


Technical Description

TECHNICAL DESCRIPTION	
Product	Pure maple sap harvested from sugar maple trees as they naturally flow in spring. Sterilized using UHT processing.
Advantages	100% natural and authentic product, harvested exclusively from Canadian maple groves. No preservatives added. Nothing has been added or removed. Renewable source. The presence of the maple industry protects Quebec and Canadian forests.
Certifications	NAPSI-certified (Natural, Authentic, Pure, Sterile and Integral). Pure maple sap. The NAPSI logo has been submitted for certification mark registration in Canada, the United States, France, the United Kingdom and Japan. The logo may only be used by businesses that sign a licensing agreement according to the terms established by the Federation of Quebec Maple Syrup Producers, and under the condition of adherence to the certification standard and the design standards.
	
Origin	Canada.
Declaration in the list of ingredients	Maple water or maple sap.
Code	Provided by the processor.
GMO	None.
Pesticides	No pesticide residue. Maple production does not require the use of products such as antibiotics, antiparasitics, pesticides, herbicides, plant-growth regulators, etc. As a result, the risk of finding traces of these substances is practically zero, according to the recommendations in effect in Quebec.
Allergens	None added at the maple grove.

COMPOSITION	
Ingredients	Maple water (maple sap).
Brix	2.0 to 3.0 °Bx
pH	6.60 to 7.50

SPECIFICATIONS	
Organoleptic properties	Clear and translucent appearance, like pure water, sometimes with a very slight amber tint. Slightly sweet with a subtle maple flavour. Free of foreign flavours or odours.
Sweetness	0.04 (sucrose = 1) 0.06 (glucose = 1)

DETAILED PHYSICO-CHEMICAL ANALYSES					
	Median	Number of samples	Minimum	Maximum	Method
Total solids (%)	2.56	18	1.70	2.97	AOAC, 100 °C
Water activity	0.967	6	0.960	0.973	AW meter
Dextrose equivalent	BQL*	6	BQL*	BQL*	Titrimetry
Invert sugar (%)	BQL*		BQL*	BQL*	Calculations
Transmittance at 560 nm (%)	98.6	6	97.4	99.7	Spectrophotometer
Density (g/ml)					Densimeter
20-21 °C	1.0085	6	1.0060	1.0110	
4 °C	1.0078	6	1.0050	1.0095	
Viscosity (cP)					Brookfield viscometer
20-21 °C	0.82	6	0.81	0.84	SC4-18, 100 rpm
4 °C	0.80	6	0.78	0.81	SC4-18, 100 rpm

*BQL = Below Quantifiable Limit

MICROBIOLOGICAL ANALYSES AFTER 18 MONTHS COMMERCIAL STERILITY		
MICROBIOLOGY	Result	Method
Yeasts (CFU/ml)	<1	MFHPB-22
Moulds (CFU/ml)	<1	MFHPB-22
Aerobic spore-forming bacteria (CFU/ml)	<1	MFLP-44
Aerobic mesophilic bacteria (CFU/ml)	<1	MFHPB-18
Anaerobic spore-forming bacteria (CFU/ml)	<1	MFLP-44
Anaerobic mesophilic bacteria (CFU/ml)	<1	MFHPB-18
Pseudomonas aeruginosa (CFU/ml)	<1	ILMA-017
Bacillus cereus (CFU/ml)	<2.5	MFLP-42
Clostridium spp (CFU/ml)	Not detected	MFHPB-23

Nutritional Values

NUTRIENTS	Typical values for 100 ml (100 g)				
	Median	Number of observations	Minimum	Maximum	Method
CARBOHYDRATES					
Sucrose (mg)	2261.31	421	537.54	3365.65	HPLC-RI
Glucose (mg)	5.60	421	BQL*	73.57	HPLC-RI
Fructose (mg)	4.83	421	BQL*	49.92	HPLC-RI
Complex carbohydrates (mg)	45.28	421	BQL*	142.43	HPLC-RI
Total carbohydrates	2.36 g				

MINERALS	Typical values for 100 ml (100 g)				
	Median	Number of observations	Minimum	Maximum	Method
Aluminum (mg)	1.12	421	BQL*	3.82	ICP-MS
Calcium (mg)	4.10	421	0.36	22.28	ICP-MS
Copper (mg)	0.07	421	BQL*	5.10	ICP-MS
Iron (mg)	0.20	420	BQL*	3.33	ICP-MS
Magnesium (mg)	0.70	421	0.08	5.23	ICP-MS
Manganese (mg)	0.19	421	BQL*	2.16	ICP-MS
Potassium (mg)	5.25	421	0.34	28.46	ICP-MS
Sodium (mg)	3.54	421	0.17	17.30	ICP-MS
Zinc (mg)	0.09	420	BQL*	1.69	ICP-MS
Total minerals	15.26 mg				

VITAMINS	Not detected				HPLC-DAD
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AMINO ACIDS	Typical values for 100 ml (100 g)				
	Median	Number of observations	Minimum	Maximum	Method
Arginine + Threonine (mg)	0.83	331	0.03	5.25	HPLC-FL
Leucine (mg)	0.00461	330	BQL*	2.57	HPLC-FL
Proline (mg)	0.59	331	BQL*	4.42	HPLC-FL
Histidine (mg)	0.02	324	BQL*	0.10	HPLC-FL
Total amino acids	1.44 mg				

*BQL = Below Quantifiable Limit

Nutritional Values (cont'd.)

