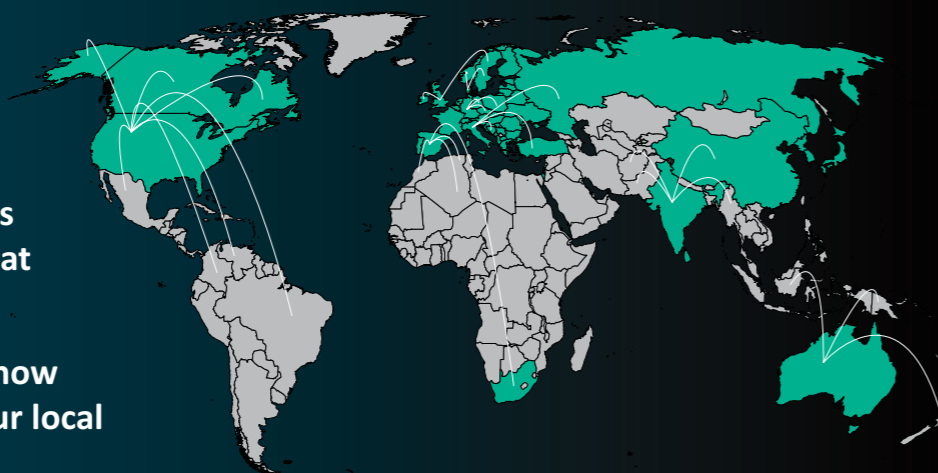


**New Compact
Yeast Monitor
coming soon**

RELIABLE...

Aber brewery products are distributed world-wide and details of the local supplier are provided at www.aberinstruments.com

For more information please call now on +44 (0) 1970 636300 or call your local Aber Instruments Distributor.



REMARKABLE...

The ABER Yeast Monitors are recognised today as the most accurate and reliable instruments for measuring the LIVE cell concentration on-line.

ABER
TRUSTED TECHNOLOGY

Aber Instruments Ltd, Science Park, Aberystwyth, SY23 3AH, UK
Telephone: +44 (0) 1970 636300 Fax: +44 (0) 1970 615455 Email: sales@abinstruments.com
www.aberinstruments.com

The Yeast Monitor 720 range remains the flagship high specification product for applications that involve multiple yeast strains, slurries with a wide range of conductivities from acid or pure water washing and is offered with a wide range of communication protocols. At Drinktec 2009, ABER will be showing the next generation of 'Compact' Yeast Monitors designed for breweries that require a low cost, easy-to-use instrument for pitching and cropping applications.

KNOWLEDGEABLE...

With over 20 years dedication to the Brewing sector we offer an integrated range of trusted products:



- Yeast Monitor 720 ideal for large highly automated breweries with multiple yeast strains and slurry washing processes. Flexible range of bus and analogue communications.

- 'Compact' Yeast Monitor for breweries with up to 2 yeast strains. Provides the lowest cost solution.



- Lab Yeast Analyser 910 - measures live cell concentration off-line with no dilution or addition of chemicals.

- Futura Biomass Monitor - measures the live yeast cell concentration in fermenters and propagators. Probe fits a standard 25mm Ingold port.



DEPENDABLE...

The modern Yeast Monitor is a robust instrument requiring minimal maintenance. Brewers can rely on the instruments to provide an accurate measurement of the LIVE cell concentration 24/7 and operator variance and errors can be eliminated.

DELIVERABLE...

The Yeast Monitor, in many countries is sold through and supported by a trained team of selected distributors. It is experience, confidence and a "can-do" attitude that has made the ABER distribution route a global leader in yeast measurement.

ADAPTABLE...

ABER offers a unique choice of instruments for measuring live yeast cell concentration in breweries.

Use the table below to select the instrument for your brewery.

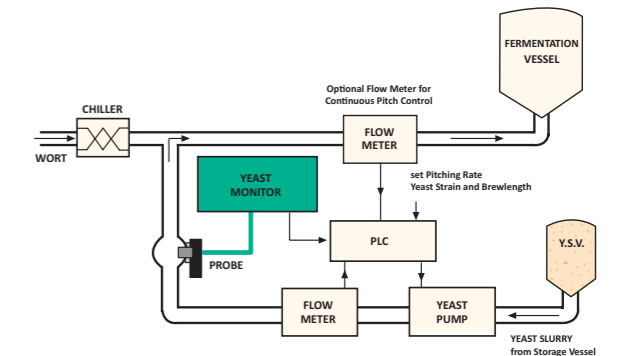
| | YM720 | YM710 | Compact | Futura | LYA 910 |
|---------------------------------|-------|-------|---------|--------|---------|
| Maximum number of Strains | 8 | 8 | 2 | 1 | 8 |
| Multiplexable | ✓ | ✓ | ✓ | ✓ | ✓ |
| Online | ✓ | ✓ | ✓ | ✓ | ✓ |
| Yeast Slurries | ✓ | ✓ | ✓ | ✓ | ✓ |
| Fermenter Propagator | ✓ | ✓ | ✓ | ✓ | ✓ |
| Profibus DP | ✓ | ✓ | ✓ | ✓ | ✓ |
| 4-20 mA | ✓ | ✓ | ✓ | ✓ | ✓ |
| Laptop Set-up | ✓ | ✓ | ✓ | ✓ | ✓ |
| Option for low cost transmitter | ✓ | ✓ | ✓ | ✓ | ✓ |

Automatic yeast pitching rate control

The Yeast Monitor allows brewers to automatically dose the correct amount of LIVE yeast into each fermenter.

Major benefits include:

- More consistent and shorter fermentations
- Reduced dependency on lab for sampling/analysis
- Improvement in consistency of beer quality.



Automatic control of yeast cropping

The Yeast Monitor is commonly used to control yeast cropping and to automatically dose the correct amount of LIVE yeast into each FV. The brewery can benefit in the following ways:

- Poor quality yeast can be directed to a waste tank
- The "cream of the yeast" with a high viable cell concentration can be selectively recovered
- The interface between yeast and beer can be clearly detected: ideal for poorly flocculent yeasts
- The system can detect and alarm when beer is being pulled through the cone.

The final LIVE cell concentration in each YSV can be determined and this value can be used for PITCH RATE CONTROL.

