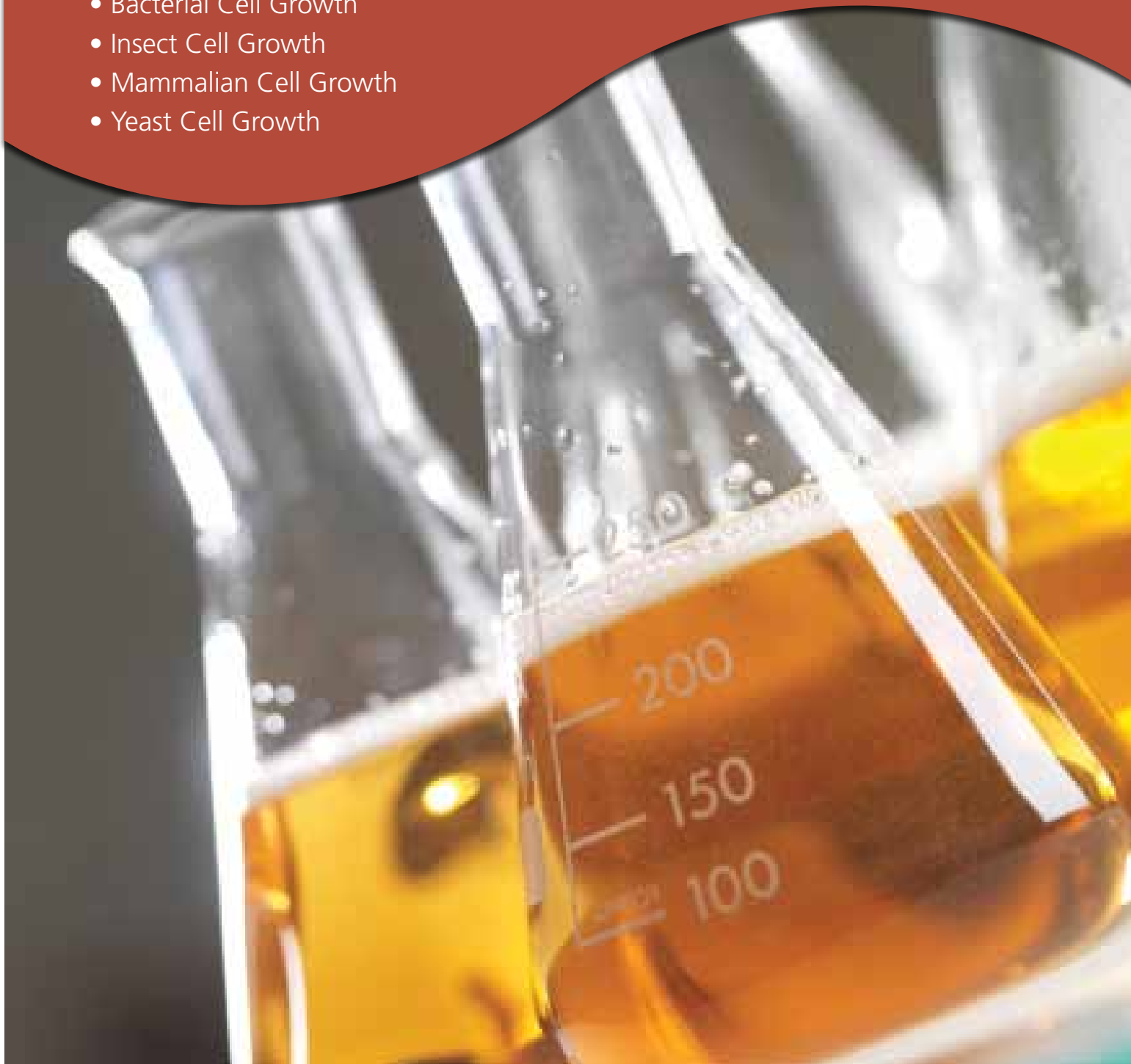


Stable Isotope Labeled Media Products

- Bacterial Cell Growth
- Insect Cell Growth
- Mammalian Cell Growth
- Yeast Cell Growth



Minimal Media for Bacterial Cell Growth

Spectra 9 (*E. coli* and Other Bacteria)

Spectra 9 is a cost effective medium for *E. coli* bacterial growth and protein expression. It is comprised of labeled salts and labeled carbohydrates, and is supplemented with Celtone® Base Powder (1g powder per liter Spectra 9) which contains amino acids, vitamins, peptides and other essential nutrients.

Spectra 9 is available as a ready-to-use solution and should not be diluted. Each lot is tested for sterility, cell growth and protein expression.

