

Expert Opinion

File No: **IU-M-194**
Date: 20/02/20

Applicant: Fabrika proteina i ulja BIOPROTEIN d.o.o. Bulevar Nikole Tesle 30a 11080 Zemun Bulevar Nikole Tesle 30a 11080 Zemun
Documents reff.: Delovodni broj: 66 od 03.02.2020.
Data on sample Samples submitted 06/02/20

Sample and identification number:

IU-M-00502 Biopro 32 (Enzymatic active soft soybean powder);

Type of testing: Food safety

IU-M-00502 Quality: sensor analysis and physico chemical analysis, Physico chemical residue /contaminant analysis: pesticides, heavy metals: Pb, Cd, As, Hg, mycotixins, RH, GMO, Microbiological analysis upon request

Date of receipt: 06/02/20

Date of start of lab. analysis: 06/02/20
Date of completion of lab. analysis: 20/02/20

On the basis of results of laboratory analysis and expert review it was determined that the above stated sample IU-M-00502 from the point of controlled parameters IS IN COMPLIANCE WITH the Product Specification, Regulation (EC) No 396/2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin (OJ L 70 16.03.2005. p1) and amendments (Consolidated version of Reg 396/2005), Commission regulation (EC) No 1881/2006 setting maximum levels for certain contaminants in foodstuffs (OJ L 364/5), Council Regulation (EC) No: 733/2018 of 15 July 2018 and 1048/2009 of 23.October 2009, Regulation (EC) No 1829/2003 on genetically modified food and feed (OJ L 268/1) and Commission regulation (EU) No 619/2011 laying down the methods of sampling and analysis for the official control of feed as regards presence of genetically modified material for which an authorisation procedure is pending or the authorisation of which has expired (OJ L 166/9).

Head of laboratory
Milan Simić PhD, Hygiene Specialist



Report on laboratory analysis

File No: **IU-M-194**
Date: **20/02/20**

Data received from applicant:

Applicant: **Fabrika proteina i ulja BIOPROTEIN d.o.o.**
Bear Costs: **Fabrika proteina i ulja BIOPROTEIN d.o.o. Bulevar Nikole Tesle 30a 11080 Zemun**
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Statements:

This Report refers only to the tested sample.

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No: **IU-M-194**
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Analysis results:

Sample: IU-M-00502 Biopro 32 (Enzymatic active soft soybean powder)

Sample data: **

Sample: Biopro 32 (enzymatically active full-fat soft soybean flour)
Food group: Protein products
Original packaging: 25 kg natron paper bags
Sample quantity: 5 pcs
Best used by: 02.11.2020
Series (LOT): 020220F2A2293
Storage and storage conditions: in a dry ventilated and cool place
Manufacturer: - "Bankom" d.o.o. Ul Bulevar Nikole Tesle 30A Zemun production plant "Bioprotein" d.o.o.ul Nemanjina b.b. Obrenovac R. Serbia
Other information relevant to the consumer: The manufacturers specification and manufacturers declaration have been provided
Sample properly submitted

Sensor analysis

The subject sample is an enzyme-active, full-fat soft soybean meal under the commercial name "Biopro-32" obtained by a technological process from genetically unmodified soybean grains, by removing non-proteins substances. Product is fine powdery texture, pale cream color, characteristic odour and pleasant, slightly sweet taste.

Method: SBM-03-001

Declaration of Conformity:

Based on the test results the sample is in COMPLIANCE with the manufacturer specification and the Regulation on the quality of protein products and mixtures of protein products for the food industry (Sl. List SFRJ br. 41/85, Sl. List SCG br. 56/03 i 4/04)

