

CHEMICAL LABORATORY SERVICES

at The Food Processing Center



The Food Processing Center can assist with prompt quality and proximate analysis of natural products, food ingredients and finished products ranging from direct testing for nutrition label requirements to shelf life analysis of lipid stability and total amounts of antioxidant rich polyphenols. If you have a need to know the composition of your food, but lack the facilities to determine it yourself, let us help.

With a range of analytical equipment and services, the Food Processing Center has the capability to assist with other analytical testing and needs as well. Let us know your goals and needs and we will let you know what we can do to help.

PROXIMATE AND COMPOSITIONAL (method overview) <minimum required>

The basic composition of foods including the proximate composition (gravimetric analysis) and more specific analysis of food components.

- pH (direct measure) <Min 5ml>
- Moisture (convection oven or vacuum oven drying) <Min 5 ml>
- Ash (muffle furnace) <Min 10g>
- Total Protein (Dumas method) <Min 1g/1ml>
- Crude Lipid (solvent extraction by Soxhtech system or modified mojonier for dairy) <Min 10g>
- Proximate Composition (moisture/ash/protein/lipid with carbohydrate by calculation) <Min 40g>
- Total Sugars (HPLC separation with PAD detection) <Min 5g>
- Dietary Fiber (enzymatic digestion and gravimetric determination) <Min 5g>
- Minerals (Sodium/Potassium/Calcium/Iron... by atomic absorption) <Min 10g>
- Fatty Acid Profile (gas chromatography with FID) <Min 1 to 40g depending on lipid content>
- Cholesterol/Plant Sterols (gas chromatography with FID) <Min 1 to 40 g depending on lipid content>
- Total Fructooligosaccharides (enzymatic digestion and HPLC separation with PAD detection) <Min 5g>
- Total Galactooligosaccharides (enzymatic digestion and HPLC separation with PAD detection) <Min 5g>
- Total Sugar Alcohols (HPLC separation with PAD detection) <Min 5g>
- Grocery Label (Proximates with Sugars/Dietary Fiber/Minerals/Cholesterol and Vitamin D as needed) <Min 100g>
- Restaurant Label (Proximates with Sugars/Dietary Fiber/Sodium and Cholesterol) <Min 100g>

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BEER & ALCOHOLIC BEVERAGES

Additional testing of the alcohol content of beverages or foods with added liquors.

- Alcohol by Volume (distillation) <Min 350 ml/12oz>
- Alcohol by Volume (gas chromatography with FID) <Min 10ml>
- Standard Reference Method (spectrophotometric analysis) <Min 10ml>
- International Bitterness Units (extraction and spectrophotometric analysis) <Min 20ml>
- Total Calories (real extract, total proteins and total ash) <Min 350 ml/12oz>

OXIDATIVE DAMAGE OF LIPIDS

Add quantitative data to your shelf life testing of lipid damage.

- Peroxide Value (spectrophotometric analysis) <Min 2g extractable lipids>
- Thiobarbituric Reactive Species (spectrophotometric analysis) <Min 1g extractable lipids>
- Conjugated Dienes (spectrophotometric analysis) <Min 1g extractable lipids>
- Hexanal (gas chromatography with FID) <Min 10g>

POLYPHENOLS

Determine the total amounts of polyphenols that act as antioxidants in a product, or the amounts of classes of polyphenols.

- Total Polyphenols (Folin-Ciocalteu's reagent with spectrophotometric analysis) <Min 5g>
- Total Flavonoids (aluminum complex with spectrophotometric analysis) <Min 5g>
- Total Tannins (vanillin reaction with spectrophotometric analysis) <Min 5g>
- Total Anthocyanins (pH differential with spectrophotometric analysis) <Min 5g>

MISCELLANEOUS

Additional testing regularly performed for analysis of foods and natural products.

- Carotenoids (extraction with HPLC separation with UV/VIS detection) <Min 5g>
- Chlorophyll (extraction with HPLC separation with UV/VIS detection) <Min 5g>
- Organic Acids (HPLC separation with UV/VIS detection) <Min 2g/5ml>
- Non-Protein Nitrogen (trichloroacetic acid precipitation with Dumas) <Min 5g/5ml>
- Chitin (alkaline digestion with gravimetric detection) <Min 10g>
- Vitamin A (HPLC separation with UV/VIS detection) <Min 10g>
- Vitamin E (HPLC separation with UV/VIS detection) <Min 10g>

EQUIPMENT

- High Performance Liquid Chromatography (HPLC) and Ion Chromatography (HPIC)
- Gas Chromatography with Flame-Ion Detection
- Atomic Absorption of Minerals (sodium, potassium, calcium, iron and some heavy metals)
- Particle Size Analysis

FOR MORE INFO, CONTACT

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