

THE MAGRUDER FERTILIZER CHECK SAMPLE PROGRAM

History

Round robin samples are frequently used to provide comparisons of analytical results. The first program using statistical techniques to evaluate fertilizer sample results was the Magruder Check Sample Program. The program's originator Dr. E. W. Magruder, a chemist with the F. S. Royster Guano Company, distributed the first sample to 29 laboratories in 1922. In 1958 sponsorship of the program transferred from Royster to joint sponsorship by AAPFCO* and TFI*. AAPFCO assumed full administration of the program in 1971. W. R. Grace & Co. also subsidized the program by furnishing statistical evaluations of the data through its statistician Edwin Glocker. This service continued until his death in 1989. In 2015 electronic data reporting and statistical evaluation programs were implemented using more modern robust statistics. These evaluations are managed through an independent statistical consultant. History of the program and archived data can be found at www.magruderchecksample.org



***AAPFCO** - Association of American Plant Food Control Officials (aapfco.org)

* **TFI** - The Fertilizer Institute (TFI.org)

Administration

The Magruder Program is administered by a committee approved by the AAPFCO president. Membership is balanced between regulatory and industry representatives. This is the only AAPFCO committee permitting industry representatives to hold full committee privileges. The committee sets subscription fees, selects sample materials, contracts preparation and distribution of samples, retains a statistician, evaluates results, and authorizes educational programs.



Present Program

Each subscribing laboratory receives one or two samples each month. These samples contain varying levels of the primary nutrients (N, P, & K) as well as secondary (Ca, Mg & S) and many micro-nutrients. In addition, contaminants of interest, including trace metals (As, Cd, Cr, Co, Hg, Pb, & Se) are often included in the evaluation. Samples are analyzed according to methods chosen by the participating laboratory. The results, with method designations are reported electronically and submitted directly to the statistician. A comprehensive statistical report is prepared, based on "The International Harmonized Protocol For The Proficiency Testing of Analytical Chemistry Laboratories, 2006 focusing on robust statistical approaches. These reports are sent to subscribers for performance evaluation. Laboratories are identified only by number; laboratory identification and performance is held in strict confidence.

Inter-Organization Cooperation

Program objectives and goals are those of AAPFCO, & TFI; both organizations support the program. Evaluations of results are reviewed by the committee and are summarized in a newsletter published periodically by the committee.



Participants

There are over 100 laboratories subscribing to the Magruder program. Most state fertilizer control laboratories participate as well as regulatory, industry and commercial laboratories from around the world.

For subscription information:

Contact Bill Hall, Chair, at Mosaic Crop Nutrition, LLC, 13830 Circa Crossing Dr., Lithia, FL 33547; Phone 813-500-6670; Fax: 813-571-6922; Email bill.hall@mosaicco.com. Additional subscription information can be found at the Magruder committee website: www.magruderchecksample.org Complete this completed form and return to the address on the reverse panel.

Name: _____

Organization: _____

Address: _____

City/State/Province/Country/Postal Code

Email: _____

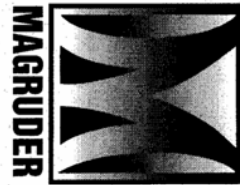
Magruder & Quality Assurance

The benefits of inter-laboratory method evaluation and laboratory performance are increasingly important to clients. Modern instrumentation is a great timesaver, but difficult sample matrices such as fertilizers need careful attention to prevent reporting erroneous results. Inter laboratory proficiency testing is a well recognized way to monitor laboratory performance and stay in top form. Additionally, participation in proficiency testing programs is a requirement for ISO 17025 and other laboratory accreditation programs.

Every laboratory should implement and maintain an active quality assurance program. The Magruder program can become an important part of your program. Current and historical reports can be viewed and downloaded from the website. Reserve samples of historical Magruder materials are available for sale at minimal cost. This program is offered to all organizations involved in fertilizer analysis and can be used as aids in estimation of measurement uncertainty in your laboratory. A full list of benefits and services can be found on the Magruder website at www.magruderchecksample.org or by contacting the chair.

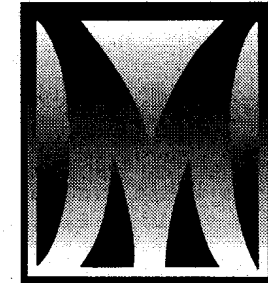


Notes:



Association of
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MAGRUDER

Fertilizer Check Sample Program

Striving for Excellence in Analysis

With

Inter-Laboratory

Statistical Evaluation

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