



Sampleprep

Fast, reproducible and safe media sterilization

Introduction

High quality medium for the cultivation of bacteria is at the core of various routine applications in today's laboratories. Hence, many downstream tasks and results directly depend on the performance of media preparation. Furthermore, an efficient process flow is important. This not only allows laboratories to save labour costs, but also frees manpower for less repetitive tasks.

The Sampleprep product range is designed to approach these needs. It allows the rapid and gentle sterilization of 1–30 L culture medium. Precise controlling and monitoring of temperature, time and pressure during the sterilization process guarantee constant high quality. The intuitive graphical user interface and the simple programming make it very easy for everyone to operate.

Sampleprep allows you to be flexible culture medium of high quality is rapidly available whenever needed. This minimizes the needed storage room, eliminates the management of shelf life time and therefore guarantees constant high medium quality.

Sampleprep is quickly set up. Insert the cuvette (container for media), fill in the coupling water (water jacket between the cuvette and the vessel for efficient heat transfer) and you are ready to prepare your culture medium. Culture medium can be suspended and dissolved directly within Sampleprep. The strong magnetic stirrer guarantees homogeneous mixing within the vessel and prevents coagulation. Alternatively, culture medium can be dissolved and pre-swelled using the WATERBATH operation mode prior to sterilization. The intuitive, multilingual graphical user interface makes it very easy for everyone to use Sampleprep – no special training of the staff is required. Programs with user-defined parameter settings such as sterilization temperature, sterilization time or dispensing temperature can be saved and recalled.



Operation modes

Two main operation modes for media preparation, plus two extra modes can be selected and the parameters set to your needs:

1. STANDARD mode: For the preparation of standard and highly sensitive culture media. Sterilization temperature/time and dispensing temperature can be set.



2. CHOCOLATE AGAR mode: A special two-step program that allows the preparation of complex media. After the first sterilization phase, supplement, e.g. blood, can be added through the adding port. Subsequently, a second heating phase will be performed.



3. WATER BATH mode: For pre-swelling culture media prior to sterilization within the temperature range 30 – 80° C. In combination with an autoclave cuvette (only Sampleprep 10), liquids in glassware can be thermostatted.

4. AUTOCLAVE mode (Sampleprep 10 only): Sampleprep 10, together with an optional autoclave kit can be used as a bench top autoclave for the sterilization of small amounts of culture media in glassware such as Erlenmeyer flasks or test tubes.

Features

High Operational Safety

An automatic tightness check at the beginning of each sterilization cycle prevents the instrument from starting if, for example, the lid seal of the vessel is not inserted properly – avoiding incomplete sterilization and subsequent media rejection. Furthermore, Sampleprep is

equipped with several independent monitoring systems for pressure and temperature, guaranteeing highest safety standards for the user and the working environment. The vessel lid is equipped with an autonomous overpressure safety valve and a burst disc in case all other electronic monitoring systems fail.

Fast Heating

Powerful heating elements permit fast media processing. This minimizes thermal stress and ensures high fertility of your culture media. Pressure and temperature controlled deaeration guarantees saturated steam in the vessel – an absolute must for complete sterilization.

