Adding Value to Oklahoma... and more

For many, Oklahoma’s agricultural and food industries evoke thoughts of wheat and cattle. While this is a rich part of Oklahoma’s heritage and a significant portion of our economy, many of these commodities are currently sent to other states or even other countries for further processing into the bakery, meat, and other products that reach the consumer’s table.

The Food & Agricultural Products Center, located in Stillwater, Okla. on the campus of Oklahoma State University, strives to keep the products, jobs and dollars home in Oklahoma. The FAPC offers large and small businesses, producers, and entrepreneurs of Oklahoma, as well as other states, access to faculty and staff with expertise in business and technical disciplines.

The FAPC’s research laboratories, including the Analytical Chemistry Laboratory; pilot processing facilities; educational programs; and seminars keep food and agricultural processors and entrepreneurs on the forefront of cutting-edge value-added processing and technology.

Going Beyond the Basic Needs

Not only does the Analytical Chemistry Laboratory assist in collaborative studies and method development, the laboratory offers on-site visits to provide technical support and troubleshooting services to individual clients in the food processing fields. The Analytical Chemistry Laboratory also serves as an unbiased third-party verifier for those companies who perform tests in-house or at another laboratory.

Analytical Chemistry
Food & Agricultural Products Center

Analytical Chemistry Laboratory
Food & Agricultural Products Center
Oklahoma State University
148 FAPC
Stillwater, Oklahoma 74078-6055
(405) 744-6071 • FAX (405) 744-6313
www.fapc.biz
Serving Analytical Chemistry Needs

The Analytical Chemistry Laboratory of the FAPC offers analysis of food products to assist processors and entrepreneurs. From aflatoxins to beef jerky to food colorants to vanilla analysis, the Analytical Chemistry Laboratory’s mission is to serve the various disciplines within the food and agricultural industries.

State-of-the-Art Instrumentation

The laboratory has extensive instrumentation capabilities, including:
- High performance liquid chromatographs (HPLC) with photo diode array (PDA) detector
- Gas chromatograph with flame ionization detector (FID) and thermo conductivity detector (TCD)
- Gas chromatograph with mass spectrometer detector (GC/MS)
- Ultraviolet (UV)/visible spectrometers.

Complying to the Standards

The Analytical Chemistry Laboratory follows all available standard methods provided by the:
- Association of Official Analytical Chemists
- American Oil Chemist Society
- United States Department of Agriculture
- United States Environmental Protection Agency.

One-of-a-Kind Services

The FAPC Analytical Chemistry Laboratory has created convenient packages of its services to assist clients more efficiently. If a test or analysis is not listed, please contact the Analytical Chemistry Laboratory for availability.

Basic Package
Proximate Analysis (fat, moisture, protein, ash, carbohydrate, pH)

Processed Meat Package
Water Activity
Color
Moisture
Fat
Protein

Nutritional Labeling Package (Mandatory Label)
Proximates (ash, fat, moisture, protein)
Fats (cholesterol, fatty acid profile, which includes trans)
Carbohydrates (total dietary fiber, sugar profile, complex carbohydrates)
Total Carbohydrates (calories)
Vitamins (vitamin A, vitamin C)
Minerals (calcium, iron, sodium)

Nutritional Labeling Package with Optional Assays
Vitamins (riboflavin, thiamin, niacin, vitamin E)
Minerals (magnesium, phosphorus, potassium, other minerals)

MAP (Modified Atmosphere Packaging) Package
(Headspace determination of the following gasses.)
CO
CO$_2$
O$_2$
N$_2$

Lipid Analysis
Fatty Acid Profile, including trans fatty acids, Conjugated Linolenic Acids (CLAs) and cholesterol
Peroxide Value
TBARS

Beverage Package
Caffeine
Sugar
pH
Fat

Toxin and Residue Package
Pesticides
Aflatoxin
Fumonisin
Ochratoxin

Forensics

Workshops and short courses are available upon request.

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