**TECHNICAL CERTIFICATE Nº 248/2019**

Chile, July 20th of 2019

Avenatop S.A., Rut 76.035.224-1, located in Los Pehuenches S/N, Freire, Region La Araucanía-Chile, Certificate through the Quality Control Department, the following:

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| **Batch Identification Analyzed** | | | | |
| **Product:** | Dehulled oat grain | **Vessel:** | | Cochrane 921W (AX1) |
| **Lot Number:** | PEP71787 | **Bags per-Lot:** | | 5,520 |
| **Production date:** | 28,29-06-2019/01,02,03- 07-2019 | **Best Before:** | | 28,29-03-2019/01,02,03-04-2019 |
| **Finished Process Code:** | 2019-S1S2-T1-0703 |  |  | |
| **Container Number:** | MOAU581550-8/ MOAU678101-7/ NYKU360292-6/ BEAU259116-8/ TCKU181276-1/ NYKU367484-4/ NYKU978733-9/ TEMU061992-1/ TCLU690657-8/ FCGU225377-8/ TEMU543178-9/ SEGU286704-7. | | | |

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| **Product**  **Description**  **Allergenic material**  **Heavy metals** | : Dehulled oat grain  : Oat grain, cleaned, dehulled and stabilized.  : This product may contain gluten traces, which can cause allergic reactions.  : The content of heavy metals is below the limits allowed by the Codex Alimentarius. |
| **Organoleptics Characteristics** |  |
| **Color** | : Light Brown. |
| **Odors and flavor** | : Usual of toasted oats free of strange odors or flavors. |
| **Appearance** | : Soft border and surface. |
| **Best before** | : From its production date and under proper packing and storage conditions (Dry and cold place), its shelf life is 9 months. |
| **Storage conditions** | : Temperature between 18 to 25 degrees and 60% of relative humidity. Environment free of biological or chemical contamination. |
| **Packing material** | : Thermo laminated polypropylene bags |

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| **Chemical Physical Parameters (granulometría)** | | | | | | |
| **Test** | **Results** | **Specification** | **India**  **Method** | **India**  **Freq** | **Avenatop**  **Method** | **Avenatop**  **Freq** |
| **Variety :** | Supernova | As per Specification List | ----- | ---- | N/A | Every Lot |
| **Appearance** | Normal | Comparable to Reference | Sensory | Every Lot | Sensory | Every Lot |
| **Aroma:** | Normal | Typical KDHO Aroma, free from objectionable odours | Sensory | Every Lot | Sensory | Every Lot |
| **Moisture:** | 9.03 | 10.0% max. | AOAC 925.10/  halogen balance | Every Lot | AOAC 925.10  halogen balance | Every Lot |
| **Tyrosinase Activity:** | Negative | Negative | Catechol Oxidation | Every Lot | Catechol Oxidation | Every Lot |
| **Lipase Activity:** | Negative | Negative | Catechol Oxidation | Every Lot | Catechol Oxidation | Every Lot |
| **Sieve Analysis:**  **Thru 1.7mm screen (USBS N° 12.)** | 0.79 | 3.0% max | IND/SIEVET SSTM 27 | Every Lot | 100 gm Pick  Test | Every Lot |
| **Unhulled Groats:** | 3 | 5 max | 100 gm Pick  Test | Every Lot | 100 gm Pick  Test | Every Lot |
| **Husk:** | 0 | 5 max | 100 gm Pick  Test | Every Lot | 100 gm Pick  Test | Every Lot |
| **Slivers:** | 2 | 5 max | 100 gm Pick  Test | Every Lot | 100 gm Pick  Test | Every Lot |
| **Burt Groats:** | 0 | 3 max | 100 gm Pick  Test | Every Lot | 100 gm Pick  Test | Every Lot |
| **Discoloured Groats:** | N/A | 30 max | 100 gm Pick  Test | Every Lot | 100 gm Pick  Test | Every Lot |
| **Forein Grain (Total):** | 0 | 20 max  (wheat, Barley & Other) | 100 gm Pick  Test | Every Lot | 100 gm Pick  Test | Every Lot |
| **Weed Seeds:** | 0 | 1 max | 100 gm Pick  Test | Every Lot | 100 gm Pick  Test | Every Lot |
| **Foreign Material:** | 0 | Free from any objectionable &  hazardous foreign material e.g  wood & stones | 100 gm Pick  Test | Every Lot | 100 gm Pick  Test | Every Lot |