Physico chemical analysis

| Parameter: | Result: | (unit) | Ref. value: | Method: |
|---------------------------|-------------|--------|-------------|---------------------------------|
| Moisture | 6,29 ±0,31 | % | max 8 | Sl. List SRFJ br.41/85 metoda 1 |
| Protein (in dry matter) | 44,15 ±0,88 | % | min 38 | Sl. List SRFJ br.41/85 metoda 4 |
| Ash (in dry matter) | 5,37 ±0,27 | % | max 5.5 | Sl. List SRFJ br.41/85 metoda 3 |
| Fat (in dry matter) | 25,77 ±1,8 | % | min 18 | Sl. List SRFJ br.41/85 metoda 2 |
| Cellulose (in dry matter) | 2,11 ±0,11 | % | max 4.5 | Sl. List SRFJ br.41/85 metoda 6 |

Declaration of Conformity:

Based on the test results the sample is in COMPLIANCE with the Regulation on the quality of protein products and mixtures of protein products for the food industry ("Sl. List SFRJ" br. 41/85, "Sl. List SCG" br. 56/03 and 4/04)

Residue / contaminant analysis

| Parameter: | Result: | (unit) | Ref. value/ML: | Method: |
|------------------------------------|---------|--------|----------------|----------------------------|
| <i>Organophosphorus pesticides</i> | | | | |
| -Cadusafos | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Chlorfenvinphos | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Chlorpyrifos | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Chlorpyrifos-Methyl | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Diazinon | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Dichlorvos | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Dimethoate | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Etrimfos | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Fenitrothion | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Fenthion | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Malathion | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Methacrifos | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Parathion | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Parathion-Methyl | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Phosphamidon | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Pirimiphos-Methyl | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Profenofos | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| -Sulprofos | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |
| <i>Carbamates</i> | | | | |
| -Carbaryl | < 0,01 | mg/kg | | GC-MSD, SRPS EN 15662:2018 |

The laboratory name "Centar za ispitivanje namirnica d.o.o." is prohibited, in the text of the declaration and for advertising purposes.

*) Non accredited activities. **) The data provided by customer.

Tag: **CIN-LAB-7.8/O-1** Edition 1 from January 3 2020.

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| | | | |
|---|--------|-------|----------------------------|
| -Methiocarb | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Methomyl | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Oxamyl | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Pirimicarb | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Propoxur | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| Triazines | | | |
| -Atrazine | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Cyanazine | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Prometon | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Propazine | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Simazine | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Terbuthylazine | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| Pyrethroids | | | |
| -Bifenthrin | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Fenvalerate (sum of isomers, including esfenvalerate) | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Permethrin (sum of isomers) | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -S-Bioallethrin | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| Organochlorine pesticides | | | |
| -Aldrin and Dieldrin (combined expressed as dieldrin) | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Chlordane (sum of cis- and trans-chlordane) | < 0,02 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -DDT (sum of p,p'-DDT, o,p'-DDT, p,p'-DDE, p,p'-DDD) | < 0,03 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Endosulfan (alpha-, beta- isomers and endosulfan-sulphate) | < 0,03 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Endrin | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Heptachlor (sum of Heptachlor and Heptachlor epoxide) | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Hexachlorobenzene (HCB) | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Hexachlorocyclohexane (HCH), alpha-isomer | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Hexachlorocyclohexane (HCH), beta-isomer | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Lindane (gamma-isomer of hexachlorocyclohexane (HCH)) | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| -Methoxychlor | < 0,01 | mg/kg | GC-MSD, SRPS EN 15662:2018 |
| Metals and metalloids | | | |
| Lead (Pb) | < 0,20 | mg/kg | GFAAS, IHM-03-AAS 01 |
| Cadmium (Cd) | < 0,10 | mg/kg | GFAAS, IHM-03-AAS 01 |
| Mercury (Hg) | < 0,10 | mg/kg | CVAAS, IHM-03-AAS 01 |
| Arsenic (As) | < 0,10 | mg/kg | HGAAS, IHM-03-AAS 01 |
| Mycotoxins | | | |
| Aflatoxin B1 and total (B1+B2+G1+G2) | < 4,0 | µg/kg | IHM-03-ELISA 01a |
| Aflatoxin B1 | < 2,0 | µg/kg | IHM-03-ELISA 01b |

