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GRAIN INSPECTION, PACKERS AND STOCKYARDS
ADMINISTRATION
FEDERAL GRAIN INSPECTION SERVICE
STOP 3630
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DON HANDBOOK
CHAPTER 4
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CHAPTER 4

CERTIFICATION

<u>Section Number</u>	<u>Section</u>	<u>Page Number</u>
4.1	BACKGROUND	4-1
4.2	GENERAL PROCEDURES.....	4-1
4.3	CERTIFYING TEST RESULTS	4-4
4.4	APPROVED STATEMENTS	4-6

4.1 BACKGROUND

Wheat, barley, corn, and oats are tested for DON under the authority of the United States Grain Standards Act (USGSA). Under the USGSA, DON results are recorded on the pan ticket, worksheet, or loading log and in the remarks section of the certificate.

Certify DON test results on grain in accordance with sections 800.160 through 800.166 of the regulations under the USGSA.

Upon the request of the applicant, separate certificates may be issued for grade and for DON when both are determined on the same lot.

Sections 800.125 and 800.135 of the regulations under the USGSA permit a review inspection on either official grade/factors or official criteria. When requested, a review inspection for official grade or official factors and official criteria may be handled separately, even though both sets of results are reported on the same certificate. When official grade or official factors and official criteria are reported on the same certificate, the review inspection certificate shall show a statement indicating that the review results are for official grade, official factors, or official criteria, and that all other results are those of the original, reinspection, or appeal inspection results, whichever is applicable.

4.2 GENERAL PROCEDURES

The type of service requested and the test method used determine how DON results are recorded and certified.

a. Qualitative Testing.

- (1) Record the results of a **qualitative service** on the pan ticket and inspection log as being equal to or less than a threshold (e.g., 2 ppm) or as exceeding the threshold.
- (2) If a **quantitative method** is used to provide qualitative service, record the test results on the work records in a quantitative measurement (e.g., 1.4 ppm) or a qualitative measurement (e.g., ≤ 2 ppm).
- (3) Certify results as being equal to or less than a threshold.

b. Quantitative Testing.

(1) Test kits with conformance limit ending in .5 ppm (e.g., 2.5 ppm)

Record the results on the pan ticket and the inspection log to the tenth ppm.

When test results indicate that DON is present at a level of 0.5 ppm or less, certify the results as "equal to or less than 0.5 ppm."

Certify test results that are above the lower conformance level (e.g. 0.6 ppm) and below the upper conformance level (e.g., 2.4 ppm) to the nearest whole ppm. For example: A DON test result of 2.3 ppm obtained using a DON test kit with a conformance range of 0.5 - 2.5 ppm would result in the following certification statement "DON 2 ppm." Upon request of the applicant, the results may be certified to the tenth ppm.

Test results that are equal to the conformance limit are certified as equal to the conformance limit. For example: A DON test result of 2.5 ppm obtained using a DON test kit with a conformance range of 0.5 - 2.5 ppm would result in the following certification statement "DON 2.5 ppm."

Test results greater than the conformance limit are certified as exceeding the conformance limit. For example: A DON test result of 2.8 ppm obtained using a DON test kit with a conformance range of 0.5 - 2.5 ppm would result in the following certification statement "DON exceeds 2.5 ppm."

(2) Test kits with conformance limits rounded to the whole ppm (e.g., 5 ppm)

Record the results on the pan ticket and the inspection log to the tenth ppm.

When test results indicate that DON is present at a level of 0.5 ppm or less, certify the results as "equal to or less than 0.5 ppm."

Certify test results that are between 0.6 ppm and the conformance limit (e.g., 5 ppm) to the nearest whole ppm. For example: A DON test result of 5.4 ppm obtained using a DON test kit with a conformance range of 0.5 - 5 ppm would result in the following certification statement "DON 5 ppm." Upon request of the applicant, results between 0.6 ppm and the conformance limit (e.g., 5 ppm) may be certified to the tenth ppm.

Test results greater than the conformance limit are certified as exceeding the conformance limit. For example: A DON test result of 5.5 ppm obtained using a DON test kit with a conformance range of 0.5 - 5 ppm would result in the following certification statement "DON exceeds 5 ppm."

STANDARD REPORTING - QUANTITATIVE TESTING										
Test Kit Range	Test Result	Certify as:	Test Result	Certify as:	Test Result	Certify as:	Test Result	Certify as:		
0.5 - 2.5 ppm	0.5 or less	≤ 0.5 ppm	0.6 - 2.4	Nearest whole ppm	2.5 ppm	= 2.5 ppm	2.6 or more	> 2.5 ppm		
0.5 - 3 ppm	0.5 or less	≤ 0.5 ppm	0.6 - 3.4	Nearest whole ppm	*	*	3.5 or more	> 3 ppm		
0.5 - 5 ppm	0.5 or less	≤ 0.5 ppm	0.6 - 5.4	Nearest whole ppm	*	*	5.5 or more	> 5 ppm		

OPTIONAL REPORTING - QUANTITATIVE TESTING									
Test Kit Range	Test Result	Certify as:	Test Result	Certify as:	Test Result	Certify as:	Test Result	Certify as:	
0.5 - 2.5 ppm	0.0	Not Detected	0.6 - 2.5	Actual tenth ppm	*	*	*	*	
0.5 - 3 ppm	0.0	Not Detected	0.6 - 3.0	Actual tenth ppm	*	*	*	*	
0.5 - 5 ppm	0.0	Not Detected	0.6 - 5.0	Actual tenth ppm	*	*	*	*	

4.3 CERTIFYING TEST RESULTS

- a. Single lot inspection basis for trucks and railcars.

Certify each test result on a separate certificate.

- b. Combined land carrier basis for trucks and railcars.

