

REQUEST FOR LABORATORY ANALYSIS

Wine Cider Mead

ALAB SERVICE AGREEMENT

6 University Avenue, INN249, Wolfville, Nova Scotia B4P 2R6

p: 902 698 1012 e: alab@acadiau.ca w: alab.acadiau.ca



ACADIA LABORATORY FOR
AGRI-FOOD & BEVERAGE

Client Information

Name: _____ Organization: _____
Email for Results: _____ Address: _____
Email for Invoice: _____ Phone: _____

- ALAB collects non-identifiable data for ongoing statistical analysis and academic-related activities to better characterize products and improve our service offerings.
 - ALAB is required to report on its activities, including the names of clients using ALAB services. If you would like to exclude your company name from reporting activities, please notify ALAB staff via email - alab@acadiau.ca. Please note that company-specific testing results are confidential and will not be released.
- Please check this box if you are using the results of this analysis for product research & development.**

Sample Volume – minimum volumes listed. If multiple tests are required, please enquire about volume required.

- Wine/Cider/Mead – Minimum 150 mL – More will be needed for Cold/Heat Stability and Calorie Testing
 - LC Panel testing requires one full retail packaged product
 - We recommend removing as much air space above the sample as possible
- Must/Juice – Minimum 120 mL
- Grape – 200 Grape Berries – See page 3 for further grape analysis information

Samples will be retained for a maximum of 5 business days after results have been sent.

Grape Ripening Analysis:

To avoid overnight sample refrigeration and allow same day processing of the samples ALAB will accept grape and juice samples from **9 am to 3 pm**. Wine samples will be accepted from 9 am to 5 pm as usual.

If you have any detailed instructions, requests not covered by the sample submission form, or other questions or concerns regarding sample analysis, contact ALAB at 902-698-1012 or alab@acadiau.ca.

For ALAB Use:			Batch numbers
Temperature Rec'd & Stored	R:	S:	
Date & Time Rec'd			
Received by			
Logged?			Data Send Date
Comments & Notes	Order ID:		

Sample Types: White Wine-**WW**, Red Wine-**RW**, Grapes-**G**, Must-**M**, Fermenting Must-**MUF**, Cider-**C**, Mead – **D**, Fruit Wine – **FW**

Client Sample ID	Sample Type	Comment – is sample 100% grape?/Specify										Sorbate added?
Ex. WWbatch1	WW	Pre-bottling sample, 100% grape										yes
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
Analyses Required	Price	1	2	3	4	5	6	7	8	9	10	
pH ^{AT}	\$8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Brix	\$8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Density/Specific Gravity ^{AT}	\$8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Conductivity	\$8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Turbidity ^{AT}	\$8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Colour Profile	\$19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
FOSS for Must/Wine* (no SO ₂ , not for cider)	\$25	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
FOSS for whole grape* (not for cider)	\$35	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Classical ^{AT}	\$65	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Alcohol by Volume ^{AT}	\$31	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Free and Total SO ₂ ^{AT}	\$37	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Total Acidity ^{AT}	\$31	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Volatile Acidity ^{AT}	\$31	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Total Reducing Sugars ^{AT}	\$31	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sorbic Acid ^{AT}	\$25	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Calories and Carbohydrates -See pg 4	\$104	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Nutrition Panel – see pg 4	\$175	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Total Anthocyanins	\$37	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Total Polyphenols	\$37	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sugars Profile ^{AT**}	\$49	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Organic Acids Profile	\$55	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Single Organic Acid; specify	\$31	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Malic Acid (Enzymatic)	\$31	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
YAN	\$37	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cold Stability	\$28	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Heat Stability	\$28	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ethyl Carbamate ^{AT}	\$158	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metals ^{AT} (As, Cd, Co, Cu, Pb)	\$104	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Single Metal; specify	\$55	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cations (Na, K, Mg, Ca, Fe)	\$61	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Single Cation; specify	\$49	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Analyses Required	Price	1	2	3	4	5	6	7	8	9	10
Methanol (< 30 g/L sugar)	\$61	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alcohols Profile (< 30 g/L sugar, 3 analytes, see below)	\$94	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Higher Alcohols (< 30 g/L sugar, 8 analytes)	\$185	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Synthetic Dyes ^{AT} (9 analytes)	\$73	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LC Panel – see pg 4	\$250	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples requiring export analysis: Use Export sample submission form											

AT: Accredited Test; HST not included in pricing; See Pg 3 for bulk rates* Rapid analysis by FOSS is currently only available for Grape Wine and Must – Results are next business day. FOSS is not available for ciders and fruit wines. **Not available for ciders.