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| **Microbiologycal Parameters (parámetros microbiológicos)** | | | | | | |
| **Test** | **Results** | **Specification** | **India**  **Method** | **India**  **Freq** | **Avenatop**  **Method** | **Avenatop**  **Freq** |
| **Standard Plate Count:** | <10 | < 10000CFU/gm | AOAC 990.12 | Quarterly | AOAC 2015.13 | Quarterly |
| **Yeast & Mould:** | <10 | < 500 CFU/gm | AOAC 995.21 | Quarterly | AOAC 2014.05 | Quarterly |
| ***E. coli* :** | <10 | < 3 CFU/gm | AOAC 991.14 | Quarterly | AOAC 991.14 | Quarterly |
| ***Salmonella sp:*** | Absent | Absent/ 25 gm | AOAC 967.25 | Quarterly | ISO 6579 | Quarterly |
| **Coliform:** | <1.0 | < 10 MPN/gm | AOAC 991.14 | Quarterly | AOAC 991.14 | Quarterly |
| **Aflatoxin:** | 3.6 | 30 mcg/ 1 Kg | AOAC 975.36  AOAC 999.07 | Quarterly | USDA – GIPSA 2012-021 | Once year |

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| **Chemical Parameters** | | | | | | |
| **Test** | **Results** | **Specification** | **India**  **Method** | **India**  **Freq** | **Avenatop**  **Method** | **Avenatop**  **Freq** |
| **Nitrogen:** | 2.12 | 1.8% Min D.B. | AOAC 920.87 | Every Lot | N/A | Monthly |
| **Protein (Dry Basis):** | 12.31 | 11.25% Min D.B. | AOAC 920.87 | Every Lot | ISP. PART-711.02-173 | Monthly |
| **Total Ash:** | 1.46 | 2.0 % Max D.B. | OAC 923.03 | Every Lot | AOAC 938.08  AOAC 940.26 | Monthly |
| **Acid Insoluble Ash:** | 0.77 | 0.1 % Max D.B. | AOAC 923.03 | Every Lot | AOAC 938.08, 940.26,945.46, 925.51, 930.30 | Quarterly |
| **Alcoholic Acidity:** | - | See Notes | MOMC&C\*/8.6 | Every Lot | N/A | Quarterly |
| **Crude Fibre:** | 2.63 | 2.0 % Max D.B. | AOAC 962.09 | Every Lot | AOAC 962.09 | Monthly |
| **Beta Glucan:** | 3.2 | 3.6% Min | AOAC 995.16 | Twice year | AOAC 995.16 | Quarterly |
| **Total Dietary Fibre:** | 7.23 | 10.0% Min | AOAC 991.43 | Monthly | AOAC 2011.25 | Monthly |
| **Total Fat :** | 8.16 | 10.5% Max | AOAC 922.06 | Twice year | AOAC 2003.06 | Monthly |
| **Saturated Fat:** | 1.28 | 2.0% Max | AOAC 996.06 | Twice year | AOAC CE 1f-96 | Monthly |
| **Cholesterol:** | Not detected | 3.0 mg/ 100gm Max | AOAC 994.10 | Twice year | AOAC 994.10 | Monthly |
| **Sugars:** | Not detected | 2.0% Max | AOAC 982.14 | Twice year | (\*) | Monthly |
| **Sodium:** | 3.98 | 20 mg/100 gm Max | AOAC 976.25  AOAC 2011.14 | Quarterly | AOAC 985.35 | Twice year |
| **Iron:** | 2.71 | 2.0 mg/100 gm Min | AOAC 999.11  AOAC 2011.14 | Quarterly | AOAC 985.35 | Twice year |
| **Magnesium:** | 98.15 | 85.0 mg /100 gm Min | AOAC 985.35  AOAC 2011.14 | Quarterly | AOAC 985.35 | Twice year |
| **Zinc:** | 2.3 | 1.5 mg / 100 gm Min | AOAC 999.11  AOAC 2011.14 | Quarterly | AOAC 985.35 | Twice year |
| **Uric Acid:** | - | 100 mcg/ 1 Kg | AOAC OMA  969.46 | Quarterly | N/A | N/A |

Notes: (1) Alcohol Acidity (with 90% alcohol)- shall be equivalent to not more than [8.0] ml NaOh per 100gm of dried substance.

(\*) Based in: James Ceirwyn S. Analytical Chemestry of Foods “DNS colorimetric determination of available carbohydrates in foods”

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| **Francisco Martínez.** | **Karen Poblete B.** |
| **Manager of Operations** | **Quality Manager** |
| **Avenatop S.A.** | **Agrotop Company** |