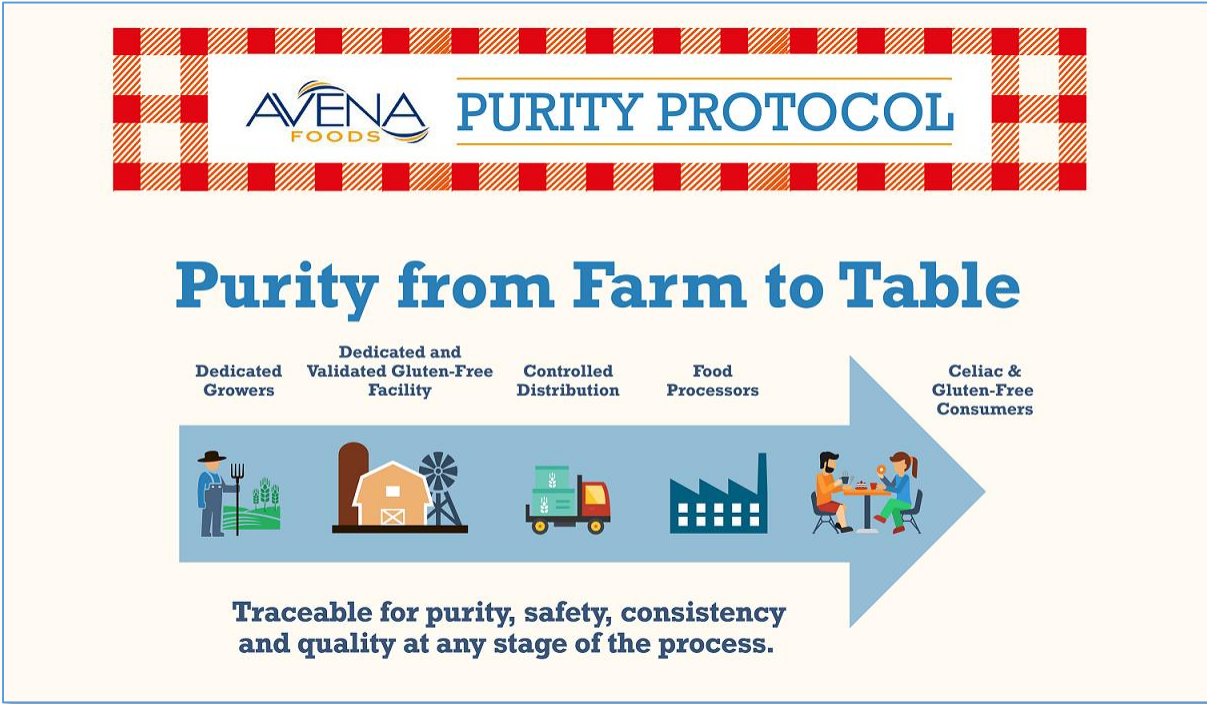


Avena Purity Protocol



The Avena Purity Protocol is a unique “Farm to Table” industry benchmark process consisting of safety, purity and traceability protocols that achieves consistent, superior quality certified gluten-free oats.

The Avena Purity Protocol was developed by Avena Foods in 2008 and is firmly endorsed by the Canadian Celiac Association (CCA). The protocol specifies how oats can be grown and handled to prevent any cross-contact with wheat or other gluten-containing grains. The main challenge with oats is that they’re normally grown, harvested, transported and stored alongside gluten-containing grains. The idea of the Avena Purity Protocol is to “Start Clean and Stay Clean.” The seed must be pure to ensure no wheat or barley germinates to contaminate the field. Year-to-year rotation includes other gluten-free crops.



Avena Purity Protocol



The Four Essential Process Elements of Avena Purity Protocol

1. Dedicated Growers



The Avena Purity Protocol begins with a conversation between Avena Foods and a grower that usually started several years prior. To ensure all gluten-containing grains are virtually eliminated from the fields, growers are required to have a three-year crop rotation. In addition, a three-meter isolation strip is mandatory for fields growing Avena Oats and that all seeds used are pedigreed seed supported by a signed copy of the seed declaration.

Avena Foods conducts field inspections annually to ensure fields are not showing signs of gluten-containing crops. And to ensure crop identity is preserved, one land location a lot is practiced and mixing of lots together is prohibited. Once the crop is mature and harvested, a 2Kg pre-cleaned harvest sample is sent to both Avena Foods and to a third-party lab for analysis. Samples are visually inspected to determine purity of the field.

Once the grower has cleaned the grain, another 2Kg are sent to a third-party lab for purity checks and to Avena Foods for another purity screen.

Once the grain has been visually inspected, deliveries are scheduled with the growers. The transport trucks are cleaned prior to hauling Avena Oats with the paperwork attached to the grain receipt.

