



## Dairy One Forage Laboratory - Quality Assurance Program

January 01, 2023

The Dairy One Forage Laboratory employs a five-part quality assurance (QA) program to ensure the integrity of analyzed results. The key quality control elements in this program are outlined below.

### 1. Analysis Methods

The Dairy One Forage Laboratory selects standardized and widely accepted and researched methods from AOAC International, scientific journals, manufacturer's proprietary procedures, and major universities. A list of analytical methods with corresponding references can be found on our web site at [www.dairyone.com](http://www.dairyone.com).

### 2. External Check Sample Programs

The Dairy One Forage Laboratory participates in eight external check sample exchange programs. Samples are treated as regular unknowns and submitted to the lab and analyzed for the applicable analytes. Results are submitted to each program for statistical evaluation and comparison to other participating labs. Our performance in these exchanges continues to be excellent and compares very favorably to the other participating labs performing the same analyses.

- a. Association of American Feed Control Officials (AAFCO) – <http://www.aaeco.org/Laboratory/Proficiency-Testing-Programs>
  - i. Regular Check Sample Program
  - ii. Pet Food Program
  - iii. Minerals Program
- b. National Forage Testing Association (NFTA) – [www.foragetesting.org](http://www.foragetesting.org)
- c. Manure Analysis Proficiency (MAP) Program sponsored by the Minnesota Department of Agriculture – <https://www.mda.state.mn.us/pesticide-fertilizer/certified-testing-laboratories-manure-soil>
- d. Agricultural Laboratory Proficiency (ALP) Program sponsored by Collaborative Testing Services (CTS) - [www.collaborativetesting.com](http://www.collaborativetesting.com)
- e. North American Proficiency Testing (NAPT) - [www.naptprogram.org](http://www.naptprogram.org)
- f. North European Proficiency Testing (NEPT)

### 3. In-house Quality Control Samples

Each department in the Dairy One Forage Laboratory analyzes quality control (QC) check samples on a daily basis for each assay performed. In-house QC check samples include purchased reference materials from instrument manufacturers, past check samples from the AAFCO Check Sample Program, and industry typical feeds and forages obtained from local farms and feed mills including hays, corn silages, and grain mixes.

The QC check sample data is reviewed daily by the senior technicians in each department for run acceptability. Unknowns with corresponding QC check sample results that fall outside the appointed ranges are re-analyzed. The Quality Assurance Specialist statistically summarizes the QC check sample data on a monthly basis for trend analysis.

### 4. Instrument Performance

Instruments and equipment are evaluated on a regularly scheduled basis to ensure each is working within nominal parameters.

### 5. Forage Lab Edit Program

The results of all customer samples are subject to a final review prior to release to the client using an internally developed Forage Lab Edit Program. All results pass through an edit system that identifies samples with results falling outside of expected ranges by sample type. Results for these samples are reviewed by senior staff members, at which time the results are either flagged for reanalysis or released to the customer.