novelfarms

NFMGG1/NFMGG2 adaptation protocol

Purpose
Adapt suspension chicken cells grown in classic 10% FBS medium to low-serum NFMGG1 then serum-free NFMGG2 media.

Overview
The adaptation process consists of gradually diluting the culture in the target medium, allowing the cells to adapt over multiple passages in the new media dilution. It is recommended to first adapt cells to the low-serum (NFMGG1) medium then to the serum-free (NFMGG2) medium by following the recommended passaging and media dilution strategy:

Passage	Target medium (parts)	Original medium (parts)	Number of passages
1	50	50	2
3	75	25	2
5	90	10	3
8	95	5	3
11	99	1	3
14	100	0	>10

Procedure

- Adapt cells sequentially to NFMGG1 then NFMGG2 for fastest results.
- All cultures performed in sterile 125mL Erlenmeyer flasks with a total volume of 40mL medium.
- If cell clumping is observed, at passages, strain through 40µm strainer to select for single-cell populations.
- Split cells at a 1:2 or 1:3 split ratio for passaging.
- Maintain cells at a density best suited for logarithmic growth.

1. Culture cells in 100% original medium until robust growth is established.
2. Passage 1–split 1:2 into target medium: add 20mL 100% original medium culture into prewarmed 20mL 100% target medium in a new sterile 125mL Erlenmeyer flask. This is passage 1 at 50:50 medium.

3. Passage 2–passage at a 1:2 split into 50:50 medium: prepare 20mL of 50:50 medium. Add 20mL culture to pre-warmed 20mL 50:50 medium in a new sterile 125mL Erlenmeyer flask.
4. Passage 3–split 1:2 into 75:25 medium: prepare 20mL of 75:25 medium. Add 20mL culture to pre-warmed 20mL 75:25 medium in a new sterile 125mL Erlenmeyer flask.
5. Passage 4–passage at a 1:2 split into 75:25 medium: add 20mL culture to pre-warmed 20mL 75:25 medium in a new sterile 125mL Erlenmeyer flask.
6. Continue this passaging scheme according to the above table until cells are stably growing in 100% target medium.