



**CMBTC**<sup>TM</sup>  
CANADIAN MALTING BARLEY TECHNICAL CENTRE

**2017-18**

# Professional Analytical Services Catalogue



[www.cmbtc.com](http://www.cmbtc.com)

## CMBTC Fee-for-Service Costs

All costs in US dollars

Catalogue #	Barley Analysis	Cost per sample	Sample Quantity Required
CMBTC1000	<b>Comprehensive</b> <i>Includes general appearance, moisture, protein, sizing, germination energy, water sensitivity, 1000 Kernel Weight</i>	\$150	400 g
CMBTC1010	Moisture	\$20	100g
CMBTC1020	Protein	\$20	100g
CMBTC1030	Sizing	\$20	100g
CMBTC1040	Germination Energy	\$40	100g
CMBTC1050	Water Sensitivity	\$40	100g
CMBTC1060	Germination Capacity	\$40	100g
CMBTC1070	1000 Kernel Weight	\$20	100g
CMBTC1080	RVA	\$50	50 g
CMBTC1090	Vomitoxin	\$40	100g

Catalogue #	Malt Analysis	Cost per sample	Sample Quantity Required
CMBTC2000	<b>Comprehensive (Wet Chemistry)</b> <i>Includes moisture, fine and coarse grind extract, soluble and total protein (Kolbach Index), diastatic power, alpha amylase, viscosity, friability, beta-glucan, FAN, colour</i>	\$250	500 g
CMBTC2000a	<b>Essentials (Wet Chemistry)</b> <i>Includes fine extract, soluble protein, diastatic power, friability, beta-glucan, colour</i>	\$150	500 g
CMBTC2010	<b>NIR analysis*</b> <i>Includes moisture, fine and coarse grind extract, soluble and total protein (Kolbach Index), diastatic power, alpha amylase, viscosity, friability, beta-glucan, FAN, colour</i>	\$50	50 g
CMBTC2020	<b>NIR analysis for Multiple Samples (5 or more)*</b> <i>Includes moisture, fine and coarse grind extract, soluble and total protein (Kolbach Index), diastatic power, alpha amylase, viscosity, friability, beta-glucan, FAN, colour</i>	\$25	50 g

\*Predictive indicators

Please go to <http://cmbtc.com/services/analytical-services/> to submit a request for analysis or contact Aaron Onio at [aonio@cmbtc.com](mailto:aonio@cmbtc.com) or call 204 984 8373

Catalogue #	Beer Analysis	Cost per sample	Sample Quantity Req'd (bottle)
CMBTC3000	<b>Comprehensive</b> <i>AE, RE, Alcohol, Color, pH, COE, Foam (NIBEM), O<sub>2</sub>, CO<sub>2</sub>, Bitterness, FTU</i>	<b>\$150</b>	12
CMBTC3010	<b>Basic Analysis</b> <i>AE, RE, Alcohol, Color, pH, COE, calories, CO<sub>2</sub></i>	<b>\$60</b>	2
CMBTC3020	<b>Basic Analysis (5 or more samples)</b> <i>AE, RE, Alcohol, Color, pH, COE, calories, CO<sub>2</sub></i>	<b>\$40</b>	2
CMBTC3040	CO <sub>2</sub>	<b>\$20</b>	3
CMBTC3050	Carbohydrates (by HPLC) <i>Maltotetraose, Maltotriose, Maltose, Glucose, Fructose</i>	<b>\$160</b>	2
CMBTC3060	Foam (NIBEM)	<b>\$30</b>	3
CMBTC3070	Bitterness	<b>\$35</b>	2
CMBTC3080	Chill Haze & Forced Turbidity	<b>\$30</b>	3
CMBTC3090	Diacetyl by Gas Chromatography	<b>\$75</b>	2
CMBTC3100	Sensory Analysis	<b>\$100</b>	6

### CMBTC EQUIPMENT

Malting Plant	Brewery	Laboratory
<ul style="list-style-type: none"> <li>• Joe White Micro-Malting unit: (250 g – 1 kg samples, up to 20 samples at a time)</li> <li>• Three vessel Pilot Malting system, capacity up to 100 kg               <ul style="list-style-type: none"> <li>○ Steeping vessel</li> <li>○ Germination vessel</li> <li>○ Kiln vessel</li> </ul> </li> <li>• Unimalter (steeping, germinating and kilning in one vessel) capacity up to 100kg</li> </ul>	<ul style="list-style-type: none"> <li>• 250 L Pilot Brewing system:               <ul style="list-style-type: none"> <li>○ Mash mixer</li> <li>○ Cereal cooker</li> <li>○ Lauter Tun</li> <li>○ Meura mash filter</li> <li>○ Kettle</li> <li>○ Whirlpool</li> <li>○ 4 Cylindro-conical fermenters (Unitanks)</li> </ul> </li> <li>• 15 L Micro-Brewing system               <ul style="list-style-type: none"> <li>○ Mash mixer</li> <li>○ Lauter Tun &amp; Kettle</li> </ul> </li> <li>• Zymatic Picobrew Automated Brewing System</li> <li>• Two-roller malt mill</li> <li>• Hammer mill</li> <li>• Sheet filter</li> <li>• Counter-pressure bottle filler</li> <li>• Pasteurizer</li> <li>• Aber Countstar Automated Cell Counter</li> </ul>	<ul style="list-style-type: none"> <li>• Ellutia Gas Chromatograph</li> <li>• Waters HPLC</li> <li>• Unity Scientific Near-Infrared Scanner</li> <li>• Infratec 1241 Grain Moisture &amp; Protein Analyzer</li> <li>• 1-CUBE Mashing Bath</li> <li>• Anton-Paar DMA 5000 Density Meter &amp; Alcohol Meter</li> <li>• BioChrom Ultrospec 2100 Spectrophotometer</li> <li>• Dr. Thiedig Digox Oxygen Analyzer</li> <li>• Zahm &amp; Nagel Direct DV-1 CO<sub>2</sub> Analyzer</li> <li>• Sigrist Labscat Process-Photometer</li> <li>• A&amp;D Moisture Balance MX-50</li> <li>• Carlsberg Seed Quality Analyzer</li> </ul>

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## Additional Fee-for-Service

<b>Senior Consultant</b>		\$1,500 per day
<b>Standard Pilot Malting Trial</b> 80 kg Includes comprehensive analysis and report		Please contact
<b>Micro-malting (standard)</b> (Single sample, 1 kg)		\$150 per sample
<b>Micro-malting (standard)</b> (Over 10, 1 kg samples)		\$100 per sample
<b>Standard Pilot Brewing Trial</b> 2.5 hl  Ale or Lager (including 7 day lagering time). Includes comprehensive analysis. Additional costs include brewing materials, shipping, packaging more than 24 bottles, mash filter operation, and additional lagering time.		Please contact
<b>Small Pilot Brewing Trial 15L</b> Includes comprehensive analysis		Please contact
<b>Small Pilot Brewing Trial 15 L</b> Includes fermentation in duplicate and comprehensive analysis		Please contact



**Ellutia Gas Chromatograph**



**Breeze 2HPLC**