2. Dedicated and Accredited Gluten-Free Facility



At delivery, the Avena Grain Receiver pulls a belly sample from the truck to visually check for purity. The grain is off-loaded into a receiving bin and as it off-loads, an automatic sampler pulls samples to create a composite. A thorough visual inspection is done on each kernel in a 1Kg sample. A tolerance of 1 gluten containing kernel per Kg. If one wheat or barley is found at receiving, another Kg is inspected. If at any

time 2 kernels are found in a single Kg, the load is rejected. From the composite sample, 100g of raw grain are ground to a powder and a quick gluten test is performed using the RIDA QUICK Gliadin R7003 test kit. The grain is now able to run through production.



Avena Purity Protocol



The Avena Foods milling site is a dedicated, certified gluten-free facility. It is certified by the Gluten Intolerance Group (GIG) of North America, which is verified and validated by the Gluten-Free Certification Organization (GFCO). GFCO inspects Avena’s products and manufacturing facility to ensure the program standards are never compromised and that the gluten level is always less than 10 parts per million (ppm).

As finished products are packed into 1Tonne super sacks, composite samples are collected for Quality Assurance (QA). From the composite sample, 100g is ground to a powder and tested for gluten by R-Biopharm trained technicians. The R5-ELISA RIDASCREEN Gliadin R7001 test method is used and more than 90 percent of Avena’s products tested exceed GFCO standards at below 5ppm.

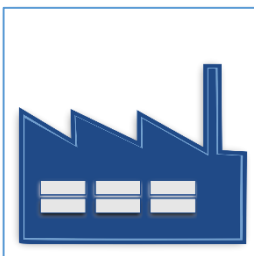
After all QA analyses are completed, the QA Technician will allocate totes for each customer’s purchase order.

3. Controlled Distribution



To ensure products are not contaminated with gluten during transportation, new pallets are used, trailers are ensured to be free of gaps and inspected prior to final sealing of the load to preserve the integrity of the product during transportation.

4. Traceability



Each shipment is uniquely traceable back to Avena’s individual growers and their fields.

Milled lot sizes are partitioned to allow for maximum traceability throughout the process.



Avena Purity Protocol



Optical and Mechanical Sorting

Health Canada requires oats in gluten-free products to contain no more than 20 ppm, but does not specify what method food producers should use to should meet their standard. As such, some food manufacturers use optical and mechanical sorting, a technology used to separate grain according to color, size and shape.

Some however, some doubt the effectiveness of optical and mechanical sorting in reliably distinguishing oat grains from wheat and barley, which are difficult even for the human eye to distinguish. It also fails to remove contaminating dust. The CCA professional advisory council states it “is not aware of any published North American data that demonstrates the levels of gluten in oats that have been cleaned using optical and mechanical sorting.” However, the council is not discounting that it might work, but consumer trust requires better evidence.

Comparison Table

GFCO Criteria	Avena Purity Protocol	Optical and Mechanical Sorting
<ul style="list-style-type: none"> All oats used certified to at least 10ppm or less 	All oats used are certified to 5ppm 98% of the time, surpassing GFCO and Health Canada standards.	Not all oats used are certified at 10ppm; PPM level varies from 10ppm to more than 20ppm
<ul style="list-style-type: none"> Pure or pedigree planting seed stock is only used 	Yes	No
<ul style="list-style-type: none"> Pre-planting field history audits 	Yes	No
<ul style="list-style-type: none"> All equipment inspected and approved for gluten-free production 	Yes	Varies/ Undisclosed
<ul style="list-style-type: none"> Each field inspected prior to harvest by the company and 3rd Party 	Yes	No
<ul style="list-style-type: none"> Harvested seed only stored in dedicated gluten-free grain storage 	Yes	Varies/ Undisclosed
<ul style="list-style-type: none"> Processed in a dedicated gluten-free facility 	Yes	Varies/ Undisclosed
<ul style="list-style-type: none"> 3rd Party audits showing the final product is certified gluten-free 	Yes	No



• No blending of samples for an average set of tests	Yes	Varies/ Undisclosed
• Test Method	R5-Elisa Ridascreen Gliadin R7001	Varies/ Undisclosed
• Conducts representative and systematic sampling	Yes	No
• Inspected and Quality Controlled Distribution on Inbound and Outbound transports	Yes	Varies/ Undisclosed

Avena Foods is committed to its customers and the celiac and gluten-sensitive community the continuous improvement of all products it produces and strives to maintain their confidence. Hence, Avena Foods is continually improving its procedures as it grows and adapts to the ever changing requirements set forth by its food safety system, Food Safety System Certification (FSSC) 22000.