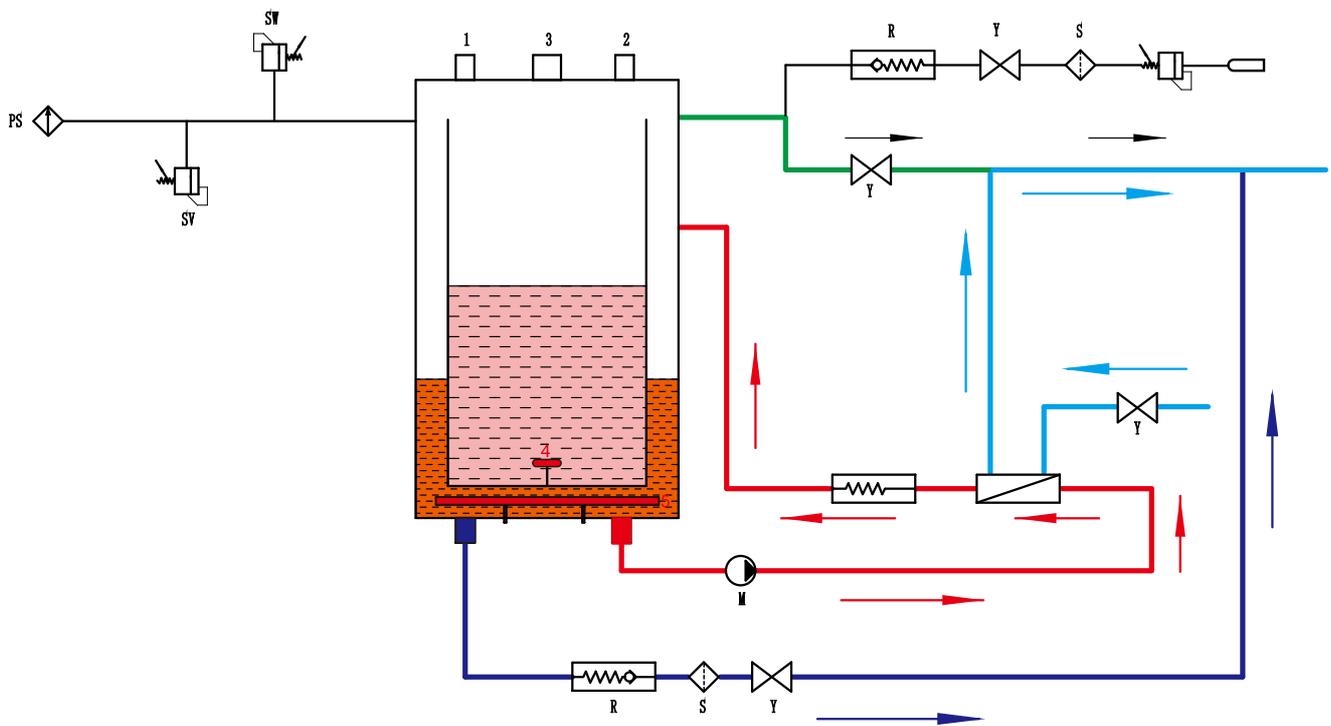
Reliable Sterilization

The large and strong magnetic stirrer with adjustable speed and reversing rotation direction ensures homogenous media preparation over a wide viscosity range. A Pt-100 temperature probe and microprocessor control of all relevant process parameters allow reliable and complete sterilization of culture media.



Rapid Cooling

Rapid cooling is enabled by an efficient plate heat exchanger. The spatial separation of the cooling water system and the sterilization chamber makes it virtually impossible that culture media will get contaminated by cooling water. The built-in support pressure system prevents a delay in boiling during the rapid cool down phase and thereby allows an extraordinary fast and gentle cooling.



PS: Pressure sensor SW: Pressure switch SV: Safety valve R: No-return valve Y: Solenoid valve S: Filter
 1.Dispensing port 2.Dispensing port 3. Feeding port 4. Magnetic rotor 5.Heating elements

Dispensing of the sterilized media

Easy Dispensing

The wide adding port facilitates fast and safe addition of supplements such as antibiotics, blood or growth factors prior to dispensing. The automatic in-process sterilization of the dispense port eliminates the risk of medium contamination during dispensing.

The vessel and the dispensing system of the Sampleprep were designed to avoid dead volume, allowing laboratories to save costs due to maximal medium yield.

The Sampleprep can be quickly and conveniently connected to the dispensing tubing of the automated Petri dish filler, allowing the dispensing of agar media into up to Petri dishes.

Cleaning and maintenance

Sampleprep is designed to keep maintenance easy. The absence of any heating element within the sterilization vessel makes the cleaning of the vessel easy.

The integrated CLEANING procedure automatically sterilizes the vessel, valves and the tubing inside Sampleprep. Hot, sterile coupling water is drained at the process end; dissolving and removing unwanted agar residues in the system effectively. This allows a complete decontamination of all vulnerable parts of the instrument and thus ensures the best possible environment for sterile media preparation.

An automatic indication of the next service to be due prevents unnecessary downtime, thus maximizing the productivity of the whole media kitchen.

Technical Data

Sampleprep 12

- 1、 Capacity 1-12L
- 2、 Stainless steel cuvette Autoclave cuvette (\varnothing , H) : 222mm, 260mm
- 3、 Temperature range
Sterilization: 70°C – 130°C
Dispensing: 25°C – 80°C
Waterbath: 30°C – 80°C
- 4、 Max. temperature deviation: 1.0°C
- 5、 Max. allow pressure: 2.5bar
- 6、 Design pressure: 4.0bar
- 7、 Stirrer speed : Selectable 120, 240 rpm, reversing direction .
- 8、 Heating Capacity : Max. 3.6 kW
- 9、 Cooling water connections: 3/4" thread
- 10、 Electricity supply: 200 – 240 V 50/60 Hz, 16 A
- 11、 Dimensions and weight
Basic Device (H x W x D) : 550mm x 555 mm x 700mm
Weight: 85 kg



Sampleprep 30

- 1、 Capacity 1-30L
- 2、 Stainless steel cuvette Autoclave cuvette (\varnothing , H) : 222mm, 620mm
- 3、 Temperature range
Sterilization: 70°C – 130°C
Dispensing: 25°C – 80°C
Waterbath: 30°C – 80°C
- 4、 Max. temperature deviation: 1.0°C
- 5、 Max. allow pressure: 2.5bar
- 6、 Design pressure: 4.0bar
- 7、 Stirrer speed : Selectable 120, 240 rpm, reversing direction
- 8、 Heating Capacity : Max. 10 kW
- 9、 Cooling water connections: 3/4" thread
- 10、 Electricity supply: 400 V 3 ~ /N/PE, 50/60 Hz, 16 A
- 11、 Dimensions and weight
Basic Device (H x W x D) : 980 mm x 555 mm x 700mm
Weight: 122kg