Available in 0.5L & 1L sizes

Catalog No.	Labeling	Catalog No.	Labeling
SPECTRA 9			
CGM-3030-C	(¹³ C, 98%)	CGM-3030-CDN	(¹³ C, 98%; D, 97%; ¹⁵ N, 98%)
CGM-3030-D	(D, 97%)	CGM-3030-DN	(D, 97%; ¹⁵ N, 98%)
CGM-3030-N	(¹⁵ N, 98%)	CGM-3030-U	Unlabeled
CGM-3030-CN	(¹³ C, 98%; ¹⁵ N, 98%)		

Products for Bacterial Minimal Media

	Catalog No.	Labeling	Sizes
MINIMAL MEDIA			
D-Glucose	CLM-1396	(U- ¹³ C ₆ , 99%)	0.25g-50g
	CLM-1396-25*	(U- ¹³ C ₆ , 24-25%)	1g
	DLM-2062	(1,2,3,4,5,6,6-D ₇ , 98%)	0.5g, 1g
	CDLM-3813	(¹³ C ₆ , 99%; D ₇ , 98%)	1g
	CLM-746*	(2- ¹³ C, 99%)	1g
	Ammonium Chloride	NLM-467	(¹⁵ N, 99%)
Ammonium Sulfate	NLM-713	(¹⁵ N, 99%)	1g-50g
Glycerol	CLM-1510	(¹³ C ₃ , 99%)	1g, 5g
	CLM-1397*	(2- ¹³ C, 99%)	0.1g-1g
	CLM-1857*	(1,3- ¹³ C ₂ , 99%)	0.1g-1g
	DLM-558	(D ₈ , 99%)	1g, 5g
Sodium pyruvate	CLM-1575*	(3- ¹³ C, 99%)	0.25g-1g
Deuterium Oxide	DLM-4	(D, 99.9%)	10g-1000g
	DLM-4-99.8	(D, 99.8%)	1000g
	DLM-4-99	(D, 99%)	1000g-5000g
	DLM-4-70	(D, 70%)	1000g

* Products used for "sparse" ¹³C Labeling.

Larger quantities are available, please inquire.

Rich Bacterial Cell Growth Media

Celtone® Powder (*E. coli* and Other Bacteria)

Celtone Base Powder is a mixture of amino acids, peptides, vitamins and other essential nutrients, which provide a “rich” environment for excellent bacterial cell growth and high protein expression.

The advantage of Celtone powder is that researchers can formulate a custom medium based on their specific research needs. Depending on cell line and desired performance, this powdered media can be used at concentrations ranging from 1g to 10g per Liter. Truly exceptional performance has been achieved with M9 salts, 2-3g/L glucose and 1g of ammonium chloride. The powder is easy to use and store and has the longest shelf life of any fully-rich bacterial growth medium.

Celtone Base Powder alone does not constitute a complete medium. Appropriately labeled salts and carbohydrates are needed to make a complete medium. Please note that D₂O is required for reconstitution for products containing deuterium. Each lot is tested for cell growth and protein expression.

Available in 0.5g & 1g sizes.

Catalog No.	Labeling	Catalog No.	Labeling
CELTONE POWDER			
CGM-1030P-C	(¹³ C, 98%)	CGM-1030P-CN	(¹³ C, 98%; ¹⁵ N, 98%)
CGM-1030P-D	(D, 97%)	CGM-1030P-CDN	(¹³ C, 98%; D, 97%; ¹⁵ N, 98%)
CGM-1030P-N	(¹⁵ N, 98%)	CGM-1030P-DN	(D, 97%; ¹⁵ N, 98%)
CGM-1030P-CD	(¹³ C, 98%; D, 97%)	CGM-1030P-U	Unlabeled

Celtone® Complete (*E. coli* and Other Bacteria)

Celtone Complete Medium is a “rich” bacterial cell growth medium derived from an algal source with a growth rate comparable to LB, allowing for inoculation and induction within one working day. Celtone contains amino acids, nucleic acids, peptides, vitamins, salts and other essential nutrients and provides excellent cell growth and high protein expression.

Celtone Complete Medium is formulated as a ready-to-use medium without need for dilution or pH adjustment. Each lot is tested for sterility, cell growth and protein expression.

Available in 0.1L & 1L sizes.

Catalog No.	Labeling	Catalog No.	Labeling
CELTONE COMPLETE			
CGM-1040-C	(¹³ C, 98%)	CGM-1040-CDN	(¹³ C, 98%; D, 97%; ¹⁵ N, 98%)
CGM-1040-D	(D, 97%)	CGM-1040-DN	(D, 97%; ¹⁵ N, 98%)
CGM-1040-N	(¹⁵ N, 98%)	CGM-1040-U	Unlabeled
CGM-1040-CN	(¹³ C, 98%; ¹⁵ N, 98%)		

Rich Bacterial Cell Growth Media

BioExpress®1000 (*E. coli* and Other Bacteria)

This “fully rich” media is comprised of a complex mixture of glucose, amino acids, peptides, vitamins, minerals and cofactors. Prepared from algal cell hydrolysates and processed using a proprietary procedure, BioExpress® 1000 yields excellent growth and expression characteristics for a number of different bacterial systems.

BioExpress is supplied as a 100 mL sterile liquid concentrate (10x), and reconstitutes to 1L with no final pH adjustment required. A 10 mL sample size (reconstitutes to 100 mL) is also available. Please note that D₂O is required for reconstitution for products containing deuterium.