NUTRIENTS	Typical values for 100 ml (100 g)				
	Median	Number of observations	Minimum	Maximum	Method
ORGANIC ACIDS					
Malic (mg)	21.149	400	1.363	44.036	HPLC-UV
Fumaric (mg)	0.149	400	0.011	1.068	HPLC-UV
Acetic (mg)	0.860	400	BQL*	2.165	HPLC-UV
Lactic (mg)	BQL*	329	BQL*	1.238	HPLC-UV
Gluconic (mg)	0.225	313	BQL*	9.399	HPLC-UV
Pyruvic (mg)	0.140	400	0.007	3.158	HPLC-UV
Succinic (mg)	0.827	400	BQL*	2.638	HPLC-UV
Total organic acids	23.35 mg				
ANTIOXIDANT					
Antioxidant capacity	12 µmol TE	3	5.4	15.6	ORAC
POLYPHENOLS					
More than 25 phenolic compounds	0.37 mg	332	0.14	1.11	Folin-Ciocalteu
PHYTOHORMONES					
Abcisic acid ABA (µg)	0.30	87	0.09	1.28	UPLC/ESI-MS/MS
Phaseic acid PA (µg)	2.67	87	0.87	10.09	UPLC/ESI-MS/MS
ABA metabolites (µg)	1.37	87	0.31	5.43	UPLC/ESI-MS/MS
Total phytohormones	4.34 µg				
ENERGY VALUE					
	8.4 kcal				calculations

*BQL = Below Quantifiable Limit

Nutrition Facts Tables

GENERAL INFORMATION

Nutrition Facts tables may change depending on use:

- Industry: Nutrition Facts table for 100 g
- Packager: Nutrition Facts tables for 250 ml, 330 ml and 500 ml (if intended for consumers)

This table is presented for information purposes only.

Format must be confirmed for your packaging. Consult with a specialist.

MAPLE WATER 100, 250, 330 AND 500 ML

Nutrition Facts Valeur nutritive	
Per 100 g (100 ml) / par 100 g (100 ml)	
Amount Teneur	% Daily Value % valeur quotidienne
Calories / Calories 10	
Fat / Lipides 0 g	0 %
Saturated / saturés 0 g	0 %
+ Trans / trans 0 g	
Cholesterol / Cholestérol 0 mg	
Sodium / Sodium 15 mg	1 %
Carbohydrate / Glucides 2 g	1 %
Fibre / Fibres 0 g	0 %
Sugars / Sucres 2 g	
Protein / Protéines 0 g	
Vitamin A / Vitamine A	0 %
Vitamin C / Vitamine C	0 %
Calcium / Calcium	0 %
Iron / Fer	0 %

Nutrition Facts Valeur nutritive	
Per 250 ml / par 250 ml	
Amount Teneur	% Daily Value % valeur quotidienne
Calories / Calories 20	
Fat / Lipides 0 g	0 %
Saturated / saturés 0 g	0 %
+ Trans / trans 0 g	
Cholesterol / Cholestérol 0 mg	
Sodium / Sodium 45 mg	2 %
Carbohydrate / Glucides 5 g	2 %
Fibre / Fibres 0 g	0 %
Sugars / Sucres 5 g	
Protein / Protéines 0 g	
Vitamin A / Vitamine A	0 %
Vitamin C / Vitamine C	0 %
Calcium / Calcium	0 %
Iron / Fer	0 %

Nutrition Facts Valeur nutritive	
Per 330 ml / par 330 ml	
Amount Teneur	% Daily Value % valeur quotidienne
Calories / Calories 30	
Fat / Lipides 0 g	0 %
Saturated / saturés 0 g	0 %
+ Trans / trans 0 g	
Cholesterol / Cholestérol 0 mg	
Sodium / Sodium 55 mg	2 %
Carbohydrate / Glucides 7 g	2 %
Fibre / Fibres 0 g	0 %
Sugars / Sucres 7 g	
Protein / Protéines 0 g	
Vitamin A / Vitamine A	0 %
Vitamin C / Vitamine C	0 %
Calcium / Calcium	0 %
Iron / Fer	0 %

