



## CERTIFICATED OF ANALYSIS N° AF5323

<b>Service Order</b>	: N° AF5323
<b>Shipper</b>	: AGRO FERGI S.A.C.
<b>Address</b>	: Av. Alfredo Benavides No. 1180 OF. 302 Miraflores
<b>Service</b>	: Sampling and analysis
<b>Product Declared</b>	: 6 MT PERUVIAN WHITE QUINOA GRAINS 3 MT PERUVIAN RED QUINOA GRAINS 2 MT PERUVIAN BLACK QUINOA GRAINS 2 MT PERUVIAN TRICOLOR QUINOA GRAINS 3 MT PERUVIAN AMARANTH FLAKES 10 MT PERUVIAN CONVENTIONAL MACA POWDER
<b>Place of Inspection</b>	: José Antonio de Sucre Mz I Lote II Sta. Maria de Huachipa
<b>B/L</b>	: PER-2303976
<b>Container No.</b>	: FANU1319597
<b>Date of Sampling</b>	: 22 <sup>th</sup> March, 2023
<b>Date of Analysis</b>	: 24 <sup>th</sup> March, 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	<b>QUINOA BRANCA EM GRAOS 25 KG.</b> LOTE N°AF0202233-ATTBR EMBALADO EM: MARCO 2023 VALIDADE DO PRODUCTO: MARCO 2024 PAIS DE ORIGEM, PROCEDENCIA: PERU
PERUVIAN RED QUINOA GRAINS	The product was packed paper bags of 25 Kg. net each one	<b>QUINOA VERMELHO EM GRAOS 25 KG.</b> LOTE N°AF0302233-BTTBR EMBALADO EM: MARCO 2023 VALIDADE DO PRODUCTO: MARCO 2024 PAIS DE ORIGEM, PROCEDENCIA: PERU
PERUVIAN BLACK QUINOA GRAINS	The product was packed paper bags of 25 Kg. net each one	<b>QUINOA PRETO EM GRAOS 25 KG.</b> LOTE N° AF0402233-CTTBR EMBALADO EM: MARCO 2023 VALIDADE DO PRODUCTO: MARCO 2024 PAIS DE ORIGEM, PROCEDENCIA: PERU
PERUVIAN TRICOLOR QUINOA GRAINS	The product was packed paper bags of 25 Kg. net each one	<b>QUINOA MIX EM GRAOS 25 KG.</b> LOTE N° AF4202233-DTTBR EMBALADO EM: MARCO 2023 VALIDADE DO PRODUCTO: MARCO 2024 PAIS DE ORIGEM, PROCEDENCIA: PERU
PERUVIAN AMARANTH FLAKES	The product was packed paper bags of 25 Kg. net each one	<b>AMARANTO EM FLOCOS 25 KG.</b> LOTE N° AF7502233-ETTBR EMBALADO EM: MARCO 2023 VALIDADE DO PRODUCTO: MARCO 2024 PAIS DE ORIGEM, PROCEDENCIA: PERU





PERUVIAN CONVENTIONAL MACA POWDER	The product was packed on paper bags of 20 Kg. net each one	<b>FARINHA DE MACA</b> <b>20 KG.</b> LOTE N° AF3011TTBR-20 EMBALADO EM: MARCO 2023 VALIDADE DO PRODUCTO: MARCO 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
00002603	Client
00002604 - 00002609 00002610 - 00002615	Laboratory

### 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
00002616	Client
00002617 - 00002622 00002623 - 00002628	Laboratory

### 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
00002629	Client
00002630 - 00002635 00002636 - 00002641	Laboratory

### 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
00002642	Client
00002643 - 00002648 00002649 - 00002654	Laboratory





**Amaranth 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 amaranth flakes 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
00002655	Client
00002656 - 00002661	Laboratory
00002662 - 00002667	

**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
00002668	Client
00002669 - 00002674	Laboratory
00002675 - 00002680	

**3. ANALYSIS:**

**3.1 Physical Chemical Analysis:**

ANALYSIS	WHITE QUINOA	RED QUINOA	BLACK QUINOA	TRICOLOR QUINOA	AMARANTH
Moisture (%)	10.53 %	10.64 %	10.60 %	10.63 %	10.0 %

Metodology:  
MOISTURE: NTP 205.002

**3.2 Physical Sensorial Analysis:**

ANALYSIS	WHITE QUINOA RESULTS	RED QUINOA RESULTS	BLACK QUINOA RESULTS	TRICOLOR QUINOA RESULTS	AMARANTH FLAKES RESULTS
Other variety (%)	0,00	0.00	0,00	0.00	0.00
Foreign matters (%)	0,01	0.02	0,03	0.02	0.01
Purity	99,99 %	99.98 %	99,97 %	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	AMARANTH GRAINS RESULTS
Microorganismos Aerobios Mesófilos (ufc/g)	10 x 10 <sup>2</sup>	10 x 10 <sup>2</sup>
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. Acibia) 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 Acibia). 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 Acibia). 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 Acibia). 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			
	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

ANALYSIS	AMARANTH 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





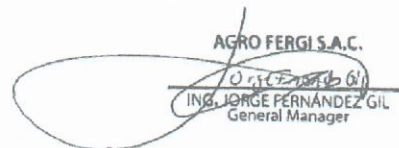
**FARINHA DE MACA – RESULTS OF ANALYSIS:**

Physicochemical Analysis	Results	Method
% Humidity	<7%	
Mesh	60 Mesh	
<b>Microbiological Analysis</b>		
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
<b>Heavy Metals Analysis</b>		
Cadmiun (mg/Kg.)	0.24	ICP-MS
Arsenic (mg/Kg.)	0.251	ICP-MS
Mercury (mg/Kg.)	<0.005	ICP-MS
<b>Physical Characteristics</b>		
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, March 24<sup>th</sup>, 2023

online

AGRO FERGI S.A.C.  
  
ING. JORGE FERNÁNDEZ GIL  
General Manager