Catalog No.	Labeling	Catalog No.	Labeling
BIOEXPRESS® 1000			
CGM-1000-C	(¹³ C, 98%)	CGM-1000-CN-35*	(¹³ C, 35%; ¹⁵ N, 98%)
CGM-1000-D	(D, 98%)	CGM-1000-CDN	(¹³ C, 98%; D, 98%; ¹⁵ N, 98%)
CGM-1000-N	(¹⁵ N, 98%)	CGM-1000-CDN-80	(¹³ C, 98%; D, 80%; ¹⁵ N, 98%)
CGM-1000-CD	(¹³ C, 98%; D, 98%)	CGM-1000-CDN-50	(¹³ C, 98%; D, 50%; ¹⁵ N, 98%)
CGM-1000-CN	(¹³ C, 98%; ¹⁵ N, 98%)	CGM-1000-DN	(D, 98%; ¹⁵ N, 98%)
CGM-1000-CN-25*	(¹³ C, 25%; ¹⁵ N, 98%)	CGM-1000-U	Unlabeled

* Products used for “sparse” ¹³C labeling

E. coli-OD2

E. coli-OD2 is made from bacterial hydrolysate and contains primarily amino acids, some low MW oligopeptides and almost no carbohydrates. The bacterial strain used is a chemolithoautotrophic organism which grows on inorganic substrates that are isotopically labeled. This OD-Media have the same characteristics as conventional LB media: high expression rates and short fermentation times. This OD media are ready-to-use sterile solutions and can be used instantly for the fermentation of bacteria. Silantes media require only the addition of antibiotics and special nutrients needed for the specific expression system.

Available as 0.2L and 1L.

Catalog No.	Labeling	Catalog No.	Labeling
CGM-1020-SL-C	(¹³ C, 98%)	CGM-1020-SL -CDN	(¹³ C, 98%; D, 98%; ¹⁵ N, 98%)
CGM-1020-SL-D	(D, 98%)	CGM-1020-SL -DN	(D, 98%; ¹⁵ N, 98%)
CGM-1020-SL-N	(¹⁵ N, 98%)	CGM-1020-SL -U	Unlabeled
CGM-1020-SL-CN	(¹³ C, 98%; ¹⁵ N, 98%)		

Insect Cell Growth Media

BioExpress®2000 for Insect Expression Systems

The Baculovirus Expression Vector System (BEVS), first introduced in the mid-80s, has grown to become the most versatile and widely used eukaryotic vector system employed for the expression of recombinant proteins in cultured insect cells. The BEVS is based on the infection of insect cells with recombinant baculovirus (BV) carrying the gene of interest with the subsequent expression of the corresponding recombinant protein by the insect cells. The most popular insect cell lines used in conjunction with the BEVS are Sf9 (*Spodoptera frugiperda*) and High Five™ (*Trichopulsia ni*). BioExpress® 2000 is packaged as two components: a solid powder (a proprietary blend of inorganic salts and labeled amino acids) and a liquid component (fatty acid solution). Amino acid selective labeling is possible with BioExpress®2000 because the amino acid content is chemically defined.

Available as a 1L kit and a 200 mL sample kit.

Catalog No.	Labeling	Catalog No.	Labeling
BIOEXPRESS 2000			
CGM-2000-N	(U- ¹⁵ N, 98%)	CGM-2000-U	Unlabeled
CGM-2000-CN	(U- ¹³ C, 98%; U- ¹⁵ N, 98%)	CGM-2000-CUSTOM	Customer Determined

Mammalian Cell Growth Media

BioExpress®6000 for Mammalian Expression Systems

Many complex proteins, many of these being important drug targets, such as kinases and GPCRs, often cannot be expressed with *E. coli* in a correctly folded and active state. It is widely believed that the expression of recombinant mammalian proteins in mammalian cell lines show the greatest promise to produce correctly folded proteins with the greatest number of post-translational modifications (e.g., N-linked glycosylation, phosphorylation, and acetylation). This media should work well with cell lines grown in DMEM. Amino acid selective labeling is possible with BioExpress® 6000 because the amino acid content is chemically defined.

Available as a 1L kit and a 200 mL sample kit.

Catalog No.	Labeling	Catalog No.	Labeling
BIOEXPRESS 6000			
CGM-6000-N	(U- ¹⁵ N, 98%)	CGM-6000-U	Unlabeled
CGM-6000-CN	(U- ¹³ C, 98%; U- ¹⁵ N, 98%)	CGM-6000-CUSTOM	Customer Determined

Yeast Cell Growth Media

Yeast-OD2

Yeast is used for the expression of eukaryotic proteins, since this host facilitates high protein expression and many post-translational protein modifications characteristic for mammalian cells. This rich growth OD-Media for yeast is ready to use. The problem of optimizing standard minimal media containing glucose or methanol as a sole carbon source therefore does not arise.

Available as 1 Liter

Catalog No.	Labeling	Catalog No.	Labeling
Yeast-OD2			
CGM-4020-SL-C	(¹³ C, 98%)	CGM-4020-SL -CN	(¹³ C, 98%; ¹⁵ N, 98%)
CGM-4020-SL-N	(¹⁵ N, 98%)		