



CMBTCTM
CANADIAN MALTING BARLEY TECHNICAL CENTRE

2017-18

Professional Analytical Services Catalogue



www.cmbtc.com

CMBTC Fee-for-Service Costs*

All costs in US dollars. Non-standard malting and brewing trials will be determined by the CMBTC on an individual basis (based on extra work required).

Senior Consultant	\$1,500 per day
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Standard Pilot Malting Trial 80 kg Includes comprehensive analysis and report	\$2,100 per trial
Micro-malting (standard) (Single sample, 1 kg)	\$150 per sample
Micro-malting (standard) (Over 10, 1 kg samples)	\$100 per sample
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Standard Pilot Brewing Trial 2.5 hl	\$2,200 per trial
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.	
Small Pilot Brewing Trial 15L Includes comprehensive analysis	\$800 per trial
Small Pilot Brewing Trial 15 L Includes fermentation in duplicate and comprehensive analysis	\$1,200 per trial



Ellutia Gas Chromatograph

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Breeze 2 HPLC

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

Catalogue #	Barley Analysis	Cost per sample	Sample Quantity Required
CMBTC1000	Comprehensive <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

Catalogue #	Malt Analysis	Cost per sample	Sample Quantity Required
CMBTC2000	Comprehensive (Wet Chemistry) <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	Essentials (Wet Chemistry) <i>Includes fine extract, soluble protein, diastatic power, friability, beta-glucan, colour</i>	\$150	500 g
CMBTC2010	NIR analysis* <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	NIR analysis for Multiple Samples (5 or more)* <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

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Catalogue #	Beer Analysis	Cost per sample	Sample Quantity Req'd (bottle)
CMBTC3000	Comprehensive <i>AE, RE, Alcohol, Color, pH, COE, Foam (NIBEM), O₂, CO₂, Bitterness, FTU</i>	\$150	12
CMBTC3010	Basic Analysis <i>AE, RE, Alcohol, Color, pH, COE, calories, CO₂</i>	\$60	2
CMBTC3020	Basic Analysis (5 or more samples) <i>AE, RE, Alcohol, Color, pH, COE, calories, CO₂</i>	\$40	2
CMBTC3040	CO ₂	\$20	3
CMBTC3050	Carbohydrates (by HPLC) <i>Maltotetraose, Maltriose, Maltose, Glucose, Fructose</i>	\$160	2
CMBTC3060	Foam (NIBEM)	\$30	3
CMBTC3070	Bitterness	\$35	2
CMBTC3080	Chill Haze & Forced Turbidity	\$30	3
CMBTC3090	Diacetyl by Gas Chromatography	\$75	2
CMBTC3100	Sensory Analysis	\$100	6

CMBTC EQUIPMENT

Malting Plant	Brewery	Laboratory
<ul style="list-style-type: none"> • Joe White Micro-Malting unit: (250 g – 1 kg samples, up to 20 samples at a time) • Three vessel Pilot Malting system, capacity up to 100 kg <ul style="list-style-type: none"> ○ Steeping vessel ○ Germination vessel ○ Kiln vessel • Unimalter (steeping, germinating and kilning in one vessel) capacity up to 100kg 	<ul style="list-style-type: none"> • 250 L Pilot Brewing system: <ul style="list-style-type: none"> ○ Mash mixer ○ Cereal cooker ○ Lauter Tun ○ Meura mash filter ○ Kettle ○ Whirlpool ○ 4 Cylindro-conical fermenters (Unitanks) • 15 L Micro-Brewing system <ul style="list-style-type: none"> ○ Mash mixer ○ Lauter Tun & Kettle • Zymatic Picobrew Automated Brewing System • Two-roller malt mill • Hammer mill • Sheet filter • Counter-pressure bottle filler • Pasteurizer • Aber Countstar Automated Cell Counter 	<ul style="list-style-type: none"> • Ellutia Gas Chromatograph • Waters HPLC • Unity Scientific Near-Infrared Scanner • Infratec 1241 Grain Moisture & Protein Analyzer • 1-CUBE Mashing Bath • Anton-Paar DMA 5000 Density Meter & Alcohol Meter • BioChrom Ultrospec 2100 Spectrophotometer • Dr. Thiedig Digox Oxygen Analyzer • Zahm & Nagel Direct DV-1 CO₂ Analyzer • Sigrist Labscat Process-Photometer • A&D Moisture Balance MX-50 • Carlsberg Seed Quality Analyzer

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