If an applicant requests DON testing on a composite basis (up to 5 railcars and 15 trucks) and the inspection for grade on the basis of individual carriers, factor only certificates are issued for the DON testing and separate grade certificates are issued for each carrier.

- c. Composite Sample Testing for Shiplots.

Certify the composite results using the appropriate qualitative or quantitative statements.

- d. Submitted Sample Testing.

Certify the results using the appropriate qualitative or quantitative statements.

e. Unit Train and Shiplot Inspection under the CuSum Loading Plan.

(1) Recording Test Results.

DON test results of subplot samples taken throughout loading are recorded on the loading log. A material portion occurs if the subplot result exceeds the limit as specified in the load order.

(2) Certifying Test Results.

When subplot samples are tested using a **quantitative method**, certify the lot based on the mathematical/weighted average (as applicable) of the accepted subplot results. When subplot samples are tested using a **qualitative method**, certify the lot results as equal to or less than the maximum limit (e.g., 2 ppm). If some sublots were reviewed using a quantitative method, continue to certify the lot as equal to or less than the maximum limit.

Certify material portions separately.

(3) Material Portions.

If a material portion occurs, the applicant has the option of requesting a review inspection. Review inspection results replace previous results when determining if a material portion exists.

If a material portion designation due to DON is not removed by the review inspection process, the applicant may leave the material portion on board and receive a separate certificate; return the grain to the elevator; or discharge the material portion along with additional grain in common stowage equivalent to one half the material portion quantity.

4.4 APPROVED STATEMENTS

Upon request of the applicant, the term vomitoxin may be used in lieu of the term DON in the certification statements.

a. Qualitative Service.

For qualitative service, certify results as being equal to or less than a threshold (e.g., 2 ppm) or as exceeding the threshold.

"DON exceeds 2 ppm."

"DON equal to or less than 2 ppm."

b. Quantitative Service.

Use one of the applicable statements for certifying DON on a quantitative basis.

(1) When DON results are less than or equal to 0.5 ppm:

"DON equal to or less than 0.5 ppm."

(2) Certify DON test results between 0.6 ppm and the conformance limit (e.g., 5 ppm) to the nearest whole number in ppm.

"DON (result rounded to the nearest whole number) ppm."

NOTE: The use of this statement is limited when testing with kits having a conformance limit ending in .5 ppm.

(3) When quantitative test results are equal to the conformance limit (e.g., 2.5 ppm).

"DON (enter conformance limit) ppm."

NOTE: The use of this statement is used only for test kits having a conformance limit ending in .5 ppm.

(4) When quantitative test results are greater than the conformance limit (e.g., 2.5 ppm).

"DON exceeds (enter conformance limit) ppm."

- (5) Board Appeals performed by the High Performance Liquid Chromatography (HPLC) method are certified to the tenth ppm.

"DON (record actual results to the nearest tenth) ppm. Results based on HPLC Reference Method."

c. Optional Quantitative Statements.

- (1) At the request of the applicant, certify quantitative test results between 0.6 ppm and the conformance limit to the tenth ppm.

"DON (result in tenths) ppm."

- (2) At the request of the applicant, use the following statement when DON is not detected using a quantitative method (0.0 ppm).

"DON not detected."

NOTE: If subplot results are combined and averaged and the lot average is equal to 0.0 ppm, but an individual subplot result exceeds 0.0 ppm, then the statement "DON less than or equal to 0.5 ppm" must be used.

d. Additional Statements.

The statements listed below may be used in addition to the applicable qualitative/quantitative statements.

- (1) At the request of the applicant, convert and certify the ppm result to parts per billion (ppb) using an approved statement. To convert ppm to ppb, multiply the ppm result by 1000.

"(Actual ppm result) ppm is equivalent to (converted ppb results) ppb."

- (2) At the request of the applicant, convert and certify results in milligrams per kilogram (mg/kg) or micrograms per kilogram ($\mu\text{g/kg}$). Use the following equivalents to determine mg/Kg or $\mu\text{g/kg}$:

$$\text{ppm} = \text{mg/kg}$$

$$\text{ppb} = \mu\text{g/kg}$$

- (3) When certifying multiple DON results on the same certificate and the results are based on different sample types the certificate must reflect the difference. As a guideline, the multiple results are shown as follows:

"Sublot sample results: DON equal to or less than (threshold) ppm."

"Composite sample result: DON (actual result) ppm."

- (4) Use this statement when the applicant requests the type of test shown on the certificate:

"Results based on (indicate type of test used) method."

- (5) Upon request of the applicant, one of the following statements may precede the applicable results statement when test results are equal to or less than the specified threshold.

"The DON result is negative." OR "Negative DON."

NOTE: These certification statements may be modified as deemed necessary.

e. Reinspection, Appeal, Board Appeal Certificates.

- (1) Results are reported on the same kind of certificate issued for the original service and supersede the previously issued inspection certificate.

Enter the following statement on the reinspection/appeal/board appeal certificate:

"This certificate supersedes Certificate No. (number) dated (date)."

- (2) The superseded certificate is null and void as of the date of the subsequent (reinspection/appeal/board appeal) certificate.

"The superseded certificate has not been surrendered."

- (3) When a file sample is used, enter the following statement on the reinspection/appeal/board appeal certificate:

"Results based on file sample."

- (4) When reporting more than one official result on the same certificate but at different levels of inspection, explain this condition using one of the following applicable statements:

"(Grade, factor, or official criteria) results based on (new/file) sample. All other results are those of the original inspection service."

"(Grade, factor, or official criteria) results based on the appeal inspection. All other results are those of the (original inspection/reinspection) service."

"(Grade, factor, or official criteria) results based on the Board appeal inspection. All other results are those of the (original inspection/reinspection/appeal inspection) service."