



# OTSC Quarterly Newsletter



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## Cynthia Applegate Retires from OTSC

After more than 31 years of service at Texas A&M, including 27 years with the Office of the Texas State Chemist (OTSC), Cynthia Applegate retired on January 23, 2018. Cynthia obtained her Bachelor's degree in Chemistry from Temple University and Master of Science in Chemistry at Texas A&M University. After graduation, Cynthia worked in the Texas A&M Biochemistry Department followed by the Geochemical and Environmental Research Group before joining OTSC in November 1990.

During Cynthia's tenure at OTSC, she became proficient in nearly every area of the laboratory. She was instrumental in validating numerous methods

for use in the lab.

Some highlights of her notable tenure include:

- Transitioning from Thin Layer Chromatographic (TLC) method to High Performance Liquid Chromatography (HPLC) for aflatoxin analysis;
- Validation of various methods used in the OTSC laboratory;
- Participation in the AOAC collaborative study for Decoquinatone by HPLC;
- Mycotoxin Kit validation; and
- Elemental Analysis of feed and fertilizer.

Story continues on page 2.

## Aflatoxin Proficiency Program

The use of proficiency testing (PT) is a tool to assure the quality of test results. A proficiency testing program accompanied by regular use of reference material represent key components of a laboratory quality system. Proficiency testing programs enable the evaluation of laboratories for specific tests. They also may be used by individual labs and their accrediting body to monitor ongoing performance.

First initiated as part of the OTSC One-Sample-Strategy (OSS) program in 2011, aflatoxin proficiency program provides a useful tool to assist Texas and the global feed and food sector to manage aflatoxin risk. It provides a unique insight into the global testing capability and enables a partitioning of performance by testing method and region. In 2017, the Texas grain and feed industry demonstrated outstanding testing capability measured by the difference between the assigned value by OTSC of 93.9 ppb versus an average measurement by the regulated community of 94.6 ppb. Compared to the rest of the United States and world, we see that Texas aligned most closely with the assigned value and demonstrated the least variability. In 2017, OTSC became an accredited proficiency program and reference material provider.

For more information on the OSS and PT programs, visit our website (<http://otscweb.tamu.edu>).

## New Instruments Improve Lab Capabilities

At OTSC, timely and accurate laboratory results and actions are essential to the effectiveness of our feed and fertilizer regulatory compliance program. To improve our laboratory capabilities, OTSC recently purchased 2 new mass spectrometry systems. Mass spectrometry (MS) is often described as an ultra-sensitive scale that can weigh molecules.

The new mass spectrometry systems will improve the sensitivity and robustness of the analyses, accelerate method development for new methods, reduce complexity, increase ease of use, and ensure the correct result for customers. For example, the new Agilent



7010B GCMS is a triple quadrupole system which has the capability to quantify trace levels of dioxins in food and feed matrices. In addition, both instruments can be used complementarily to ensure the analysis of regulatory samples can be conducted without interruption. Results of this work will also assist firms to complete their hazard analysis as part of preparing a food safety plan required under the FDA Food Safety Modernization Act.

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*Protects consumers & enhances Agri-Business through its Feed & Fertilizer Regulatory Compliance Program, surveillance & monitoring of Animal-Human health & environmental hazards, & preparedness planning.*

### Cynthia Applegate Retires from OTSC (Continued)

Cynthia was awarded Employee of the Year in 2006 for her work in validating the HPLC method for aflatoxin, which resulted in a significant reduction in turn-around time for violative samples. In 2009, she was part of the Elemental Analysis team which was recognized for reducing overall sample analysis turnaround time. In addition, Cynthia played a vital role in the lab's accrediting process for the ISO/IEC 17025:2005 standard. Her other contributions to the laboratory included conduct-

ing lab tours for visiting students and assisting in organization of corn samples.

Cynthia's retirement plans include the continuation of her volunteer work with Kairos Ministry and other mission related volunteer work. Cynthia's OTSC colleagues will not only miss her brilliant analytical skills, but also her lovely sense of humor and penchant for practical jokes. We, at the OTSC, wish her the best in her future endeavors.



**Happy Retirement—Cynthia and Ken**

### OTSC Bids Farewell to Ken McCormick

After 16 years of service with the Office of the Texas State Chemist, Ken McCormick retired from analytical work in the Agricultural Analytical Services (AAS) laboratory at the end of December 2017.

Ken obtained his Bachelor of Science from the University of Washington, Seattle, WA. Upon graduation, Ken returned to Texas to work for the Geochemical and Environmental Research Group at Texas A&M and then for the Ocean Drilling Program. Later, Ken moved to Dallas to perform chemical analyses for RSR Corporation.

Since 2001, Ken has been employed with the OTSC's AAS. At OTSC, Ken was well known for the quality of his analytical results. During his time here, Ken met and married Cindy, a fellow lab analyst.

Ken's retirement plans include volunteer work with Brazos Valley Elder-Aid and his church, working on the home project checklist, and spending more time with the grandchildren. We wish Ken well as he steps into the next phase of his life.