

Art no: 05-0104

CERTIFICATE OF ANALYSIS

Lot no: 280809



Product name:	<i>Lens culinaris</i> lectin, <i>Lens culinaris</i> agglutinin
Production date:	2022-02-24
Date of release:	2022-04-21
Stability:	2027-02
Form:	Lyophilized

Analysis	Specification	Result
Appearance	White powder or flocculate by visual inspection resulting in a clear solution.	Fulfills requirement
Solubility	Dissolves in distilled water and 0.9% NaCl within 5 minutes.	Fulfills requirement
Assay (%)	≥ 85 % protein by $OD_{280\text{ nm}}$ (ϵ 1mg/ml = 1,34), essentially salt free.	87,8 %, fulfills requirement
Electrophoresis	Gives two major bands in isoelectrophoresis corresponding to the two isomers LCA-A and LCA-B.	Fulfills requirement, see Bilaga 1.
Activity Haemagglutination/inhibition	Agglutinates human erythrocytes (2% blood solution) when lectin concentration is ≤ 10 $\mu\text{g/ml}$ in 0.9 % NaCl after 1 hour at 25 °C. inhibition appears with 60 mM Methyl mannoside (end conc. 20 mM) at a titer minimum 4 steps lower than titer of control. Control must have a titer of minimum 32.	Titer inhibition with 20 mM Methyl mannoside = 2; Agglutination at 2,6 $\mu\text{g/ml}$. Fulfills requirement, see Bilaga 3.
UV scan	Typical appearance of <i>Lens culinaris</i> lectin at 700-230 nm.	Fulfills requirement, see Bilaga 2.
Bacterial burden	Less than 10^2 CFU per 1 g of solid substance.	< 100 CFU/g, fulfills requirement

Bilaga:

1. IEF electrophoresis.
2. UV Scan 700-230nm.
3. Activity, Haemagglutination control.

The above material has met all quality specifications and has been reviewed by a quality representative.

Quality Assurance, Max Johansson

2022-04-21

Date

IEF analysis *Lens culinaris* lectin, Lot 280809

Isoelectric focusing using Pharmacia Phastsystem (Amersham Biosciences).

Materials

Phastgel IEF 3-9

Reference proteins pH 3.5 – 9.3 (IEF Stdrd)

Amylglucosidase -	3.50 pI
Methyl red (dye) -	3.75 pI
Trypsin inhibitor -	4.55 pI
b-Lactoglobulin A -	5.20 pI
Carbonic anhydrase B (bovine) -	5.85 pI
Carbonic anhydrase B (human) -	6.55 pI
Myoglobin, acidic band -	6.85 pI
Myoglobin, basic band -	7.35 pI
Lentil lectin, acidic -	8.15 pI
Lentil lectin, middle -	8.45 pI
Lentil lectin, basic -	8.65 pI
Trypsinogen -	9.30 pI

Method

The proteins were diluted to 4 mg/ml in milliQ water supplemented with 30 % saccharose. The gels were fixed for 10 min, washed and stained with IEF staining sol. for 10 min at 50°C and then destained.

Program

Sample applicator down at	2.2	0Vh				
Sample applicator up at	2.3	0Vh				
SEP 2.1	2000V	2.5mA	3.5W	15°C	75Vh	
SEP 2.2	200V	2.5mA	3.5W	15°C	15Vh	
SEP 2.3	2000V	2.5mA	3.5W	15°C	410Vh	

