



FrieslandCampina 

Ingredients

product data sheet

Proyield® Wheat WGE80M-UF

Proyield Wheat WGE80M-UF is a protein hydrolysate derived from wheat gluten protein by enzymatic hydrolysis. The enzymes used for digestion are from non-animal sources. Proyield Wheat WGE80M-UF has been ultrafiltered to reduce endotoxin.

Product characteristics

Proyield Wheat WGE80M-UF is an ultrafiltered protein hydrolysate composed of enzymatically hydrolysed wheat gluten. It is naturally rich in trace elements and carbohydrates coupled with predominately di- and tri-peptides. It is a rich source of glutamine. Proyield Wheat WGE80M-UF is recommended specifically for the biopharmaceutical cell culture applications; the product delivers excellent support for both the growth and expression of product in mammalian cells and bacterial cells. Proyield Wheat WGE80M-UF has demonstrated growth support for bacterial cultures.

Proyield Wheat WGE80M-UF is manufactured from GMO free wheat gluten. Proyield Wheat WGE80M-UF has been tested and determined to have no residual enzyme activity. Proyield Wheat WGE80M-UF is a homogeneous, tan, free-flowing powder.

Proyield Wheat WGE80M-UF is manufactured in our facility in the US (NY-DIO-0001, ISO 9001:2008).

Application

Current applications have been found with mammalian and bacterial cell culture.

Growth profile

To determine the growth enhancing effect 0.4% (w/v) hydrolysate solutions in IS CHO CD medium (Irvine Scientific Cat. no. 91119) are tested using our validated growth assay. 25ml of CHO (ATCC CRL-11397) cell suspensions are shaken on an orbital shaker (125 rpm) in 100ml baffled flasks. Start concentration of CHO cells is 2×10^5 cells per ml. Cells are grown for 14 days (37°C/5%CO₂). Growth is determined by measuring viable cell count using a cell analyzer, the Cedex HiRes. No feed is added during growth. See figure 1.

Packaging

Proyield Wheat WGE80M-UF is packaged in 20kg plastic drums.

Shelf life and storage conditions

Protein hydrolysates are hygroscopic. If not properly protected from moisture, the hydrolysate will lose its physical and functional characteristics. Therefore, it is recommended to store your hydrolysate in the original sealed container at temperatures below 25°C and a relative humidity of below 65%. In the original sealed packaging, Proyield Wheat WGE80M-UF has a shelf life of 5 years.

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This information is intended for industrial customers only and not intended for consumers.

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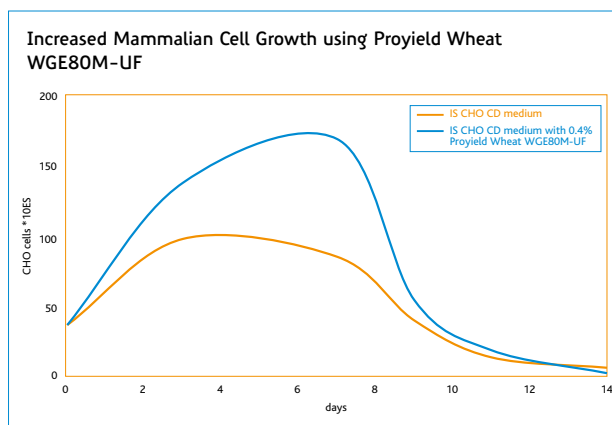


Figure 1: Increased Mammalian Cell Growth using Proyield Wheat WGE80M-UF

Typical analysis

Chemical

Protein (TN x 5.77)	80.9%
Amino Nitrogen (AN)	1.6%
Total Nitrogen (TN)	13.8%
AN/TN x 100	11.6%
Ash	2.0%
Moisture	3.9%
pH	6.6
Endotoxin	< 16 EU/ml ¹
Filterability	142 sec ²

1 Endotoxin determination by Limulus Amebocyte Lysate in 1% solution (LAL Testing):
More information about the procedure is available on request.

2 Filtration of a 10% solution on a Schleicher & Schull filter system with Millipore
Durapore (PVDF) Filters (GVWP04700, 47 mm), vacuum pressure -0,55 bar.

Molecular Weight Profile (area %)

> 10,000	0
10,000-5,000	0
5,000-2,000	2
2,000-1,000	6
1,000-500	15
< 500	77
Avg. Molecular Weight	415 Daltons
Free Amino Acids	1%

Amino Acid Analysis Measured per 1g of product (in mg)

Alanine	19
Arginine	24
Aspartic Acid	21
Cysteine/Cystine	17
Glutamic Acid	337
Glycine	28
Histidine	10
Isoleucine	27
Leucine	53
Lysine	13
Methionine	8
Phenylalanine	41
Proline	106
Serine	32
Threonine	15
Tryptophan	3
Tyrosine	30
Valine	31

Elemental Analysis Measured per 100g product (in mg)

Calcium	244
Magnesium	33
Potassium	412
Sodium	906
Phosphorus	55

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