

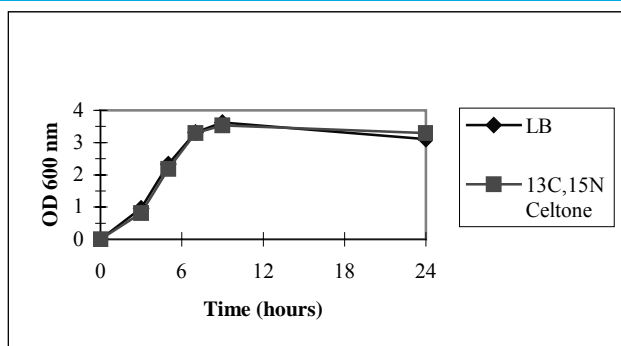
# BACTERIAL CULTURE MEDIA

## CELTONE<sup>®</sup> Standard Growth Medium

### Product Description

CELTONE 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.

It is recommended that researchers interested in growing bacterial cultures with our CELTONE medium perform a small-scale prep trial before conducting large-scale experiments.



<sup>13</sup>C<sup>15</sup>N labeled CELTONE medium vs. LB medium (on E. coli BL21)

CELTONE is available in solution and powder forms and can be supplied with <sup>13</sup>C, <sup>15</sup>N, or <sup>2</sup>H individual labeling or any combination of the three. For each lot of CELTONE, isotopic purity and enrichment are tested by advanced analytical techniques and is typically ≥ 98%. Partially <sup>2</sup>H labeled media are also available upon request.

CELTONE is formulated as ready-to-use medium without need for dilution. Each lot of CELTONE medium is tested for sterility, cell growth and protein expression to ensure the quality of the product. An analytical certificate is provided with each shipment.

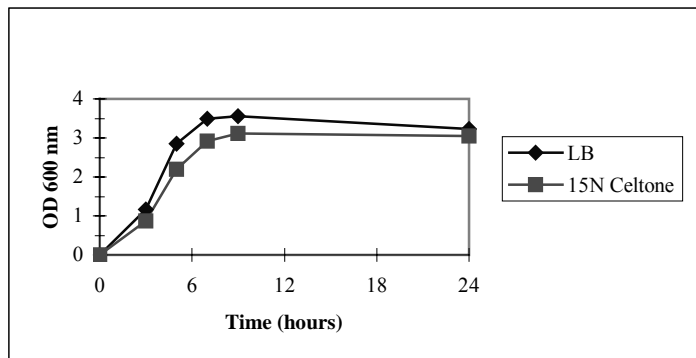
Following is a typical CELTONE amino acid profile table.

FREE AMINO ACID COMPOSITION				TOTAL AMINO ACID COMPOSITION			
Ala:	11.1%	Arg:	4.6%	Ala:	7.6%	Arg:	5.6%
Asp:	17.5%	Glu:	10.0%	Asp:	9.6%	Glu:	10.2%
Gly:	11.5%	His:	1.2%	Gly:	6.4%	His:	2.3%
Ile:	1.3%	Leu:	7.7%	Ile:	3.1%	Leu:	8.4%
Lys:	7.1%	Met:	1.7%	Lys:	12.0%	Met:	1.6%
Phe:	3.8%	Pro:	6.2%	Phe:	8.3%	Pro:	5.6%
Ser:	5.2%	Thr:	2.8%	Ser:	4.4%	Thr:	4.8%
Tyr:	3.7%	Val:	2.1%	Tyr:	3.8%	Val:	4.5%
Trp:	0.2%	Cys:	0.2%	Trp:	0.2%	Cys:	0.7%

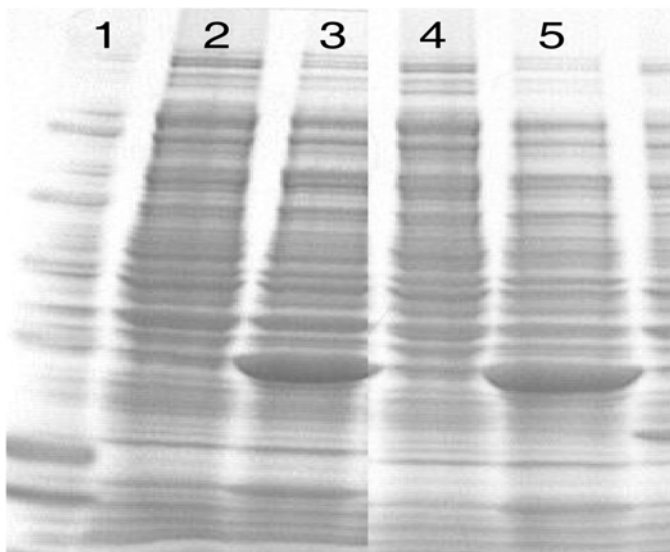
Analytical data was obtained on a specific batch of <sup>13</sup>C<sup>15</sup>N labeled CELTONE (CB0041).

*Contact us for a complimentary sample of unlabeled CELTONE medium.*

## CELTONE Media



<sup>15</sup>N labeled CELTONE medium vs. LB medium (on E.coli BL21)



Comparison of the expression of a 20 kDa protein in CELTONE versus LB medium

Lane 1: Molecular weight ladder  
Lane 2: uninduced protein from LB medium  
Lane 3: IPTG induced protein from LB medium  
Lane 4: uninduced protein from CELTONE medium  
Lane 5: IPTG induced protein from CELTONE medium

### References:

1. <sup>15</sup>N -labelling and preliminary heteronuclear NMR study of *Desulfovibrio vulgaris* Hildenborough cytochrome c553. Morelli X, Dolla A, Toci R, Guerlesquin F. *Eur J Biochem* 1999 Apr, 261(2): 398-404
2. Expression of doubly labeled *Saccharomyces cerevisiae* iso-1 fer-ricytochrome c and 1H, 13C and 15N chemical shift assignments by multidimensional NMR. Christina M. Szabo, Lori K, Sanders, H, Carl Le, Ellen Y.T, Chien, Eric Oldfield. *FEBS letters* 482 (2000) 25-30
3. Binding ability of HHP. Tagged proteins towards Ni<sup>2+</sup> studied by paramagnetic NMR relaxation. Jensen, Lauritzen, Dahl, Rederson, et. al. *Journal of Biomol NMR* 29: 175-185, 2004

## CELTONE® Base Powder

CELTONE is also available in powder form - CELTONE Base Powder. The advantage of this medium is its versatility as researchers can formulate their own medium using CELTONE Base Powder, based on their protein protocol. Typically, a minimum of 10 grams of CELTONE Base Powder is used to reach comparable LB densities.

CELTONE Base Powder contains amino acids, peptides, vitamins and other essential nutrients, which allow the researchers to customize the medium for their research protocols.

### CELTONE Powder Analytical Information

#### APPROXIMATE COMPOSITION

Amino Acids	70%
Sodium Chloride	20%
Moisture	10%
Glucose	<0.5%
Other Sugars	Trace

Each lot of CELTONE Powder is tested for cell growth and protein expression.

### Reconstitute Your Own Medium with CELTONE Base Powder

CELTONE Base Powder is available in  $^{13}\text{C}$ ,  $^{15}\text{N}$ , or  $^2\text{H}$  individual labeling or in any combination of the three. Each lot of CELTONE Base Powder is tested for isotopic purity and enrichment by advanced analytical techniques and is typically  $\geq 98\%$ .

Partially  $^2\text{H}$  labeled medium is also available upon request.

*Please contact us if you need more information about CELTONE Base Powder*