ALAB Packages (All prices as subject to change without notice):

- Basic Analyses:
 - pH^{AT} - pH Meter - \$8
 - Brix - - Digital Density Meter - \$8
 - Density^{AT} - Digital Density Meter - \$8
 - Conductivity^{AT} - Conductivity Meter - \$8
 - Turbidity^{AT} - Nephelometer - \$8
- FOSS (FTIR) - \$25 for must/wine (liquid) and \$35 for whole grapes

<u>Must/Grape</u>		<u>Wine (100% grape based)</u>	
Brix	Total Acidity	Ethanol	Total Acidity (pH 8.2)
Density	Volatile Acidity	Density	Volatile Acidity
Glucose+Fructose	Potassium	Glucose+Fructose	Colour (A420, A520, A620)
Reducing Sugar	YAN	Reducing Sugar	Hue & Intensity
pH	Organic Acids (Tartaric, Malic, Citric)	pH	Organic Acids (Tartaric, Malic, Lactic)

- Classical by Skalar Continuous Flow Analyzer, Alcoalyzer, and HPLC-UV-Vis (Grape wine, fruit wines, cider, mead) - Alcohol by volume^{AT}, Total Acidity^{AT}, Volatile Acidity^{AT}, Total Reducing Sugar^{AT}, Sorbic Acid^{AT} (if applicable), Free SO₂^{AT}, Total SO₂^{AT}, pH^{AT} - \$65
- Alcohol by volume^{AT} – Alcoalyzer (NIR/DMA) - \$31
- Free and Total SO₂^{AT} - Skalar Continuous Flow Analyzer - \$37
 - Note:** Samples requiring SO₂ analysis will be run on the Skalar on a next-day basis, as the reagent prep needs to be done 24 hrs in advance. Samples for SO₂ can be run Tuesday-Friday as long as we have advance notice to prepare the reagent.
- Total Acidity^{AT} - Skalar Continuous Flow Analyzer - \$31
- Volatile Acidity^{AT} - Skalar Continuous Flow Analyzer - \$31
- Total Reducing Sugars^{AT} - Skalar Continuous Flow Analyzer - \$31
- Sorbic Acid^{AT} - HPLC-UV-Vis - \$25
- Colour Analysis - Spectrophotometer - Absorbance at 280, 420, 520, 620 nm and calculated Hue and Intensity for Red Wines - \$19
- YAN (Yeast Assimilable Nitrogen) - Enzymatic Kit - \$37
- Calories and Carbohydrates - AOAC methods, ABV analysis included - \$104
 - Note:** Total carbohydrate value is given, if total sugar value is also required, please add total reducing sugar (\$31) or sugar profile (\$49) to your request.

