



CERTIFICATED OF ANALYSIS N° AF12223

Service Order : N° AF12223
Shipper : AGRO FERGI S.A.C.
Address : Av. Alfredo Benavides No. 1180 Of. 302 Miraflores
Service : Sampling and analysis
Product Declared : 6 MT PERUVIAN WHITE QUINOA GRAINS
3 MT PERUVIAN RED QUINOA GRAINS
2 MT PERUVIAN BLACK QUINOA GRAINS
3 MT PERUVIAN TRICOLOR QUINOA GRAINS
3 MT PERUVIAN WHITE QUINOA FLAKES
10 MT PERUVIAN CONVENTIONAL MACA POWDER
Place of Inspection : José Antonio de Sucre Mz I Lote II
Sta. Maria de Huachipa
B/L : HLCULI3230712630
Container No. : HLBU 2516222
Date of Sampling : 03rd August, 2023
Date of Analysis : 05th August, 2023

By order and account of AGRO FERGI S.A.C., we have carried out the survey for the product in reference, and our findings were the following:

1. VERIFICATION OF THE PRODUCT:

PRODUCT DENOMINATION	PRESENTATION	LABELS
PERUVIAN WHITE QUINOA GRAINS	The product was packed paper bags of 25 Kg. net each one	QUINOA BRANCA EM GRAOS 25 KG. LOTE N° AF0202263-ATTBR EMBALADO EM: JULHO 2023 VALIDADE DO PRODUCTO: JULHO 2024 PAIS DE ORIGEM, PROCEDENCIA: PERU
PERUVIAN RED QUINOA GRAINS	The product was packed paper bags of 25 Kg. net each one	QUINOA VERMELHO EM GRAOS 25 KG. LOTE N° AF0302263-BTTBR EMBALADO EM: JULHO 2023 VALIDADE DO PRODUCTO: JULHO 2024 PAIS DE ORIGEM, PROCEDENCIA: PERU
PERUVIAN BLACK QUINOA GRAINS	The product was packed paper bags of 25 Kg. net each one	QUINOA PRETO EM GRAOS 25 KG. LOTE N° AF0402263-CTTBR EMBALADO EM: JULHO 2023 VALIDADE DO PRODUCTO: JULHO 2024 PAIS DE ORIGEM, PROCEDENCIA: PERU
PERUVIAN TRICOLOR QUINOA GRAINS	The product was packed paper bags of 25 Kg. net each one	QUINOA MIX EM GRAOS 25 KG. LOTE N° AF4202263-DTTBR EMBALADO EM: JULHO 2023 VALIDADE DO PRODUCTO: JULHO 2024 PAIS DE ORIGEM, PROCEDENCIA: PERU
PERUVIAN WHITE QUINOA FLAKES	The product was packed paper bags of 25 Kg. net each one	QUINOA BRANCA EM FLOCOS 25 KG. LOTE N° AF0602263-ETTBR EMBALADO EM: JULHO 2023 VALIDADE DO PRODUCTO: JULHO 2024 PAIS DE ORIGEM, PROCEDENCIA: PERU



PERUVIAN CONVENTIONAL MACA POWDER	The product was packed on paper bags of 20 Kg. net each one	FARINHA DE MACA 20 KG. LOTE N° AF3011TTBR-24 EMBALADO EM: JULHO 2023 VALIDADE DO PRODUCTO: JULHO 2024 PAIS DE ORIGEM, PROCEDENCIA: PERU
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According to the instructions from the client, samples were taken from each lot and then were mixed.

