

## GRAIN LABORATORY AIDE 2

### KIND OF WORK

Senior technical agricultural laboratory work.

### NATURE AND PURPOSE

Under general supervision and/or procedural control, conducts certified chemical and physical analysis of wheat, barley, corn, oats, flax, soybeans, and other cereals to determine protein, moisture and oil content of test samples; refuses samples that are improperly secured; prioritizes samples for the most efficient production scheduling; records test results on official certificates; assigns work to and trains other Grain Laboratory Aides so that the grain quality may be determined; performs related work as required.

This class differs from Grain Lab Aide 1 because it requires a thorough knowledge of all approved lab methods and procedures used to perform protein and moisture analysis as described by the Association of Official Analytical Chemists and the ability to perform necessary testing of equipment and materials used to perform various chemical analysis. Grain Lab Aides 2 may also serve as leadworkers to other Grain Lab Aides. They perform analysis without direct supervisory access. They will normally be assigned to worksites where more than 8,000 protein analysis are typically performed annually.

EXAMPLES OF WORK (A position may not include all the work examples given, nor does the list include all that may be assigned.)

Analyzes grain samples so that true and accurate results are determined for official grading purposes by ensuring that all American Association of Cereal Chemists, Association of Official Analytical Chemists, and Federal Grain Inspection Service procedures are followed, by refusing samples that are improperly secured, and by calibrating and operating Near Infra Red Reflectance (NIR) analyzers and whole grain analyzers.

Assigns work to and trains other Grain Laboratory Aides to achieve the most efficient schedule by prioritizing samples for each day's testing, by instructing other staff in the operation of equipment and testing procedures, and by checking samples to ensure that they are properly prepared.

Records accurate laboratory results and issues the individual sample analysis so that grain may be marketed in an orderly manner by assigning sample numbers to the grain, by recording official results for certification, and by issuing official certificates and/or tickets to meet the deadlines for grain transfer.

Informs the laboratory supervisor about production scheduling conflicts and equipment malfunctions so that sampling and testing delays will be minimized by monitoring daily production schedules, by ordering supplies and/or chemicals, by check testing equipment, by performing preventive maintenance, and by recommending repair and replacement of equipment.

Mixes chemical solutions in the prescribed manner so that a standardized solution is obtained for each variety of grain being analyzed by mixing and blending chemicals such as sodium hydroxide, potassium sulfate, copper sulfate and sulfuric acid, and by checking each solution for standardization in the distillation process.

### KNOWLEDGE, SKILLS AND ABILITIES REQUIRED

Knowledge of:

\*Laboratory and grain sampling procedures prescribed by the American Association of Cereal Chemists, Association of Official Analytical Chemists, and the Federal Grain Inspection Service sufficient to approve or reject grain samples, conduct official analysis of grain samples, and to train and check the quality of work performed by other Grain Laboratory Aides.

\*Storage and retention rules sufficient to maintain official records of the grain samples.

\*Grain varieties sufficient to assign sample numbers, sort and store samples.

\*Laboratory equipment sufficient to calibrate, check test, and recommend repair and replacement.

Fundamental principles of chemistry sufficient to mix and blend chemical solutions which are required to perform chemical grain analysis.

\*Mathematics (addition, subtraction, multiplication, division, and percentages) sufficient to perform calculations of protein and moisture content of the samples.

Ability to:

\*Communicate verbally sufficient to train and instruct other Grain Laboratory Aides.

\*Prioritize daily work load of self and others sufficient to monitor production and identify schedule conflicts.

\*Operate all laboratory equipment sufficient to conduct grain sample testing.

\*Complete detail-oriented tasks quickly and with a high degree of accuracy.

SPECIAL WORK CONDITIONS

- Ability to work in an environment with grain dust.
- Ability to tolerate noisy machinery.
- Ability to do intermittent heavy lifting up to 50 pounds.
- Ability to stand for long periods of time.

Est.: 7/17/40  
Rev.: 10/77; 05/87; 05/89; 2/92  
Chk.: 8/24/64  
\*Necessary at time of hire.

T.C.: 7/22/64  
Former Title(s): Cereal Chemist I