- Nutrition Panel - \$175
 - **Includes:** % ABV^{AT}, Calories and carbohydrates as above, total reducing sugar^{AT}, cations (sodium, calcium, magnesium, potassium, iron).
 - **Note 1:** The report will include a statement that fat is not expected in this product. If the presence of fat is uncertain, we can subcontract this test for an additional fee.
 - **Note 2:** The report will state that the protein content is less than (<) 0.5 g/100 mL as based on typical amounts of proteins found in wine as studied by the [Australian Wine Research Institute](#)
 - **Note 3:** ALAB does not issue formal nutrition facts tables (NFTs). NFTs can be created from values on the COA.
- Sugars Profile^{AT} (not available for ciders) - HPLC-RI - Glycerol, Fructose, Glucose, Sucrose, Maltose, Lactose - \$49
- Organic Acids Profile - HPLC-UV-Vis – Oxalic, Tartaric, Malic, Lactic, Acetic, Citric, Succinic Acids - \$55
- Single Organic Acid - HPLC-UV-Vis - \$31
- Malic Acid - Enzymatic Kit - \$31
- Total Anthocyanins – pH differential, Spectrophotometer - \$37
- Total Polyphenols – Folin Ciocalteu, Spectrophotometer - \$37
- Cold Stability - 30-minute contact time conductivity with potassium bitartrate at 0C or 4C - \$28
- Heat Stability - 2 hour hold at 80C with turbidity measurements - \$28
 - Minimum 2 business day turnaround time
- Ethyl Carbamate^{AT} - Gas Chromatography Mass Spectrometry (GC-MS/MS) - \$158
- Metals^{AT} (Arsenic (As), cadmium (Cd), cobalt (Co), copper (Cu), lead (Pb)) - Inductively Coupled Plasma Mass Spectrometry (ICP-MS) - \$104
- Cations (Sodium, Calcium, Magnesium, Potassium, Iron) - Inductively Coupled Plasma Mass Spectrometry (ICP-MS) - \$61
- Single Cation - Inductively Coupled Plasma Mass Spectrometry (ICP-MS) - \$49
- Higher Alcohols - GC-FID - Acetaldehyde, Ethyl acetate, Methanol, 1-Butanol, 1-Propanol, Isobutanol, Isoamyl alcohol, Ethyl lactate - \$185
 - Note: For products containing less than 30 g/L sugar
- Methanol – GC-FID - \$61
 - Note: For products containing less than 30 g/L sugar
- Alcohol Profile - GC-FID- Acetaldehyde, Ethyl acetate, Methanol - \$94
 - Note: For products containing less than 30 g/L sugar
- Synthetic Dyes – Quantitative: Indigo carmine^{AT}, tartrazine^{AT}, allura red^{AT}, amaranth^{AT}, sunset yellow^{AT}, fast green^{AT}, brilliant blue^{AT}, erythrosin B^{AT}. Presence/Absence: Patent blue V - \$73
- Liquor Corporation Panel for Wines, Ciders, and Wine/Cider Based Ready to Drink beverages - \$250
 - Includes: Alcohol by volume^{AT}, total reducing sugar^{AT}, volatile acidity (wine/cider)^{AT}, total SO₂^{AT}, free SO₂^{AT}, sorbic acid^{AT}, ethyl carbamate^{AT}, arsenic^{AT}, cadmium^{AT}, cobalt^{AT}, copper (wine)^{AT}, lead^{AT}, synthetic dyes^{AT} (where applicable).
 - **Note:** To ensure that the Certificate of Analysis (CoA) provided for the Liquor Corporation Panel will be accepted by the jurisdiction/country you want to be listed with, it is your responsibility to check the listing requirements.

Bulk rates

Submission of 5 or more samples will result in a 5% discount, 10 or more samples will be discounted 10%. Bulk rates only apply to same-type analysis submitted simultaneously. Bulk rates do not apply to the Liquor Corporation Panel, Export Panels, and assays priced at less than \$20/assay.

Turnaround Times

Foss Rapid Analysis – Next Business Day (from receipt of samples & submission form)


Other Analyses and Packages – Typical turnaround time is 3-10 business days after receipt of samples and forms.

Volume of testing may affect turnaround times.

Submitting Samples:

- Step 1** Complete the ALAB Service Agreement form on pages 1 & 2 (either by hand or in Acrobat using the fill and sign function).
- Step 2** Print the completed ALAB Service Agreement form and place inside a suitable shipping box containing the sample(s). Juice or samples that are fermenting must be shipped/delivered on ice.
- Step 3** Clearly label the sample(s) with your Client Sample ID indicating the type of product and a number
Note: See Page 1 for minimum sample volumes.
- Step 4** Affix the shipping label below to the box. Wrap bottles individually if mailing.
- Step 5** Mail or drop off the sample(s) – please email ahead of time if dropping off samples.
Drop off at David Huestis Innovation Pavilion (between 9:00 and 4:30, or by special arrangements)
Enter main doors of Elliott Hall (6 University Ave.). Take the stairs on the left to the second floor
McCain Commons. Cross the walkway to Room 249 (alab). If no one is there, leave the package
outside the lab – please email alab@acadiau.ca or text 902-698-1012 to notify the lab technician that
it has been left.
- Step 6** ALAB staff will analyze the sample(s) within the standard turnaround time.
- Step 7** ALAB staff send results when the analysis is completed and will invoice to the client at the end of the month,
payment is requested immediately.

Shipping Label:

SHIP TO:	
<p>ALAB Acadia University 15 University Avenue Wolfville, NS, Canada B4P 2R6</p>	