



# Quality Control of Our Bulk Maple Syrup

QUÉBEC IS THE ONLY PRODUCER  
IN THE WORLD TO HAVE EVERY SINGLE  
BARREL OF MAPLE SYRUP SYSTEMATICALLY  
AND INDEPENDENTLY CHECKED FOR QUALITY.  
EACH YEAR, INSPECTORS GRADE NEARLY  
300,000 BARRELS OF OUR MAPLE SYRUP.



## HIGH-QUALITY AND AUTHENTIC

Québec Maple Syrup Producers (QMSP) designates the quality control and classification of bulk maple syrup to **ACER Division Inspection Inc.** This third-party, independent organization carries out its specialized duties in accordance with QMSP regulations and the provisions of the maple syrup marketing agreement.

Using instruments calibrated to industry standards, **ACER Division Inspection Inc.**'s quality control officers travel throughout the province to conduct their work at the QMSP warehouse in Laurierville, on-site at the facilities of authorized buyers, and at centralized laboratories.



## ISOLATION MANDATORY AT GRADING PROCEDURES

In order to minimize risks associated with COVID-19 and in accordance with public health recommendations, producers may not be present at the grading of their maple syrup, until further notice.

## THE CLASSIFICATION OF MAPLE SYRUP

Brix value is determined  
by refractometer



The minimum content of soluble solids in maple syrup (sugar concentration) must measure between 66° Brix and 68.9° Brix. Adjustments are made if syrup density is too low or too high.

DENSITY	OUTCOME
HIGHER THAN 69° BRIX	Significant financial penalty
HIGHER THAN 67° BRIX	Initial product weight revised upwards
BETWEEN 66° AND 67° BRIX	Ideal
LOWER THAN 66° BRIX	Initial product weight revised downwards
BETWEEN 60.5° AND 65.6° BRIX	Financial penalty
LOWER THAN 60.5° BRIX	Significant financial penalty

Details about the applicable financial penalties may be found in the current maple syrup marketing agreement.

## ENSURING THE AUTHENTICITY OF MAPLE SYRUP

The SpectrAcer™ is the tool used to detect any obvious adulteration in a sample of maple syrup. **Further analyses may be conducted.** If a barrel is identified as containing adulterated maple syrup, it is destroyed.



## INSPECTION FOR CLARITY AND MICROBIOLOGICAL DEFECTS

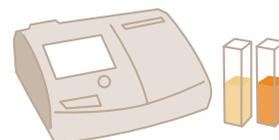
The most common substances that may be found suspended in maple syrup are:

- sugar crystals
- calcium malate
- carbon dioxide bubbles
- mould.

If such anomalies are detected in the product, the quality inspector reports them on the classification report.

## COLOUR CLASS DETERMINED BY SPECTROPHOTOMETER

Each sample of maple syrup is placed into a colour classification, according to the amount of light that passes through it, expressed as a percentage (%) value.



**GOLDEN**  
DELICATE  
TASTE

**AMBER**  
RICH TASTE

**DARK**  
ROBUST  
TASTE

**VERY DARK**  
STRONG  
TASTE

### LIGHT TRANSMISSION

75% or greater

50% to 74.99%

25% to 49.99%

Less than 25%

## EVALUATION OF ORGANOLEPTIC QUALITY

This sensory analysis of maple syrup is exceptionally important, involving the assessment of its taste and smell—the product's flavour.

### Characteristic Flavour

Characteristic flavour is defined as the typical taste of maple, free from unpleasant taste and odour.

### Off-Flavours

This refers to samples that present an unpleasant taste that masks the characteristic flavour of maple. In the grading process (depending on the off-flavour's intensity), the quality inspector will place one of the following symbols on the classification report.

SYMBOL	INTENSITY
✓	Slight trace of undesirable taste and smell
VR	Unpleasant taste and smell (VR1, VR2, VR4, VR5)
CT	Strongly unpleasant taste and smell that substantially affect the product's commercial value (CT1, CT2, CT3, CT4, CT5, CT6)

## FLAVOUR DEFECT CODES

TYPE	CODE	DESCRIPTION
Natural Defect	<b>1</b>	Wood (VR11), Sap (VR12), Burnt, over-caramelized (VR13)
Microbiological Defect	<b>2</b>	Mould and fermentation
Chemical Defect (automatically retained and may be destroyed)	<b>3</b>	Residue or suspicion of chemical contaminant (often related to cleaning/sanitizing products)
Unidentified Defect	<b>4</b>	Unidentifiable, general off-flavours (VR4 or CT4), Metal (VR43)
Buddy Defect	<b>5</b>	Buddy Taste
Ropy Syrup (automatically retained and may be destroyed)	<b>6</b>	Viscosity at 10 cm (4 in) or greater

## WHEN SYRUP IS RETAINED

A barrel of maple syrup is retained for further investigation if the quality inspector finds its contents demonstrate major chemical, sensory, or microbiological defects, or there are reasonable grounds to believe the syrup is unfit for human consumption, or it is otherwise non-compliant.

If further investigation confirms the preliminary analysis, the syrup is automatically discarded.

## LEAD

Quality inspectors conduct random screenings for lead during the grading process. If a barrel of syrup shows an abnormally high concentration of lead residue, it is sent for lab analysis. Syrup with a lead concentration of higher than 0.25 ppm is destroyed.

**There may be additional analyses for iodide and sodium content or the presence of allergens and formaldehyde to ensure product in barrels complies with the regulatory maximum limits.**

## WHEN AND HOW DO I REQUEST A CLASSIFICATION REVIEW?

**Maple producers have the right to request the review of a classification.**

### What is the deadline to request a review?

A maple producer has 15 working days to apply for a classification review. This review may concern flavour defects or a Brix level lower than 65.7° (as these are the only samples of graded maple syrup that are kept on hand).

### How do I request a review?

A maple producer may request a review by going to the CLASSIFICATION section of [ppaq.upa.qc.ca](http://ppaq.upa.qc.ca) or by filling out and signing the "Demande de révision de classification" form. By filing the application, the producer agrees to pay QMSP a fee of \$25 (plus taxes) per sample. The fee is not charged if the review results in an increased value for the re-analyzed syrup. The producer may not withdraw a review application once it has been submitted to ACER Division Inspection Inc. Reviews will not be granted for syrup that has been retained or for which additional expertise is required.

### Then what happens?

In a review, the sample is identified by number only and analyzed by two quality inspectors. They have no information about its origin or initial classification, and it is presented along with other syrup samples (with and without defects) to ensure neutrality. The analysis is conducted, and the results sent to QMSP, which contacts the producer and takes any necessary action. Whether the results are favourable, unfavourable, or unchanged, they are final and not subject to appeal.

You will find a video depiction of the review process on our [YouTube channel](#).

### CONTACT QMSP

Québec Maple Syrup Producers

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### CONTACT

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Any questions about the technical aspects and various modes of maple syrup production can be directed to an advisor at the *ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec (MAPAQ)* or the support organization of your maple-producing region.