

CERTIFICATE OF ANALYSIS

Name of the product Batch no. Status Date of manufacture Date of expiration Active component Date of issue	DSM Casein Hydrolysate V 110704 Pilot Batch 13 July 2004 To be used before 13 July 2005 Casein Hydrolysate 28 July 2004		
Parameter	Method	Specification limits	Results
Appearance	Visual inspection	Powder	Powder
Colour	Visual inspection	Cream	Cream
pH of a 5% (w/w) solution	Suitable method	4.0-5.0	4.58
Turbidity of a 5% (w/w) solution	Nephla meter	< 20 Nephla points	7.7
Protein content	Kjeldahl	> 80 % (w/w)	83 % (DFS)(**)
Degree of hydrolysis	OPA-method	> 20 %	28% (DFS)
Free Amino Acids		< 5 %	nd
Moisture	Manufacturer method	< 4%	5.8%
Ash	Manufacturer method	< 5%	8.8%
Scorched particles	ADMI	A-B	A
Microbiology:	Manufacturer method		
TPC		< 10,000 cfu/g	<10
Coliforms		Negative in 0.1 g	negative
Yeast		< 50 cfu/g	<10
Moulds		< 50 cfu/g	<10
Staphylococcus Aureus		Negative in 0.1 g	negative
Salmonella		Negative in 25 g	negative
Signature Quality Assurance Manager Approved (*), awaiting DFS analysis Date: 1 September July 2004 (*) Experimental product. Items on Ash, Moisture are out of experimental specifications and should be discussed with the customer.		Remarks (if any): (**): Due to high degree of hydrolysis Nx6.69 is used as factor to calculate the protein value. (average chain length in the product is 3.58 amino acids)	