

Art no: 05-0106

Lot no: 221517

## CERTIFICATE OF ANALYSIS




Product name:	Concanavalin A, <i>Canavalia ensiformis</i> (Jack bean) Lectin.
Production date:	2016-04
Date of release:	2016-06-10
Expiry:	2021-04
Form:	Lyophilized

Analysis	Specification	Result
Appearance	White powder or flocculate by visual inspection resulting in a clear solution.	Fulfills requirement
Solubility	Dissolves in PBS buffer pH 7.4 within 5 minutes (1mg/ml).	Fulfills requirement
Assay (%)	> 90 % by $A_{280nm}$ ( $\epsilon_{1mg/ml} = 1,14$ )	93%, fulfills requirement
Electrophoresis	4 major bands in SDS-electrophoresis, comparable to reference sample.	Fulfills requirement, see appendix 1.
Activity Haemagglutination/inhibition	Agglutinates human erythrocytes (2% blood solution) when lectin concentration is $\leq 40$ $\mu\text{g/ml}$ in 0.9 % NaCl. The agglutination activity is inhibited by 100 mM D-glucose, at a lectin concentration of $\geq 300$ $\mu\text{g/ml}$ .	Agglutination at 20 $\mu\text{g/ml}$ ; fulfills requirement, see appendix 2.
Bacterial burden	Less than $10^2$ CFU per 1 g of solid substance.	Fulfills requirement

Appendixes:  
1. SDS-PAGE  
2. Activity, Haemagglutination control.

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

  
Quality Assurance, Helena Lind

2016-06-10  
Date

## Appendix 1

### SDS PAGE analysis Con A lot 221517

Electrophoresis with Pharmacia Phast system (Amersham Biosciences)

#### Material

Phast gel gradient 8 – 25  
Phast gel SDS buffer strips

#### Method

The reference protein (freeze dried) was dissolved at 2 mg/ml in loading buffer (10 mM TRIS/HCL, 1 mM EDTA, 2.5 % SDS, 50mM DTT)

Con A lot 181716 in solution was first separated on a PD10 column for buffer exchange to water and then dissolved 1:1 in loading buffer.

LMW marker was from, LMW SDS calibration kit for SDS electrophoresis (GE Healthcare).

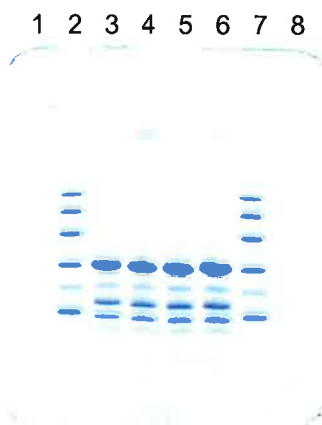
MW of proteins included in LMW (14 000 Da - 97 000 Da) marker:

Phosphorylase b	97 000
Albumin	66 000
Ovalbumin	45 000
Carbonic anhydrase	30 000
Trypsin inhibitor	20 100
$\alpha$ -Lactalbumin	14 400

The samples were boiled for 5 min. and approx. 0.5  $\mu$ l was applied on Phast gel (gradient 8 – 25).  
Program; 300v, 7.5 mA, 2.0 W, 80 Vh.

The gels were stained with Coomassie blue for 30 min and then destained.

#### Result

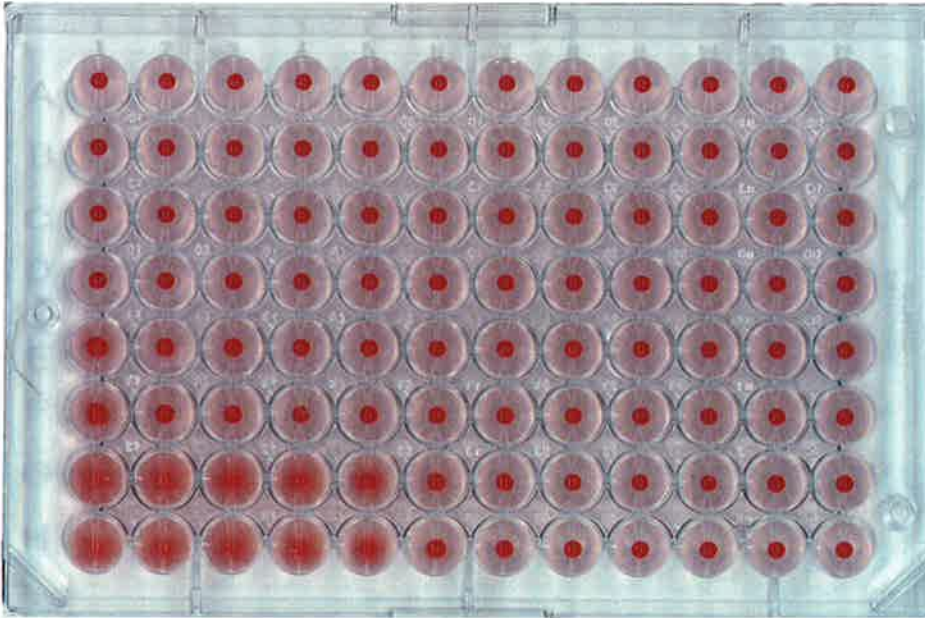


**Lane 2**            LMW standard  
**Lane 3, 4**        Con A lot 162106  
**Lane 5, 6**        Con A lot 221517  
**Lane 7**            LMW standard

Analysis performed by :  \_\_\_\_\_  
Kristina Domeika, 2016-04-29

**Haemagglutination (human blood, group 0)  
Concanavalin A (Con A), lot 221517**

Col	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 $\mu\text{g/mL}$



Row A,B	Blank
Row C-D	100 mM D-Glucose
Row E-F	10 mM D-Glucose
Row G-H	NaCl, agglutination control

Date: 2016-04-29

Signature:  \_\_\_\_\_