

BWW Medium for Sperm Cells (Sterile)

Cat. No.: S1509606 | Pack size: 100 mL | Storage: Store at -20°C

Product Information

Item	Description
Product Name	BWW Medium for Sperm Cells (Sterile)
Cat. No.	S1509606
Pack Size	100 mL
Grade & Purity	BioReagent, sterile, for cell culture
Application	Cell Culture
Storage	Store at -20°C
Shipped In	Ice chest + Ice pads
Synonyms	BWW Medium for Sperm Cells Capacitation Medium

Overview

Normal semen is a mixture composed of secretions from the testes and epididymis with suspended spermatozoa, combined with secretions from the prostate, seminal vesicles, and bulbourethral glands upon ejaculation. The final ejaculated mixture is a viscous liquid. There are numerous methods for sperm analysis, among which culture-based detection is applicable.

BWW Medium for Sperm Cells, also known as capacitating medium, is mainly composed of a series of salt ions, phenol red, glucose, sodium pyruvate, BSA, and antibiotics. Each 1000 mL of BWW Medium contains 100,000 units of penicillin sodium salt and 100 mg of streptomycin. As a common nutrient solution designed for capacitation treatment of sperm cells from a wide range of animals and humans, its standardized composition is based on the research published by the Biggers-Whitten-Whittingham (BWW) group in 1971, making it suitable for processing sperm cells from various animals and humans. This reagent is subjected to sterile treatment. For research use only. Not intended for clinical diagnosis or other purposes.

Materials to Be Prepared by Users

Sterile centrifuge tubes, centrifuge, cell culture incubator

Operating Procedures (For Reference Only)

1. Place the clean semen sample at room temperature for 30-60 minutes to allow complete liquefaction.

2. Sperm cell preparation (for reference only, non-mandatory step)

(1) Swim-up method

Take a sterile 15 mL conical-bottom centrifuge tube and add 1 mL of liquefied semen. Gently overlay 1.2 mL of Earle's medium on top of the semen. Incline the tube at a 45° angle and incubate at 37°C for 1 hour. Slowly erect the tube and aspirate the top 1 mL of the liquid. Dilute the aspirated liquid with 8 mL of supplemented Earle's medium, centrifuge at 500×g for 5 minutes, discard the supernatant, and resuspend the cells with 0.5 mL of Earle's medium for the evaluation of sperm density or function.

(2) Discontinuous density gradient method

Take a sterile 15 mL conical-bottom centrifuge tube and add 3 mL of 80% Percoll. Gently overlay 3 mL of 40% Percoll on top of the 80% Percoll layer; handle with care to avoid disturbing the interface between the two solutions. Gently overlay 1-2 mL of semen on top of the gradient solution, centrifuge at 500×g for 20 minutes, and discard the supernatant. Resuspend the sperm pellet at the bottom of the tube in 5-10 mL of Earle's medium, centrifuge at 500×g for 5 minutes, discard the supernatant, and resuspend the cells with 1 mL of Earle's medium.

3. Incubate the centrifuge tube containing sperm cells in a cell culture incubator with 5% CO₂ and 95% air at 37°C for 1 hour. If such an incubator is unavailable, seal the tube with a cap and incubate in a conventional incubator at 37°C. During incubation, most motile sperm will swim out of the seminal plasma into the overlying culture medium.

4. Centrifuge the sperm suspension at 500×g for 5 minutes to adjust the sperm density to approximately 10×10⁶ cells/mL. Resuspend the sperm in 0.5-1 mL of BWW Medium for Sperm Cells, and incubate the suspension in a cell culture incubator with 5% CO₂ and 95% air at 37°C for 18-24 hours. If such an incubator is unavailable, seal the tube with a cap and incubate in a conventional incubator at 37°C. Note: Incline the tube at a 20° angle during incubation.

Precautions

1. Ensure aseptic operation and minimize the risk of contamination.

2. If Earle's medium and supplemented Earle's medium are unavailable, they can be replaced with BWW Medium for Sperm Cells.
3. Use the reagent as soon as possible after opening to prevent adverse effects on subsequent experimental results.
4. For your safety and health, wear a lab coat and disposable gloves during operation.

Specifications

Item	Description
Synonyms	BWW Medium for Sperm Cells Capacitation Medium
Specifications & Purity	BioReagent, sterile, for cell culture
Stability and Storage	Store at -20°C long term (12 months).
Storage	Store at -20°C
Shipped In	Ice chest + Ice pads. This product requires cold chain shipping. Ground and other economy services are not available.
Grade	BioReagent, for Cell culture, Sterile

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Limitations & Regulatory Status

For Research Use Only (RUO). Not for use in human or animal diagnostics, therapeutics, or in vivo applications. Not for food, cosmetic, or household use.

This product is not a CE-marked in vitro diagnostic device under IVDR (EU) 2017/746 and is not an FDA-cleared device under 21 CFR. Use is restricted to verified businesses, institutions, and qualified professional users.

Where any kit component is classified as hazardous under CLP (EC) 1272/2008 or OSHA HCS (29 CFR 1910.1200), the product Safety Data Sheet (SDS) takes precedence over this document for handling, storage, disposal, and emergency measures.

Performance depends on sample type, sample condition, handling, and operator technique. Users are responsible for validating the product for their specific application.

Aladdin product labels, SDS, COA, and approved specifications take precedence over this document. If product formulation, label, SDS, storage conditions, pack size, or quality specifications change, the current approved Aladdin documentation supersedes this manual.