2. SAMPLING:

White Quinoa Grains:

Sampling was carried out according to the NTP 2859-1 regulation, level II, J=2800; out of the total lot, 2800 bags were taken of white quinoa for sampling. The samples were taken in the processing place, from each bag, getting 06 samples of 500 gr. approx. each one. Find the details of the samples:

Number of seal	Destiny
00004127	Client
00004128 - 00004133	Laboratory
00004134 - 00004139	

Red Quinoa Grains:

Sampling was carried out according to the NTP 2859-1 regulation, level II, J=2800; out of the total lot, 2800 bags were taken of red quinoa for sampling. The samples were taken in the processing place, from each bag, getting 06 samples of 500 gr. approx. each one. Find the details of the samples:

Number of seal	Destiny
00004140	Client
00004141 - 00004146	Laboratory
00004147 - 00004152	

Black Quinoa Grains:

Sampling was carried out according to the NTP 2859-1 regulation, level II, J=2800; out of the total lot, 2800 bags were taken of black quinoa for sampling. The samples were taken in the processing place, from each bag, getting 06 samples of 500 gr. approx. each one. Find the details of the samples:

Number of seal	Destiny
00004153	Client
00004154 - 00004159	Laboratory
00004160 - 00004165	

Tricolor Quinoa Grains:

Sampling was carried out according to the NTP 2859-1 regulation, level II, J=2800; out of the total lot, 2800 bags were taken of tricolor quinoa for sampling. The samples were taken in the processing place, from each bag, getting 06 samples of 500 gr. approx. each one. Find the details of the samples:

Number of seal	Destiny
00004166	Client
00004167 - 00004172	Laboratory
00004173 - 00004178	



White Quinoa Flakes:

Sampling was carried out according to the NTP 2859-1 regulation, level II, J=2800; out of the total lot, 2800 bags were taken of white quinoa flakes powder for sampling. The samples were taken in the processing place, from each bag, getting 06 samples of 500 gr. approx. each one. Find the details of the samples:

Number of seal	Destiny
00004179	Client
00004180 - 00004185 00004186 - 00004191	Laboratory

Maca Powder:

Sampling was carried out according to the NTP 2859-1 regulation, level II, J=2800; out of the total lot, 2800 bags were taken of maca powder for sampling. The samples were taken in the processing place, from each bag, getting 06 samples of 500 gr. approx. each one. Find the details of the samples:

Number of seal	Destiny
00004192	Client
00004193 - 00004198 00004199 - 00004204	Laboratory

3. ANALYSIS:

3.1 Physical Chemical Analysis:

ANALYSIS	WHITE QUINOA	RED QUINOA	BLACK QUINOA	TRICOLOR QUINOA	WHITE QUINOA FLAKES
Moisture (%)	10.60 %	10.62 %	10.60 %	10.52 %	10.26 %

Metodology: MOISTURE: NTP 205.002

3.2 Physical Sensorial Analysis:

ANALYSIS	WHITE QUINOA RESULTS	RED QUINOA RESULTS	BLACK QUINOA RESULTS	TRICOLOR QUINOA RESULTS	WHITE QUINOA FLAKES RESULTS
Other variety (%)	0,00	0.00	0.00	0.00	0.00
Foreign matters (%)	0,02	0.02	0.02	0.02	0.01
Purity	99,98 %	99.98 %	99.98 %	99.98 %	99.99 %

Physical Sensorial Analysis: N.T.P. 205.029:1982

(*) By simple sensorial inspection.

3.3 Microbiologic Analysis:

According to the instructions from the client, samples were taken from each lot and then were mixed for the analysis.

ANALYSIS	COMPOSITE (W+R+B+T) QUINOAS GRAINS RESULTS	WHITE QUINOA FLAKES RESULTS
Microorganismos Aerobios Mesófilos (ufc/g)	10 x 10 ²	10 x 10 ²
Bacillus Cereus (ufc/g)	< 10	< 10
Coliformes Totales (NMP/g)	< 3	< 3
Escherichia Coli (NMP/g)	< 3	< 3
Salmonella (Detección /25g)	Absence	Absence
Arsénico (mg/Kg)	< 0.04	< 0.04
Plomo (mg/Kg)	<0.05	<0.05
Cadmio (mg/Kg)	<0.01	<0.01
Arena	0.00%	0.00%
Acaros Muertos	0.00%	0.00%

