LS902 Adherent Cell Low-serum Medium

Product Name: LS902

User Manual

Contents

Description

LS902 is a serum-reduced medium developed for adherent cells. The amount of serum can be reduced from the traditional 10% to 3%-5%. LS902 supports many adherent cells like Vero, 293, ST, Marc145, PK15 cells, etc.

Application

This product is intended for research or further manufacturing in the bio-manufacturing industry, but not for human or therapeutic use.

Composition

The IP rights of LS902 medium formulation are owned by Shanghai BioEngine Sci-Tech Co., Ltd.

This medium contains:

☑ Carbohydrates, amino acids, vitamins, bulk salts, and trace elements.

☑ 4.5 g/L D-glucose，0.3 g/L P188, 4 mM glutamine.

☑ Phenol red.

Not contain:

☒ Cytokines, antibiotics, and HEPES.

☒ Raw materials from animal sources.

Storage

- Store medium at 2-8℃, away from light.
- Once opened, the powder medium should be stored protected from moisture in a tightly sealed container.
- Do not use it after the expiration date or being damped.

Reconstitution of Powder Medium

Table 1 shows the preparation of LS902 medium [1].

Ingredients	Concentration
LS902 medium powder	15.91 g/L [2]
Sodium bicarbonate	2.13 g/L

Table 1. Preparation of LS902 medium

1) Weigh 100% water of the final volume into the preparation container using pure water, ultrapure water, or water for injection at 20-30℃. Mix thoroughly without creating air bubbles.

2) Accurately weigh the corresponding mass of LS902 medium at a concentration of 15.91 g/L and add it into the preparation container of 1) step. Stir well for 20-30 minutes.

3) Slowly adjust to pH 5.0-6.5 with 5-10 mol/L sodium hydroxide solution. The recommended amount of sodium hydroxide is 0.146 g/L. Stir for 10-20 minutes. At this point, the solution should be clear.

4) Weigh 2.13 g/L of sodium bicarbonate powder, add it slowly near the liquid level in the container, and stir for 10-20 minutes.

5) Adjust to pH 7.0-7.4 with sodium hydroxide or hydrochloric acid solution if the pH is beyond this range.

6) Pass the medium solution through a pore size of 0.22 or 0.2 μm sterile filter membrane, such as PES, using a pulse pump or compressed air (3-15 psi).

7) Use the prepared medium liquid immediately or store it in glass bottles, PET storage bottles, or disposable storage bags with an oxygen barrier membrane in a dark environment of 2-8℃. It's recommended for use within one month.

8) Before use, add 3%-5% (v/v) serum to prepare complete medium.

Note:

[1] The above parameters (such as stirring time) are set for small-scale liquid preparation. Adjust these parameters for large-scale preparation based on container capacity to ensure full dissolution of dry powder.

[2] The "g/L" unit denotes volumetric concentration (solute mass/solution volume).

Specifications of final liquid medium

Test	Unit	Specification
pH		7.0 – 7.4 [3]
Osmolality	mOsm/kg	280 – 340
Turbidity	NTU	< 2.00

Table 2. Specifications of final liquid medium

Note:

[3] The pH buffer system of the product is carbon dioxide-sodium bicarbonate. The final pH value should be strictly controlled within the specific range outlined in Table 2. The following operations, such as prolonged reconstitution time or aeration in the bioreactor without pH control, can result in a gradual pH increase. There is a risk of metal ion precipitation when the pH value exceeds the upper limit.

Cryopreservation

1) Choose cells at 80-100% confluence with >90% viability.

2) Prepare cryopreservation medium with 93% complete medium, and 7% DMSO on the day of use.

3) Detach the cells with trypsin. Add complete medium to terminate and collect cells by centrifugation at 190×g for 5 minutes.

4) Resuspend cells in cryopreservation medium to a final viable cell density of 5-6×10^6 cells/mL or as required.

5) Dispense aliquots of the cell suspension into cryovials.

6) Achieve cryopreservation in an automated or manual controlled rate freezing apparatus (0.5-1℃ decrease per minute is suggested).

7) Transfer frozen cells to liquid nitrogen storage.

Cell Recovery

1) Rapidly thaw frozen cells in a 37℃ water bath. Transfer to a super clean bench as soon as melted or with small ice crystals.

2) Transfer the vial content to a centrifuge tube containing 10 mL of prewarmed complete growth medium. Harvest the cells by centrifugation at 190×g for 5 minutes and discard the supernatant.

3) Resuspend cells by 15-20 mL prewarmed complete medium and transfer to a 75 cm^2 flask with vent cap.

4) Incubate the flask at 37℃ in a humidified atmosphere of 5% CO_2 in air.

Subculture Cells

1) Subculture cells at 80-100% confluence.

2) Remove medium, rinse with PBS, then rinse with trypsin.

3) Allow the flasks to sit at 37℃ until the cells detach.

4) Add prewarmed complete medium, aspirate, and dispense into new culture flasks.

5) Incubate at 37°C in a humidified atmosphere of 5% CO_2 in air.

Related Product

Product	Cat. No.	Form	Size	Packaging	Notes
LS902 Adherent Cell Low-serum Medium	EXP0112701	Powder	200 L	Bag	● No adaptation required for medium transfer from 10% serum culture ● Supports long-term passage in 3-5% serum cultures ● Supports virus production in 1-2% serum or serum-free culture
	EXP0112702	Powder	100 L	Bag	
	EXP0112703	Powder	10 L	Bag	

Scan the QR code for more product information.

Stay tuned for more updates.

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