Двойной микробный биореактор 1 л
Технические характеристики

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70
Киргизия +996(312)-96-26-47
Казахстан +7(7172)727-132

fba@nt-rt.ru || https://froilabo.nt-rt.ru/

1 L Twin Microbial Bioreactor

Novel magnetically coupled drive: eliminates the risk of contamination within the Bioreactor since as there is no mechanical seal.
Powerful Peltier temperature control: The Peltier element provides accurate temperature control from 10-50°C.

Mixing and aeration: tailored for microbial fermentation (fungi, yeast or bacteria).
Uniform lid construction: No welded components within the lid for easy maintenance and sterility.
Flexible working volume: 1 L bioreactor with working volume of 0.4 – 0.7 L.

Product Description

Our innovative twin stirred tank bioreactor is designed for R&D and process development. It has a robust design, yet it is compact and ergonomic.

A Peltier element efficiently controls the temperature of the bioreactor vessel without the need for a water source. Tough construction and fan-driven heat exchange develop sufficient power to cool and condense even high-temperature processes.

The uniform non-welded lid features all the necessary ports and sensors that might be required for bioprocesses.

The magnetically coupled drive ensures excellent sterility within the vessel since it eliminates the need for a mechanical seal. It can provide a mixing rate from 40 rpm to 1000 rpm.

The bioprocess control unit ensures:

1) Temperature moderation. Temperature is controlled by a thermoelectric heating and cooling element (Peltier element) and is measured with the Pt100 sensor. Thermoregulation of the vessels is performed by placing the base of the vessels in copper heat transfer jars;

2) pH control. Enabled by supplying base or acid solutions to the bioreactors medium using the control unit's peristaltic pumps;

3) pO_2 control. Ensured by automatic adjustments of the stirrer's rotational speed. The actual pO_2 value is monitored using a pO_2 electrode;

4) Foam control. Performed by supplying an antifoam agent to the bioreactor's medium using the control unit's peristaltic pumps. The foam level is monitored using a conductivity sensor;

5) Feeding (of a substrate). Carried out using the control unit's peristaltic

pump and the respective feeding rate/volume is controlled by the feeding profile, which is set in the control unit;

6) Mixing. Ensured by a magnetic drive, the agitator is driven by a motor which is mounted on the top lid of the bioreactor.

Options

Bioreactor	Product Option
1 L Twin Bioreactor for Microbial Fermentation	O2/CO2 analyzer BlueInOne Ferm (BlueSens), including flow adapter
	Mass flow controller for air
	Mass flow controller for O2
	Volumetric oxygen mass transfer coefficient kLa, Oxygen uptake rate OUR, CO2 exchange rate CER (includes overpressure sensor and O2/CO2 analyzer)
	Microsparger
	Factory accepted test FAT
	SCADA for monitoring, control and reporting according the requirements of 21 CFR Part 11

Specification

Bioreactor 1.1 (microbiology)	
Vessel	
Total Volume (L)	0.9
Working Volume (L)	0.4 – 0.7

Bioreactor 1.1 (microbiology)	
Inside Diameter/Inside Height (mm)	85 / 165
Ports	Mixer drive; pH, DO, T, foam sensors; 2 medium inlet/outlet; exhaust gas, sparger
Aeration	
Control	Rotameter, TMFC (optional)
Gas Supply	Air, O_2 (optional)
Flow Range, L/min	0.1-2.0
Sparger	Micro sparger
Filters	D37 mm 0.2 µm PTFE
Exhaust gas condenser	Peltier cooling
Mixing	
Drive	Top, magnetic coupling
Rotation Speed Range (rpm)	40-1000
Mixer (Impellers)	2 Rushton turbines
Control	
Controller	Siemens Simatic S7-1200
Operator panel	Touch screen 12”
Temperature	Peltier heating/cooling 10-50°C. Measurement accuracy ± 0.1°C and control accuracy ± 0.2°C
pH	Hamilton or Mettler Toledo sensor. Acid/Alkali 2-12 +/- 0.01 pH units
pO_2	Hamilton or Mettler Toledo sensor. Stir control + O_2 (optional). 0-150% +/- 1%
Foam	Conductivity sensor
Feeding	0.01-20 mL/min according to the set profile

Bioreactor 1.1 (microbiology)	
Peristaltic Pumps	3 built-in variable speed pumps. Additional pumps (optional)
Dimensions	Overall dimensions of the bioreactor (mm) 540(W) x 350(H) x 410(D)

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70
Киргизия +996(312)-96-26-47
Казахстан +7(7172)727-132

fba@nt-rt.ru || https://froilabo.nt-rt.ru/