METHODOLOGY USED:

Mesófilos ICMSF 2da Edición. Pág.120-124. Traducción Versión Original 1978 Reimpresión 2000 (Ed. Acribia) 1983. Microorganismos de los Alimentos 1.Enumeración de microorganismos mesófilos: métodos de recuento en placa. Método 1.
Bacillus cereus ICMSF 2da Edición. 1983. Pág 285-286. Traducción Versión Original 1978. Reimpresión 2000 (Ed. Acribia). Microorganismos de los Alimentos 1. Bacillus cereus. Recuento de B. cereus.
Coliformes Totales ICMSF 2da. edición. Pág. 132-134. 1983. Traducción Versión Original 1978. Reimpresión 2000 (Ed. Acribia). Microorganismos de los Alimentos 1.Recuento de Coliformes: Técnica del número más probable (NMP) Método 1.
Escherichia coli ICMSF . 2da. edición. Pág. 139-142. 1983. Traducción Versión Original 1978. Reimpresión 2000 (Ed. Acribia). Microorganismos de los Alimentos 1. Pruebas de Identificación de Organismos Coliformes: IMViC.
Salmonella ISO 6579: 2002/ Cor 1 : 2004 . Fourth Edition. Microbiology of food and animal feeding stuffs - Horizontal method for the detection of Salmonella spp.

3.4 Aflatoxin Analysis:

ANALYSIS	COMPOSITE QUINOAS RESULTS			
Aflatoxin (ug/kg)	B1	B2	G1	G2
	<1,0	< 1,0	< 1,0	< 1,0
Ochratoxin A (ug/kg)	< 1,0			

ACCORDING TO ANALYSIS BY TLR INTERNATIONAL LABORATORIES TEST REPORT NO. 676845

Methodology: Aflatoxin / Ochratoxin A HPLC MS/MS Determination of mycotoxins



ANALYSIS	WHITE QUINOA FLAKES RESULTS			
	B1	B2	G1	G2
Aflatoxin (ug/kg)	<1,0	< 1,0	< 1,0	< 1,0
Ochratoxin A (ug/kg)	< 1,0			

ACCORDING TO ANALYSIS BY TLR INTERNATIONAL LABORATORIES TEST REPORT NO. 676845

Methodology: Aflatoxin / Ochratoxin A HPLC MS/MS Determination of mycotoxins

FARINHA DE MACA – RESULTS OF ANALYSIS:

Physicochemical Analysis	Results	Method
% Humidity	<7%	
Mesh	60 Mesh	
Microbiological Analysis		
Total Aerobic Plate Count (CFU/gr.)	46000	FDA/BAM
Coliforms (CFU/gr.)	<10 Est	FDA/BAM
E. Coli (NMP/gr.)	<10 Est	FDA/BAM
Salmonella (in 25 gr.)	Absent	FDA/BAM
Mold (CFU/g)	<10 Est	ICMSF
Yeast (CFU/g)	<10 Est	ICMSF
Staph. Aureus in 25 gr.	<10 Est	FDA/BAM
Bacillus (CFU/gr.)	<100	FDA/BAM
Heavy Metals Analysis		
Cadmium (mg/Kg.)	0.24	ICP-MS
Arsenic (mg/Kg.)	0.251	ICP-MS
Mercury (mg/Kg.)	<0.005	ICP-MS
Physical Characteristics		
Appearance / Color	Homogeneous powder	
Taste / Smell	Free lumps, between beige and light beige.	
Impurities	Free of any foreign raw material	
Certifications	Non- GMO, Gluten Free	

THE ABOVE REPORTED REFLECTS OUR FINDINGS AT THE TIME, DATE AND PLACE OF INSPECTION ONLY.

Issued in Lima-Peru, August 05th, 2023

AGRO FERGI S.A.C.

ING. JORGE FERNÁNDEZ GIL
General Manager