

NutriCulture Antibiotic Antimycotic Solution (100x)

Troubleshooting Guide

100 mL

Cat No: AA100

Use this guide for common culture-contamination and cell-response problems encountered with NutriCulture Antibiotic Antimycotic Solution (100x). The product is supplied as a ready-to-use 100x concentrate for prevention of gram-positive and gram-negative bacterial and fungal contamination in cell culture media. The datasheet recommends a final concentration of 10 mL/L (1x).

Before You Start - Quick Checks

1. Confirm the product identity: NutriCulture Antibiotic Antimycotic Solution (100x), Cat No. AA100.
2. Use the datasheet-recommended final concentration of 10 mL/L of culture medium (1x).
3. Store the concentrate at -20°C as specified in the datasheet.
4. The formulation contains Penicillin G sodium, Streptomycin sulfate, Amphotericin B, and NaCl.
5. Prepare supplemented media using clean, aseptic technique; antimicrobial supplementation does not replace sterile handling.
6. When troubleshooting cell effects, keep medium formulation, cell density, passage, and incubation conditions consistent between comparison groups.

Problem	Most likely cause	Recommended action
Contamination appears despite routine use	The working concentration may be lower than intended, or contamination may already be established before the supplemented medium is introduced.	Verify that the 100x concentrate is used at the datasheet-recommended final concentration of 10 mL/L (1x). Prepare fresh supplemented medium and review the timing of contamination relative to medium preparation and handling.
Bacterial contamination persists	The effective antibiotic exposure may be insufficient because of an incorrect dilution, compromised handling, or a contamination source that is repeatedly reintroduced.	Confirm the 1x working concentration and prepare a fresh batch of medium using aseptic technique. Check pipettes, bottles, incubator surfaces, water pans, and frequently handled culture items for recurrent contamination sources.
Fungal contamination persists	The antimycotic component may be under-dosed because of an incorrect dilution, or the fungal contamination load may be too high for preventive supplementation alone.	Verify the 10 mL/L final concentration. Replace contaminated medium and vessels rather than relying on supplementation to rescue a visibly contaminated culture. Reassess incubator and hood hygiene before restarting the culture.
Cell growth slows after adding the solution	The product may have been added above the intended 1x final concentration, or the cell line may be unusually sensitive to antibiotic/antimycotic exposure.	Recalculate the dilution and confirm that 10 mL of 100x solution was added per 1 L of complete medium. Compare with a parallel culture prepared at the correct concentration and assess whether the effect is cell-line specific.
Cell morphology changes after supplementation	Excessive final concentration or prolonged exposure to antimicrobial components may be contributing to cellular stress.	Check the dilution first. If the concentration is correct, compare morphology with an unsupplemented control under otherwise identical culture conditions and determine whether routine continuous exposure is appropriate for that cell line.
Unexpected toxicity after medium preparation	A calculation or pipetting error may have produced an over-concentrated working medium.	Prepare a new medium batch using the 100x-to-1x dilution directly: 10 mL product per 1 L final medium. Do not attempt to correct a strongly over-concentrated culture after cells have already been exposed.
Different results between medium batches	The final antimicrobial concentration, medium composition, or handling conditions may differ between preparations.	Use the same dilution calculation, calibrated pipettes, medium lot where possible, and a consistent preparation sequence. Record the volume of 100x solution added to each batch.

Table continues on next page.

NutriCulture Antibiotic Antimycotic Solution (100x)

Troubleshooting Guide (continued)

Problem	Most likely cause	Recommended action
Contamination appears soon after opening a new culture vessel	The source may be procedural rather than the antimicrobial concentration itself.	Confirm the supplement concentration, then review aseptic handling steps, bottle neck contact, pipette-tip technique, hood practices, and transfer steps. The product is preventive and does not replace sterile technique.
Stock solution handling history is uncertain	The product may have been stored outside the datasheet-specified -20°C condition or its handling history may not be traceable.	Use material with a documented storage history at -20°C. If performance is questionable, compare against a properly stored vial or prepare a fresh supplemented medium batch before drawing conclusions.
Stock solution shows unusual appearance	The product may have been exposed to inappropriate storage or contamination during handling.	Do not use a stock that shows unexplained turbidity, visible contamination, or other unexpected changes. Use a properly stored vial and maintain aseptic handling during dispensing.
Contamination is suppressed initially but returns later	A low-level contamination source may remain in the culture environment or may be reintroduced during repeated handling.	Review the full workflow rather than increasing the product concentration above 1x. Prepare fresh medium at 10 mL/L, inspect incubator and hood hygiene, and replace contaminated consumables or cultures where appropriate.
Antibiotic/antimycotic supplementation masks poor aseptic technique	Routine antimicrobial use can reduce visible contamination while an underlying handling problem remains.	Keep the product at the recommended 1x concentration and address the source through aseptic technique, environmental cleaning, and culture-management practices rather than increasing antimicrobial exposure.
Working medium was prepared at the wrong scale	The 100x dilution was not scaled proportionally when preparing a smaller or larger medium volume.	Use 1% v/v of the 100x stock to obtain 1x final concentration: for example, 1 mL per 100 mL medium, 5 mL per 500 mL, or 10 mL per 1 L.
Cell-line response is inconsistent between passages	Changes in cell state or passage history may alter tolerance to routine antimicrobial exposure even when the supplement concentration is unchanged.	Keep the antimicrobial concentration fixed at 1x while standardizing passage number, seeding density, and medium formulation. Compare matched cultures before modifying the supplement concentration.

Still having trouble? If the problem persists, first verify the 1x working concentration (10 mL/L), the -20°C storage history, and the sterility of the medium-preparation workflow. For recurrent contamination, investigate the contamination source rather than increasing the antibiotic/antimycotic concentration above the recommended level. For cell-growth or morphology changes, compare against a matched culture prepared with the correct 1x concentration under otherwise identical conditions.