RTS-8, Personal multi-channel bioreactor with non-invasive real time OD measurement

DESCRIPTION

RTS-8 is a personal bioreactor that utilizes patented Reverse-Spin® technology that applies non-invasive, mechanically driven, low energy consumption, innovative type of agitation where cell suspension is mixed by the single-use falcon bioreactor tube rotation around its axis with a change of direction of rotation motion resulting in highly efficient mixing and oxygenation for aerobic cultivation. Combined with a near-infrared optical system it is possible to register cell growth kinetics non-invasively in real time.

FEATURES

- Parallel cultivation of 8 tube bioreactors enables to save time and resources for bioprocess optimization
- Individually controlled bioreactor accelerates optimization process
- Possibility to cultivate microaerophilic and obligate anaerobic microorganisms (not strict anaerobic conditions)
- Reverse-Spin® mixing principle enables non-invasive biomass measurement in real time
- Near-infrared optical system makes it possible to register cell growth kinetics
- Free of charge software for storage, demonstration and analysis of data in real time
- Compact design with low profile and small footprint for personal application
- Individual temperature control for bioprocess applications
- Active cooling for rapid temperature control, e.g. for temperature fluctuation experiments
- Task profiling for process automatization
- Cloud data storage to remotely monitor the process of cultivation while at home or using a mobile phone

SOFTWARE FEATURES

- Real-Time cell growth logging
- 3D graphical representation of OD or growth rate over time over unit
- Pause option
- Save/Load option
- Report option: PDF and Excel
- Remote monitoring option (requires internet connection)
- Cycling/Profiling options
- User manual calibration possibility for most cells

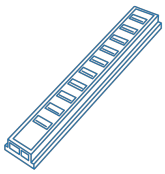
TYPICAL APPLICATIONS

- Fermentation real time growth kinetics
- Clone candidate screening
- Protein expression
- Temperature stress and fluctuation experiments
- Media screening and optimization
- Growth characterization
- Inhibition and toxicity tests
- Strain quality control
- Initial bioprocess optimization studies

SPECIFICATIONS

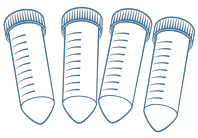
Light source	Laser
Measurement wavelength (λ)	850 ± 15 nm
Measurement range	0-100 OD600
E.coli factory calibration measurement range	0-50 OD600
S.cerevisiae factory calibration measurement range	0-75 OD600
Achievable user calibration measurement error (range 0.1-6 OD600)	± 0.3
Achievable user calibration measurement error (range 6-50 OD600)	≤ 5%
Achievable user calibration measurement error (range 50-75 OD600)	≤ 10%
Measurement periodicity per hour	1-60
Temperature setting range	+15°C ... +60°C
Temperature control range	+15 °C below ambient ... +60 °C
Temperature stability	±0.3 °C
Sample temperature accuracy (20°C – 37°C)	±1 °C
Tube sockets	8
Sample working volume range	3–50 ml
Speed control range	150–2700 rpm
Reverse spin time setting range 150-250 rpm	0 s
Reverse spin time setting range 250–300 rpm	2-60 s
Reverse spin time setting range 300–2700 rpm	0-60 s
Display	0-60 s LCD
Minimum PC requirements	Intel/AMD Processor, 1 GB RAM, Windows Vista/7/8/8.1/10/11, USB 2.0 port
Dimensions (W×D×H)	350 × 690 × 300 mm
Weight	20 kg
Nominal operating voltage	AC 230 V, 50 Hz
Power consumption	3.15 A / 500 W

ACCESSORIES



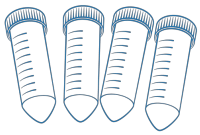
USB10

USB Hub for RTS Units



50TUB20

50 ml tubes with membrane filter TubeSpin® Bioreactor 50, TPP® 20 pcs.



50TUB180

50 ml tubes with membrane filter TubeSpin® Bioreactor 50, TPP® 180 pcs.

WolfLabs

Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct.
If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.