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Cytogenetics

BIOAMF-1

Medium for Human Amniotic Fluid and Chorionic Villi Samples

**BIOAMF-1
Basal Medium**

Cat. No.: 01-190-1
Store at: 2-8°C

**BIOAMF-1
Supplement**

Cat. No.: 01-192-1
Store at: -20°C

Instructions for Use



Product Description

The *in vitro* cultivation of amniotic fluid cells and chorionic villi is an essential part of every diagnostic cytogenetics laboratory, since the preparation of metaphase chromosome spreads is dependent upon obtaining cells in division. Amniocentesis and chorionic villi sampling are the major invasive diagnostic procedures used for the detection of fetal chromosomal abnormalities. BIOAMF-1 Medium is specifically optimized for the primary culture of human amniotic fluid cells and chorionic villi samples used in prenatal diagnostic testing. The supplement is supplied frozen and contains serum.

Precaution and Disclaimer

- For *in vitro* diagnostic use. The medium is not intended for therapeutic use.
- Do not use if a visible precipitate is observed in the medium.
- Use of Biological Industries BIOAMF-1 Medium does not guarantee the successful outcome of any prenatal diagnostic testing.
- Do not use BIOAMF-1 Medium beyond the expiration date indicated on the product label.

Storage and Stability

BIOAMF-1 Basal Medium is stable for 15 months from production date when stored at 2-8°C.

BIOAMF-1 Supplement is stable for 24 months from production date when stored at -20°C.

The complete medium is stable for 14 days when stored at 2-8°C.

Do not freeze the complete medium. Protect both the basal medium and the complete medium from light.

Instructions for Use

For the preparation of 500ml complete medium, use 01-190-1A with 01-192-1E. For the preparation of 100ml complete medium, use 01-190-1B with 01-192-1D. Thaw the BIOAMF-1 Supplement by swirling in a 37°C water bath, and transfer the contents to the bottle of BIOAMF-1 Basal Medium.

Mix the complete medium by swirling the bottle, and add 2mM L-Glutamine (L-Glutamine Solution 200mM, Cat. No. 03-020-1). Antibiotics may be added if desired (Gentamicin, Cat. No. 03-035-1).

Procedure

BIOAMF-1 Medium may be used for:

- Primary culture of amniotic fluid cells
- Culture of passaged amniotic fluid cells
- Propagation of chorionic villus cells

The medium may be used in both open and closed culture systems.

It is recommended to use cells from 2.5ml of amniotic fluid per one coverslip.

The following protocol and the volumes indicated are only general guidelines for use.

In Situ Culture of Amniotic Fluid Cells

1. Centrifuge 20ml of amniotic fluid at 750 rpm for 10 minutes.
2. Carefully decant the amniotic fluid from the cell pellet into a sterile test tube.
3. Re-suspend the cell pellet with 2ml of amniotic fluid.
4. Add 2ml of BIOAMF-1 Medium and swirl gently.
5. Culture 0.5ml of the cell suspension on each coverslip in a tissue culture dish.
6. Incubate cultures at 37°C in 5% CO₂ atmosphere.
7. Flood cultures on day 2 with 1.5ml of BIOAMF-1 Medium.
8. After 5 days, check the cultures for the presence of colonies.
9. After the colonies first appear (5-7 days), replace the medium with fresh BIOAMF-1 Medium.
10. When the cultures have colonies of sufficient size, proceed with harvesting.

Note: It is recommended to replace the medium with fresh BIOAMF-1 Medium the day before harvesting.

Flask Method Culture of Amniotic Fluid Cells – Open and Closed Systems

Use the same procedure as for the *in situ* culture, with the following adaptations:

1. Re-suspend the cell pellet with 4ml of amniotic fluid. Add 16ml of BIOAMF-1 Medium and swirl gently.
2. Culture 5ml per each T25 flask. Place the cap loosely on the flask and incubate undisturbed at 37°C in 5% CO₂ atmosphere.
For Closed Systems: Flush each culture flask with 5% CO₂ – 95% air through 0.2µ sterile filter for 20 seconds. Tighten the caps and incubate the flasks at 37°C.
3. Check all flasks for growth after 5 days.

Quality Control

BIOAMF-1 Basal Medium and **Supplement** are tested for sterility, pH, osmolality and endotoxin concentrations. In addition, each batch is tested for cell growth using primary human amniotic fluid cells in a leading clinical cytogenetics laboratory.



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