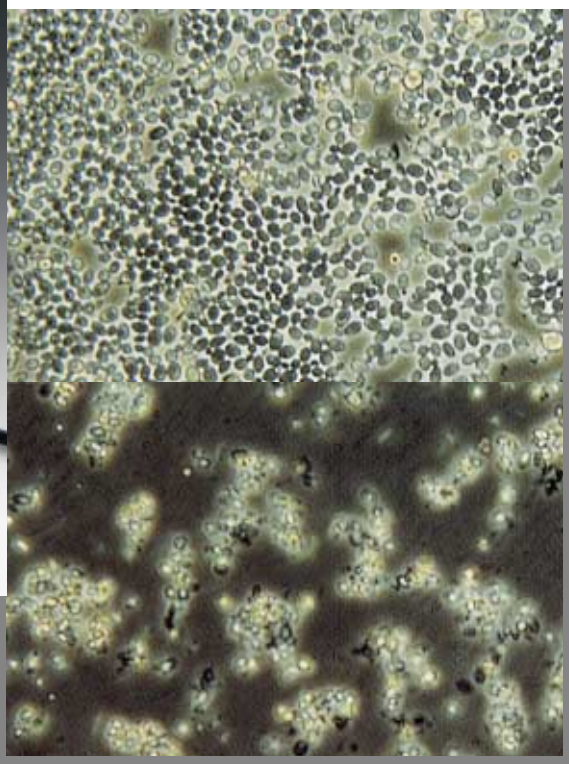
sartorius



LABSONIC®

The convenient
ultrasonic homogenizer
for your laboratory

LABSONIC®
Ultrasonic homogenizers for every application

The LABSONIC® M and LABSONIC® P homogenizers from Sartorius are compact laboratory instruments that combine power supply, generator, controller and transducer all in one unit – a worldwide unique concept that helps saving valuable bench space.

The sonication amplitude and thus the power output can be set between 20% and 100% of the nominal power. In addition, the active period within one second can be set between 0,2 sec and 1,0 sec (= continuous action). This helps to prevent heating or foaming problems.

Sonotrodes are made of titanium and are highly resistant to caviation forces, but they still show some wear with prolonged use. The length of sonotrodes is therefore determined automatically by the processor and the frequency adjusted to re-establish optimum output conditions. This also is a unique feature of LABSONIC® instruments and enables longer usage of the sonotrodes.

Ultrasonic homogenizers are widely used for disruption of bacteria, yeast and cultured animal or plant cells. In molecular biology, ultrasound is commonly applied for shearing macromolecules such as DNA. In chemistry, emulsions or dispersions are prepared by sonication.

The LABSONIC® M is a convenient, handheld instrument that allows fast sonication with a maximum of 100 W output. The application range is between 10 µl with the 0.5 mm ∅ probe and 750 ml maximum with the 10 mm ∅ probes. Using a flow cell, even larger samples can be processed.

The LABSONIC® P is a high power instrument with a maximum output of 400 W that allows sample processing up to 4 Liters, or even 50 L/hr using a flow cell. At the same time, organisms resistant to many treatments, such as Pichia pastoris, can be reliably disintegrated. Although the working frequency of 24 kHz is well above hearing level, the use of a sound dampening box is recommended with the LABSONIC® P in order to protect the user from excess audible noise.

A large variety of sonotrodes is available for both instruments as well as autoclavable flow cells and a sonication cup for indirect sonication. If the LABSONIC® homogenizers are connected to a PC via the PC control units, power output and temperature can be recorded.

Benefits

Compact instruments for various applications

Disruption of cells

Shearing of macromolecules

Preparation of emulsions and dispersions

Degassing of liquids

Reproducible action due to controlled amplitude and time

Suitable for volumes between 10 µl and several Liters

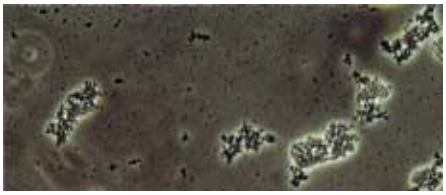
Frequency of 24 kHz or 30 kHz well above hearing level