Nutrition Facts Valeur nutritive	
Per 500 ml / par 500 ml	
Amount Teneur	% Daily Value % valeur quotidienne
Calories / Calories 40	
Fat / Lipides 0 g	0 %
Saturated / saturés 0 g	0 %
+ Trans / trans 0 g	
Cholesterol / Cholestérol 0 mg	
Sodium / Sodium 85 mg	4 %
Carbohydrate / Glucides 10 g	3 %
Fibre / Fibres 0 g	0 %
Sugars / Sucres 10 g	
Protein / Protéines 0 g	
Vitamin A / Vitamine A	0 %
Vitamin C / Vitamine C	0 %
Calcium / Calcium	0 %
Iron / Fer	0 %

Potential Claims in Canada for Pure Maple Water

CLAIMS REGARDING NUTRITIONAL VALUE

A. VITAMINS AND MINERALS
No claim allowed.

B. ENERGY
No claim allowed.

C. POLYPHENOLS
Only quantitative claims are allowed (as in the table below), and only outside the Nutrition Facts table. Note that using words such as “contains” is not allowed.

Packaging format	Quantitative claims
250 ml	0.93 mg polyphenols per serving
330 ml	1.22 mg polyphenols per serving
500 ml	1.85 mg polyphenols per serving

Potential Claims in Canada for Pure Maple Water (cont'd.)

CLAIMS REGARDING COMPOSITION, QUALITY, QUANTITY AND ORIGIN

No added sugar	Yes, but only if a general note is added	<p>The text must not imply that other maple waters may contain added sugar.</p> <p>The claim must be accompanied by a note stating that the quality attributed to this maple water does not apply to the food in question alone, but to all foods of the same category.</p> <p><u>General note:</u></p> <p>Ex.: “Maple products do not contain added sugar” or “Like all maple products, contains no added sugar,” etc.</p>
100% pure and natural*	Yes	
Naturally sweet	Yes	
Organic	To be confirmed	Claim is possible if the standard is met. Contact the authorities responsible for this certification.
100% pure	Yes	
No preservatives/ additives/ parabens	Yes, but only if a general note is added	<p>The text must not imply that other maple waters may contain preservatives, additives or other added substances.</p> <p>The claim must be accompanied by a note stating that the quality attributed to this maple water does not apply to the food in question alone, but to all foods of the same category.</p> <p><u>General notes:</u></p> <p>Ex.: “Maple products do not contain preservatives” or “Preservative-free, like all maple products,” etc.</p> <p>And “Maple products do not contain additives” or “Additive-free, like all maple products,” etc.</p> <p>And “Maple products do not contain parabens” or “Paraben-free, like all maple products,” etc.</p>
No added flavours	Yes, but only if a general note is added	<p>The text must not imply that other maple waters may contain preservatives, additives or other added substances.</p> <p>The claim must be accompanied by a note stating that the quality attributed to this maple water does not apply to the food in question alone, but to all foods of the same category.</p> <p><u>General note:</u></p> <p>Ex.: “Maple products do not contain added flavours” or “Like all maple products, contains no added flavours,” etc.</p>
Subtle maple flavour	Yes	
Hydrate naturally	Yes	
Refreshing	Yes	
Thirst-quenching	Yes	
Halal/kosher	To be confirmed	Claim is possible if the standards are met. Contact the authorities responsible for these certifications.

***Notes regarding the use of the claim “Natural”**

- A natural food or ingredient is not expected to contain, or to ever have contained, an added vitamin, added mineral nutrient, artificial flavouring agent or food additive.
- Furthermore, in order for a food or ingredient to be called “natural,” it must not have any constituent or fraction thereof removed or significantly changed, except the removal of water.
- The new CFIA guidelines state that “a natural food or ingredient of a food must have been produced through the ordinary course of nature without the interference or influence of humans.”

Packaging - Varies by Manufacturer

1000 L tote.
Tetra Pak(R) containers in 250 ml, 330 ml and 1 L - to be confirmed per manufacturer.

Storage and Shelf Life

Before opening, 18 months at room temperature.
After opening, 2 weeks in the refrigerator.

Freezing

Possible.

Potential Uses

Can be used as is or can replace water or certain juices or liquids in food preparations such as: flavoured waters, functional beverages, sports drinks and thirst-quenchers, smoothies, broths, soups, poaching liquids, etc.

NAPSI Standard

The purpose of this mark is to certify that the maple water is:

- A. Natural: sourced exclusively from trees of the genus *Acer*;
- B. Authentic: harvested in Canada and controlled from production to marketing;
- C. Pure: free of any chemical preservatives;
- D. Sterile: free of any living microorganisms;
- E. Integral: unrefined, thus preserving the integrity of its constitution.

All according to specifications that must be followed at every step along the production chain.

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