

Anaerobic Fermentation Monitor, simple parallel cultivation

The Anaerobic Fermentation Monitor (or AFM) is a robust and user-friendly laboratory parallel fermentation system that allows for accurate comparisons of carbon conversion rates and yields for six simultaneous anaerobic fermentations.

Monitoring the amount of gas that evolves from a fermentation broth under well controlled conditions is a reliable comparison method that has proven to be very useful in all industries that use anaerobic fermentations. Because carbon dioxide production is stoichiometrically coupled with carbon source conversion, very useful metabolic data can be obtained.

The AFM provides very accurate standard measuring of gas from six parallel fermentations that is both very low in maintenance and very easy to use.

Features

- Very user friendly laboratory device for monitoring anaerobic, metabolic yeast activity for alcohol production
- Six independent yeast fermentations can be carried out simultaneously
- Stirrer speeds and temperatures can be set or time programmed for each fermenter flask individually
- Accurate comparison of conversion rates and yields under different conditions such as temperature, strain type, carbon source or nutrients
- Much easier to operate and cleaner than standard fermenter systems
- Fully controlled with user-friendly PC control and data analysis software
- Automatic generation of advanced reports containing all measured data, data analysis tables and corresponding graphs
- Very strong magnetic stirrers, able to handle very viscous media
- Proven value for research and QA purposes in all fields of yeast research and (bio) ethanol production



Applications

- Measure conversion rates and yields of lignocellulose hydrolysates into biofuels
- Test and compare different yeast strains or different feedstock/substrates
- Quality control of regular/commercial yeast
- Quality control of traditional feedstock (such as molasses)
- Conversion of wort into beer
- Conversion of grape juice into wine
- Alcohol tolerance and toxicity studies
- Industrial and academic research on yeast and potable alcohol/bio-ethanol/bio-butanol production

Specifications

Total volume (liter)	6 reactors of 250 ml or 500 ml
Working volume (liter)	200 ml or 400 ml
Minimum working volume (liter)	50 ml or 100 ml
Drive system	Magnetically coupled drive
Maximum stirrerspeed (rpm)	Standard range is 50 - 500
Impellers	Marine type
Exhaust gas	Exhaust gas connection
Temperature	Measurement: Pt-100 sensor in central stirrer bar Control: heating via central stirrer bar
Dimensions (DxWxH)	30 x 85 x 67 (cm)
Empty Weight (kg)	75 kg