Large selection of sonotrodes

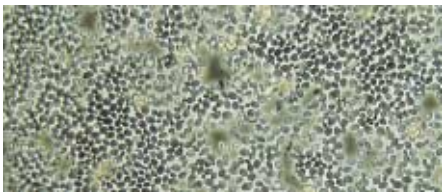
Autoclavable flow cells for sterile samples

PC connection possible

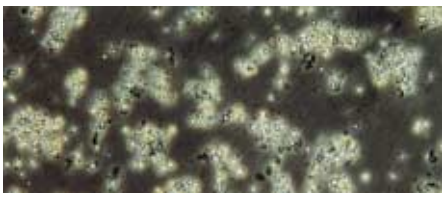
Bacteria, approx. 100 fold



Bacteria, sonicated, approx. 100 fold



Yeasts, approx. 100 fold



Yeasts, sonicated, approx. 100 fold

Accessories

For the LABSONIC® homogenizers various probes and other accessories are available.
The choice of a suitable probe depends on the intended application.
Some general guidelines for useful combinations are given in the following table.

LABSONIC® M

		For sample volumes (ml)
	Probes made of Titanium, normal length	
853 5612	Probe ∅ 0.5 mm, approx. 80 mm long	0.01–0.5
853 5620	Probe ∅ 1 mm, approx. 80 mm long	0.1–5
853 5639	Probe ∅ 2 mm, approx. 80 mm long	2–50
853 5647	Probe ∅ 3 mm, approx. 80 mm long	5–200
853 5655	Probe ∅ 7 mm, approx. 80 mm long	20–500
853 5671	Probe ∅ 10 mm, approx. 80 mm long	30–750

	Probes made of Titanium, double length	
853 5680	Probe ∅ 3 mm, approx. 160 mm long	5–200
853 5698	Probe ∅ 7 mm, approx. 160 mm long	20–500
853 5710	Probe ∅ 10 mm, approx. 160 mm long	30–750

	Accessories for sonication in a flow cell
853 5663	Probe ∅ 7 mm, for flow cell 853 5728, approx. 80 mm long
853 5701	Probe ∅ 7 mm, long form, for flow cell 853 5728, approx. 160 mm long
853 5728	Flow cell incl. cooling connection, stainless steel 1.4301, autoclavable, incl. quick-fit connector. For operation a probe 853 5701 or 853 5663 is required!
853 5736	Flow cell incl. cooling connection, glass, autoclavable, for sonicating liquids in a closed system. The norm adapter 853 5744 is needed.
853 5744	Norm adapter for glass flow cell 853 5736
	Further accessories
853 5280	Clamp STH-16
853 5272	Stand ST-16, ∅ 16 mm, plate stainless steel 1.4301, rod made of aluminium
853 5779	Timer, for connection to LABSONIC® M
853 5787	PC-control, incl. recording of input power, slot-in board for PC, connecting cable and software for Windows 95/98
853 5795	PC-control, incl. recording of input power and temperature, slot-in board for PC, connecting cable and software for Windows 95/98
853 5817	Sound dampening chamber SB2 for LABSONIC® M

LABSONIC® P

		For sample volumes (ml)
	Probes made of Titanium, normal length	
853 5124	Probe ∅ 3 mm, approx. 100 mm long	5–200
853 5132	Probe ∅ 7 mm, approx. 100 mm long	20–500
853 5140	Probe ∅ 14 mm, approx. 100 mm long	100–2000
853 5159	Probe ∅ 22 mm, approx. 100 mm long	100–2000
853 5167	Probe ∅ 40 mm, approx. 100 mm long	200–4000

	Accessories for sonication in a flow cell	
853 5175	Probe ∅ 22 mm, for flow cells 853 5213 and 853 5221, approx. 100 mm long	10–50 l/h
853 5183	Probe ∅ 22 mm, long form, for flow cells 853 5213 and 853 5221, approx. 200 mm long!	10–50 l/h
853 5213	Flow cell including cooling connection, stainless steel 1.4301, autoclavable, with quick connector For operation a probe 853 5175 or 853 5183 is required!	
853 5221	Flow cell including cooling connection, glass, autoclavable, for sonicating liquids in a closed system Norm adapter 853 5230 is required	
853 5230	Norm adapter for glass flow cell 853 5221	