Result

1 2 3 4 5 6 7 8

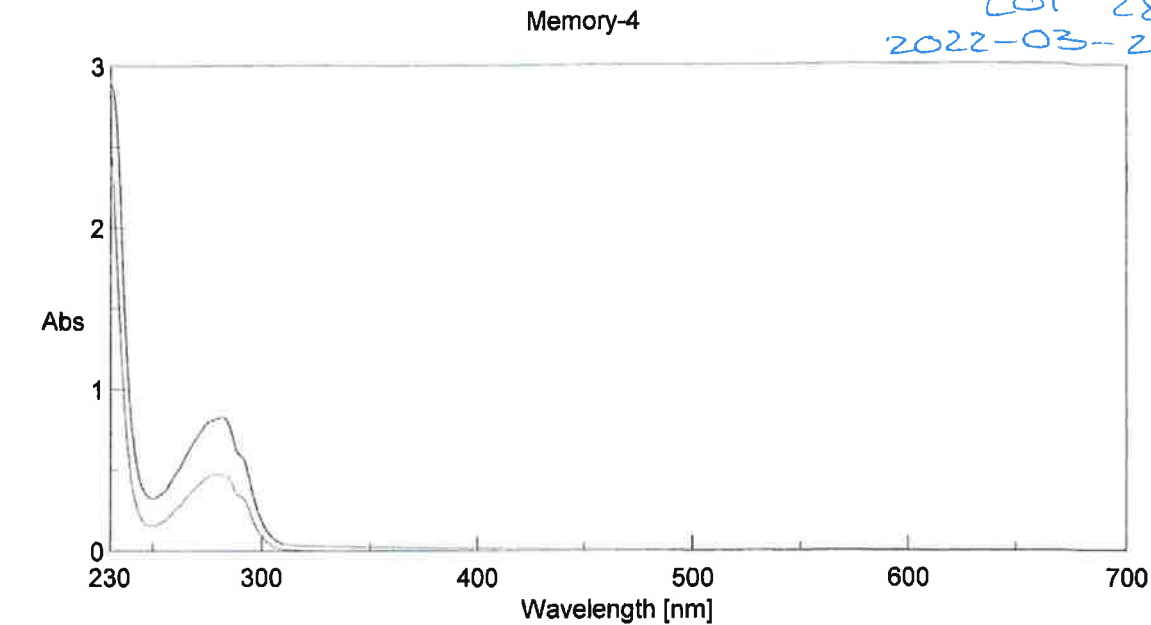


Lane 1,8	Empty
Lane 2,7	IEF standard pH 3.5 – 9.3
Lane 3-4	LCA lot 280809
Lane 5-6	LCA Ref lot 273215

Analysis performed by

Cynthia Hassinen
Cynthia Hassinen, 2022-03-29

Bilaga 2
Tillhör M-000F
Lot 280809
2022-03-21/CH



[Comments]
Sample name LCA, referens
Comment lot 273215
User CH
Division QC
Company Medicago

Memory-2
Memory-4

[Detailed Information]
Creation date 2022-03-21 12:24
Date modified 2022-03-21 12:26

Data array type Linear data array
Horizontal axis Wavelength [nm]
Vertical axis Abs
Start 700 nm
End 230 nm
Data interval 0.5 nm
Data points 941

[Measurement Information]
Instrument name Jasco UV Vis
Model name V-760
Serial No. A011061800

Accessory USE-753
Accessory S/N A011061800
Cell
Ref. beam

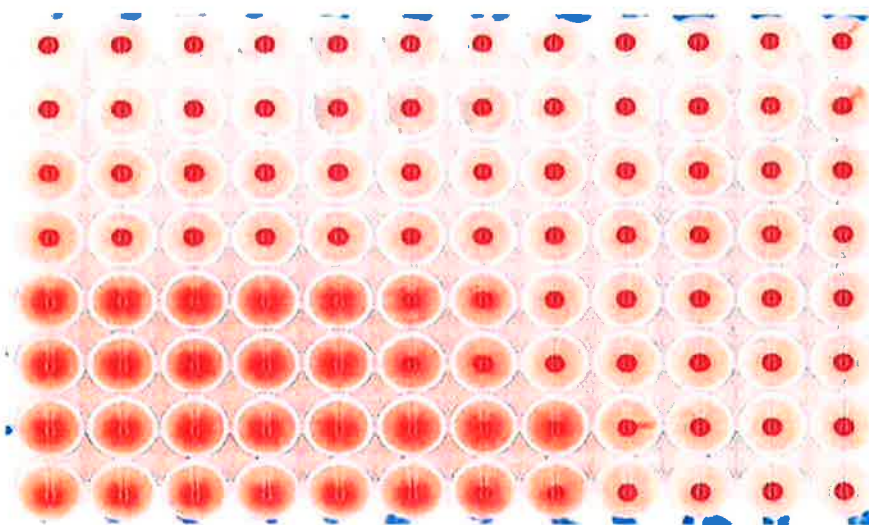
Measurement date 2022-03-21 12:24

Parameter file C:\Program Files (x86)\JASCO\SpectraManager\samples\230-700.uvsp
Photometric mode Abs
Measurement range 700 - 230 nm
Data interval 0.5 nm
Bandwidth 2.0 nm
Response 0.06 sec
Scan speed 1000 nm/min
Change source at 340 nm
Light source D2/WI

+

Bilaga 3, tillhör M-00020
Haemagglutination (human blood, group 0), Lot 280809
***Lens culinaris* agglutinin (LCA)**

Column	1	2	3	4	5	6	7	8	9	10	11	12	
Conc	333	167	83	42	21	10	5.2	2.6	1.3	0.6	0.3	0.16	µg/mL
Titer	0	2	4	8	16	32	64	128	256	512	1024	2048	



Row A,B Blank
 Row C,D With 20 mM α -metyl-D-mannosid
 Row E,F With 2 mM α -metyl-D-mannosid
 Row G,H Only lectin without α -metyl-D-mannosid (agglutination control)

Plate scanned:

Signature:

Cynthia Hassinen 2022-03-23