Genetic analysis

| Parameter: | Result: | (unit) | Ref. value/ML: | Method: |
|--|---------------|--------|--|---------|
| <i>Determination of the presence of GMOs</i> | | | | |
| CaMV 35S promoter | n.d. (< 0,1%) | % | SRPS EN ISO 21571:2009 i A1:2013; SRPS EN ISO 21569:2008 i A1:2014 | |
| A.tum NOS terminator | n.d. (< 0,1%) | % | SRPS EN ISO 21571:2009 i A1:2013; SRPS EN ISO 21569:2008 i A1:2014 | |
| FMV 34S promoter | n.d. (< 0,1%) | % | SRPS EN ISO 21571:2009 i A1:2013; SRPS EN ISO 21569:2008 i A1:2014 | |
| <i>Content RoundUp Ready soybeans</i> | | | | |
| RoundUp Ready soybeans | n.d. (< 0,1%) | % | SRPS EN ISO 21571:2009 i A1:2013; SRPS EN ISO 21570:2009 i A1:2014 | |

Declaration of Conformity:

On the basis of the analytical results the sample IS IN COMPLIANCE with the Rulebook on the maximum levels of residues of plant protection products in food and feed and on food and feed for which maximum levels of plant protection products are set (Sl. glasnik RS no. 22/18, 90/18, 76/19 and 81/19)) and the Law on genetically modified organisms (Sl. Glasnik RS no. 41/09).

NOTE: Determination of heavy metals (Hg, As) were performed upon client's request.

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Microbiological analysis

| Parameter: | 1 | 2 | 3 | 4 | 5 | MAV | Result: | Method: |
|--|------|------|------|------|------|------------------------|--------------|--------------------------|
| Enterobacteriaceae (after incubation temperature 37°C) cfu/g | <10 | <10 | <10 | <10 | <10 | c=2, m=100, M=1000 | Satisfactory | SRPS EN ISO 21528-2:2017 |
| Sulphite reducing clostridia (incubation temp. 37°C) cfu/g | <10 | <10 | <10 | <10 | <10 | c=0, M=10 | Satisfactory | SRPS ISO 15213:2011 |
| Total plate count cfu/g | 2500 | 2900 | 2600 | 3100 | 2700 | c=5, m=10000, M=100000 | Satisfactory | SRPS EN ISO 4833-1:2014 |
| Clostridium perfringens cfu/g | <10 | <10 | <10 | <10 | <10 | c=1, m=100, M=1000 | Satisfactory | SRPS EN ISO 7937:2010 |
| Listeria monocytogenes 25g | 0 | 0 | 0 | 0 | 0 | c=0, m=0, M=0 | Satisfactory | SRPS EN ISO 11290-1:2017 |
| Salmonella spp. 25g | 0 | 0 | 0 | 0 | 0 | c=0, m=0, M=0 | Satisfactory | SRPS EN ISO 6579-1:2017 |
| Staphylococcus aureus cfu/g | <10 | <10 | <10 | <10 | <10 | c=0, M=10 | Satisfactory | SRPS EN ISO 6888-1:2009 |
| Escherichia coli cfu/g | <10 | <10 | <10 | <10 | <10 | c=0, M=10 | Satisfactory | SRPS ISO 16649-2:2008 |
| Mould and yeast (aw less than or equal to 0.95) cfu/g | <100 | <100 | <100 | <100 | <100 | c=2, m=1000, M=10000 | Satisfactory | SRPS ISO 21527-2:2011 |

MDV - internal standard

According to analytical results, the sample is IN COMPLIANCE with internal standard

Other analysis

IU-M-00502 Biopro 32 (Enzymatic active soft soybean powder)

| | | |
|---------------|--|--------------------------------|
| Parameter: | Appendix: | Institution: |
| Radioactivity | Examination report No. 2020/194; submitted 10/02/20 | Veterinarski fakultet, Beograd |

Head/Heads of Departments

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***** End of the Report *****