

Art no: 05-0115

Lot no: 253702

CERTIFICATE OF ANALYSIS

Product name:	PHA-P, Phaseolus vulgaris agglutinin P
Production date:	2019-09
Retested:	2024-06
Date of release:	2024-06-26
Stability:	2026-12
Source:	<i>Phaseolus Vulgaris</i> beans (Red Kidney Beans)
Form:	Lyophilized
Storage:	-18 °C (may be shipped at ambient temp)

Analysis	Specification	Result
Appearance	White to cream coloured powder or flocculate	Pass
Solubility	1 mg/ml in PBS (10 mM Na-phosphate buffer, 140 mM NaCl, 2.7 mM KCl, pH 7.4)	Pass
Protein content	> 85 % (A_{280nm} at 1mg/ml) = 1,14)	91.4 %, Pass
Purity	≥ 90% (SDS-PAGE)	Pass
Microbiology	< 100 CFU/g	Pass
Activity	Agglutinates human blood group 0 at a concentration ≤ 4 µg/mL	Pass
Identity	One major band compare to reference (SDS-PAGE)	Pass

Appendices:
 1. SDS-PAGE
 2. Haemagglutination

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



 Manager Quality Assurance, Lars Haneskog

2024-10-02

Bilaga 1, tillhör M-00230

SDS PAGE, analysis of PHA-P lot 253702-01

Electrophoresis with Pharmacia Phastsystem (Amersham Biosciences)

Material

Phast gel gradient 8 – 25
Phast gel SDS buffer strips

Method

The proteins were dissolved to 2 mg/ml 1:1 in PBS and loading buffer (10.9 mM TRIS/HCL, 1.1 mM EDTA, 2.7 % SDS, 50 mM DTT).

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

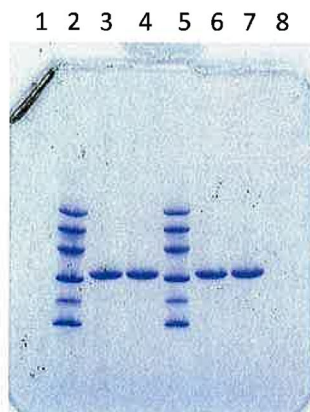
MW of proteins included in LMW (14 000 Da - 97 000 Da) marker:

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

The samples were boiled for 5 min. and approx. 1 μ 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 1, 8 Empty
Lane 2,5 LMW lot 302208
Lane 3, 4 PHA-P lot 253702-01 (Prov)
Lane 6,7 PHA-P lot 251103 (reference)

Analysis performed by


Salah Ahmed / 2024-06-10

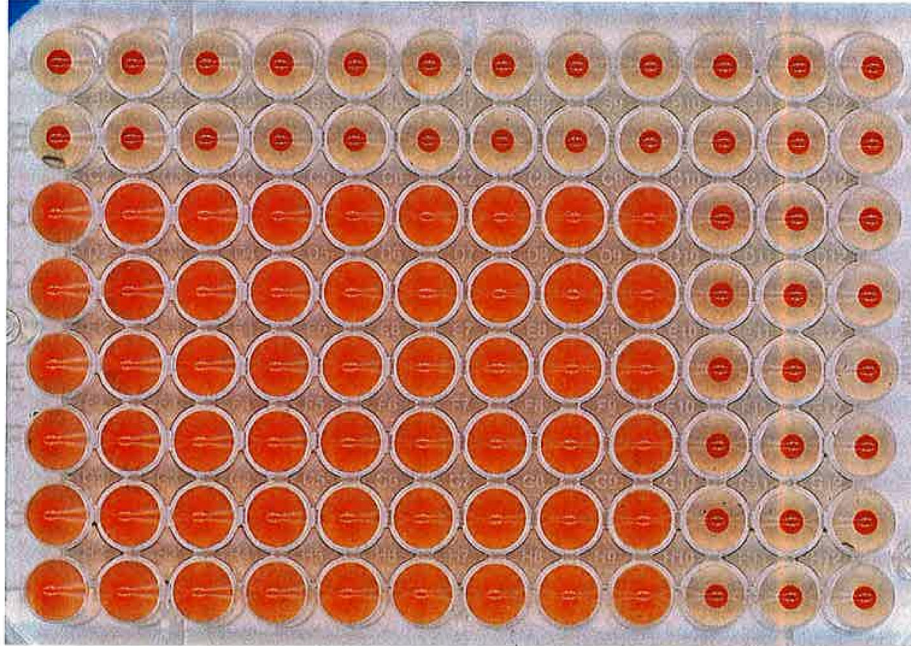
Bilaga 1, tillhör M-00030

Haemagglutination (human blood group 0)

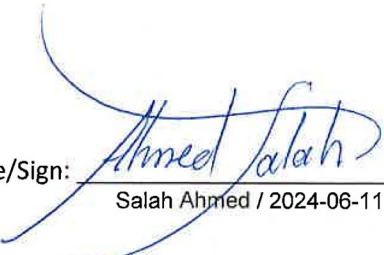
Lectin from Phaseolus vulgaris (red kidney bean),

Phytohemagglutinin (PHA)-P art nr. 05-0115 lot 253702-01(omanalysis)

Column 1	2	3	4	5	6	7	8	9	10	11	12	
Titer	0	2	4	8	16	32	64	128	256	512	1024	2048
Conc	500	250	125	63	31	16	7.8	3.9	2.0	1.0	0.5	0.2 µg/mL



Row A,B Blank
Row C-H PHA-P lot 253702-01

Date/Sign: 
Salah Ahmed / 2024-06-11