

IRVINE SCIENTIFIC

BALANCD™ CHO FEED I



PRODUCT DESCRIPTION

BalanCD™ CHO Feed I is a chemically-defined feed medium designed to provide cell culture nutrients for fed-batch applications in conjunction with BalanCD™ CHO Growth A. The feed supplement has been developed to promote cell growth and MAb production in a variety of Chinese Hamster Ovary (CHO) cells. This formulation was developed using Irvine Scientific's *Rational Culture Media Design*® approach to carefully balance key nutrients that provide superior yields in CHO fed-batch applications.

BalanCD™ CHO Feed I is comprised solely of animal component-free, chemically defined components, contains no antibiotics or antimycotics, and has proven stability in both powder and liquid formats.

BALANCD™ CHO FEED I CATALOG NUMBER

Powder	94119
Liquid	91127

PRODUCT HANDLING & STORAGE

Product handling using aseptic techniques is required to avoid contamination. Do not use if cloudy or if solution has precipitated. Powder product should be stored dry at 2-8°C and in absence of light for up to 2 years. Liquid product should be stored at 2-8°C and in absence of light for up to 9 months. Extended stability studies for both powder and liquid are ongoing for this formulation.

RELATED PRODUCTS

The following products are available from Irvine Scientific and developed for use in CHO fed-batch production systems. For additional information, please visit our website at www.irvinesci.com or call Customer Service at (800) 437-5706.

PRODUCT DESCRIPTION		CATALOG NUMBER
BalanCD™ CHO Growth A	Powder	94120
	Liquid	91128
BalanCD™ CHO Feed 2	Powder	94121
	Liquid	91129
BalanCD™ CHO Feed 3	Powder	94118
	Liquid	99471

INTENDED USE

These products are for RESEARCH USE only and not approved for human or veterinary use, for application to humans or animals, or for use in clinical or in vitro procedures.

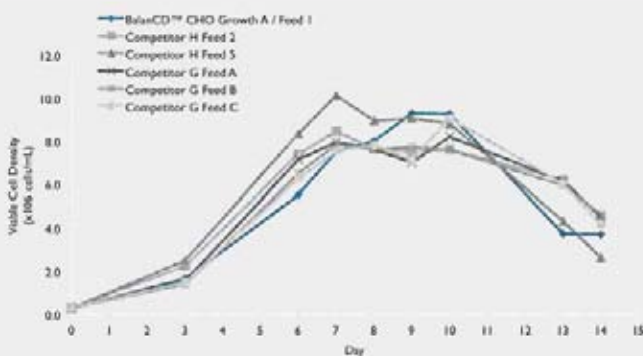
PERFORMANCE

STUDY DESIGN

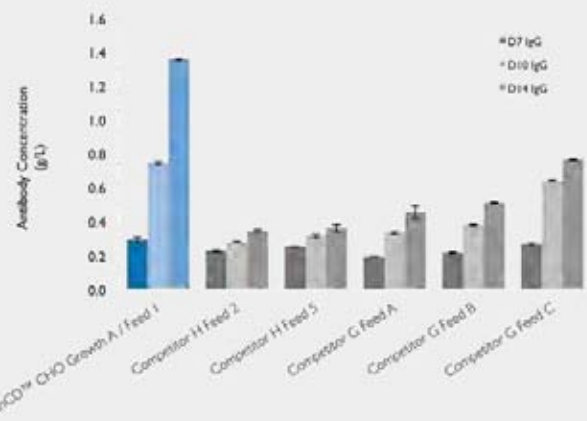
The study consisted of three model cell lines (CHO-S, CHO-K1, and CHO DHFR) grown in fed-batch mode using Irvine Scientific's BalanCD™ CHO Growth A and Feed I evaluated in a side by side comparative with several commercially available growth and feed media. The following culture parameters and experimental conditions applied to all:

- 10% (v/v) bolus feeds on days 1, 3, and 5
- Two (2) replicates per condition
- Shake flask cultures at 37°C, 5% CO₂, 120rpm

RESULTS

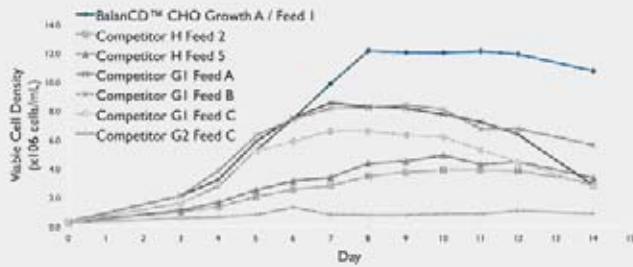


Graph 1. CHO-K1 growth data with BalanCD™ CHO Growth A in fed-batch mode with BalanCD™ CHO Feed I versus commercially available growth and feed media.

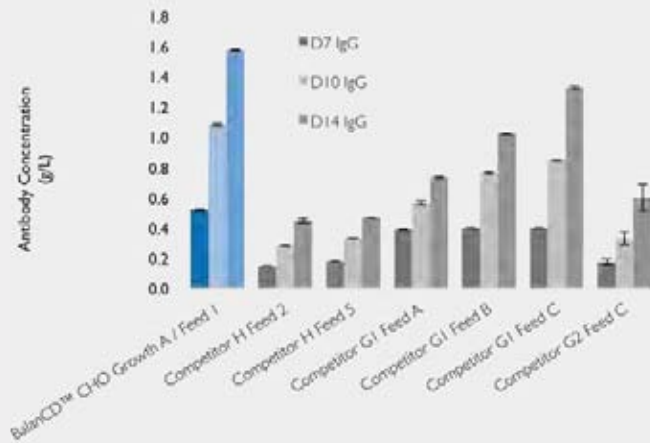


Graph 2. CHO-K1 Antibody production with BalanCD™ CHO Growth A in fed-batch mode with BalanCD™ CHO Feed I versus commercially available growth and feed media.

RESULTS



Graph 3. CHO DHFR growth data with BalanCD™ CHO Growth A in fed-batch mode with BalanCD™ CHO Feed I versus commercially available growth and feed media.



Graph 4. CHO DHFR Antibody production with BalanCD™ CHO Growth A in fed-batch mode with BalanCD™ CHO Feed I versus commercially available growth and feed media.

CONCLUSION

BalanCD™ CHO Growth A and BalanCD™ CHO Feed I are an optimized growth and feed media combination that provide superior growth and sustained high production capability throughout a fed-batch process versus other commonly available growth and feed media. BalanCD™ CHO Growth A and BalanCD™ CHO Feed I offer an advanced start to achieving an optimized fed-batch CHO culture system.

FED-BATCH SYSTEMS

The fed-batch CHO production system is the basis for development and manufacture of numerous biological therapeutics and one of the most prevalent systems in bio-manufacturing today. The appeal of fed-batch can be attributed to industry advances in chemically-defined growth and feed media, the relative ease in scalability, and improved efficiencies (upstream and downstream) over a traditional batch culture system. Fed-batch production is also cost effective due to:

- Improved bioreactor engineering, mathematical modeling, and bioreactor control
- Higher product reactor residence time over batch systems
- Increased peak cell densities and net production
- Process development time and costs are generally less than that of perfusion systems.
- Personnel and process control requirements are also less than that of perfusion systems.

A common challenge with fed-batch production is the preparation, filtration, and sustained storage of feed formulations. Each of the BalanCD™ CHO feeds have proven stability in both liquid and powder formats and offer relative ease in handling and use.

HOW TO ORDER / CONTACT US

For additional information, please contact your Regional representative or call Customer Service at (800) 437-5706 or visit our website at www.irvinesci.com.



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