	Further accessories	
853 5272	Stand ST-16, ∅ 16 mm, rod made of aluminium, plate stainless steel 1.4301	
853 5779	Timer, for connection to LABSONIC® M and P	
853 5248	PC-control for LABSONIC® P, including recording of input power, slot-in card for PC, connecting cable and software for Windows 95/98	
853 5256	PC-control for LABSONIC® P, including recording of input power and temperature, slot-in card for PC, connecting cable and software for Windows 95/98	
853 5809	Sound dampening chamber SB1 for LABSONIC® P	

Technical Data and Order Information

Ordering information

LABSONIC® M, 230 V/50 Hz, 853 5027	LABSONIC® P, 230 V/50 Hz, 853 5108
LABSONIC® M, 115 V/60 Hz, 853 5035	LABSONIC® P, 115 V/60 Hz, 853 5116

Technical data	**LABSONIC® M**	**LABSONIC® P**
Operating frequency:	30 kHz	24 kHz
Output:	max. 100 W	max. 400 W
Output settings:	20 to 100%	20 bis 100%
Duty cycle (pulsed operation):	0 to 100%	10 bis 100%
Probes (∅ in mm):	0.5; 1; 2; 3; 7; 10	3; 7; 14; 22; 40
Power consumption:	115 W	approx. 460 W
Setting times:	by means of an optional timer	by means of an optional timer
PC-connection:	optional, socket integrated	optional, socket integrated
Operating temperature:	+5 to +40°C	+5 to +40°C
Limits of humidity:	10 to 90%, non-condensing	10 to 90% non condensing
Line voltage:	230 V/50 Hz, 115 V/60 Hz	230 V/50 Hz, 115 V/60 Hz
External dimensions (W×H×D):	130×180×50 mm	135×280×195 mm
Weight (net):	0.75 kg	3.8 kg

All units are delivered without probes and further accessories.

Sartorius AG
Weender Landstrasse 94–108
37075 Goettingen, Germany

Phone +49.551.308.0
Fax +49.551.308.3289

www.sartorius.com

Sartorius BBI Systems GmbH
Schwarzenberger Weg 73–79
34212 Melsungen, Germany

Phone +49.5661.71.3400
Fax +49.5661.71.3702

www.sartorius-bbi-systems.com

Sartorius North America Inc.
131 Heartland Blvd.
Edgewood, New York 11717, USA

Phone +1.631.254.4249
Toll-free +1.800.3687178
Fax +1.631.254.4253

Sartorius BBI Systems, Inc.
2800 Baglyos Circle
Bethlehem, PA 18020, USA

Phone +1.610.866.4800
Fax +1.610.866.4890

Sartorius Ltd.
Longmead Business Park
Blenheim Road, Epsom
Surrey, KT19 9 QQ, U.K.

Phone +44.1372.737159
Fax +44.1372.726171

Sartorius S.A.
4, rue Emile Baudot
91127 Palaiseau Cedex, France

Phone +33.1.6919.2100
Fax +33.1.6920.0922

Sartorius S.p.A.
Via dell'Antella, 76/A
50011 Antella (FI), Italy

Phone +39.055.63.40.41
Fax +39.055.63.40.526

Sartorius, S.A.
C/Isabel Colbrand 10–12
Planta 4, Oficina 121
Polígono Industrial de Fuencarral
28050 Madrid, Spain

Phone +34.91.3586091
Fax +34.91.3588804

Sartorius Technologies N.V.
Luchthavenlaan 1–3
1800 Vilvoorde, Belgium

Phone +32.2.756.0670
Fax +32.2.756.0681

Sartorius K.K.
KY Building, 8-17
Kitashinagawa 1-chome
Shinagawa-ku
Tokyo 140-0001, Japan

Phone +81.3.3740.5407
Fax +81.3.3740.5406

Specifications subject to change
without notice.
Printed in Germany on paper that has been
bleached without any use of chlorine.
W/sart-000 · G
Publication No.: SB-1021-e05022
Order No.: 85030-515-84