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NMR HANDBOOK
CHAPTER 5
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CHAPTER 5

MONITORING PROGRAM

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5.1 GENERAL INFORMATION

The sunflower seed oil monitoring program is designed to monitor the accuracy of official sunflower seed oil determinations. Several methods are utilized to monitor particular elements in the sunflower seed oil testing process. These methods include local monitoring by the field office, TSD monthly check samples, intermarket sample exchanges, and special studies or collaboratives.

Monitoring information is used by field offices and inspection agencies for evaluating the performance of their local oil testing programs. TSD uses the information to evaluate the capability of the national sunflower seed oil testing program and the performance of the calibration standards.

Local monitoring by the field office and TSD check-sample results will identify service points having questionable oil results. Field offices and agencies must initiate follow-up and corrective action whenever oil testing problems are detected. Follow-up and corrective action includes investigating, identifying, and correcting oil problems. Intermarket sample exchanges, opinion samples, and special studies or collaboratives, are tools which are used to help identify the cause of discrepancies. TSD will assist the field in identifying the cause(s) of oil testing problems.

5.2 MONITORING FILE SAMPLES

Oil testing performance is evaluated through field office monitoring of official file samples. Sunflower seed oil program performance is determined by comparing original NMR oil results with monitoring results.

Specified service points are required to select and forward samples to the Grand Forks Field Office for monitoring. From the batch of monthly monitoring samples, the Grand Forks Field Office will select 10 samples and forward them to TSD for additional monitoring.

a. Selecting Samples.

Specified service points providing official NMR oil testing service shall use the following procedures to select monitoring samples.

- (1) Select 10 sunflower seed samples per month representing the range of oil values observed during the month. **Do not** select all samples from the same day. When less than 10 samples are tested during a month, select all samples tested.

Service points that perform a low volume of official oil determinations may, with field office concurrence, periodically make up sets of 10 samples to check the accuracy of their instrument.

- (2) Mail the samples to the Grand Forks Field Office by close of business on the last business day of the month.

Note: The field office or TSD may request additional samples for monitoring purposes.

b. Preparing Samples.

- (1) Using a Boerner divider, obtain a portion weighing approximately 200 grams from each sample selected for monitoring. If a location frequently receives submitted samples of insufficient size to provide a 200-gram portion, the field office manager may approve a smaller monitor portion.
- (2) Place each sample portion in a clear plastic bag and close securely.
- (3) Include a completed monitoring data worksheet with the samples. Indicate any unusual conditions observed in the "remarks" section of the worksheet.

c. Packaging Samples.

- (1) Place the selected sample portions and completed monitoring data worksheet in a canvas mailing bag.
- (2) Prepare the appropriate mailing tag (business reply tag for delegated and designated agencies, metered tag for FGIS) by indicating "SF Oil Monitoring" on the reverse side and securely attach it to the bag.

d. Monitoring Results.

The field office will prepare control charts and transmit the sunflower seed oil monitoring results to the appropriate specified service points for their review and follow-up action.

e. Evaluating Results.

The field office and specified service point managers are responsible for evaluating the control charts. If control chart rule violations occur, they must initiate follow-up action, take the necessary corrective measures, and document any action taken to resolve differences between original and monitoring data.

Documentation may be placed directly on the control chart, in a ledger or notebook, and must indicate the action limit violation and the corrective action taken.

5.3 BI-MONTHLY CHECK SAMPLES AND SPECIAL STUDIES

Bi-monthly check samples issued by TSD are used to monitor the consistency of results from individual specified service points over a period of time, identify potential intermarket differences between service points, and to track the capability of the national oil testing program in relation to the reference method. Special studies are designed to resolve differences in oil results either within or between markets.

a. Bi-monthly Check Samples.

TSD will select bulk samples of sunflower seeds representing the range of oil values typically seen in the market and prepare multiple sets of representative portions. On a bi-monthly basis, a portion of each of these samples will be distributed to specified service points, FGIS field offices, and the TSD reference method lab to be tested for oil content. Participants must complete the oil testing within 7 working days of receipt of the samples and transmit the results to TSD.

TSD will tabulate, plot, and analyze the data and prepare a report of the average results of all locations compared to TSD. In addition, a chart of the historical results for each location will be prepared. Plots and statistical analysis will be transmitted to all participants and supervising FGIS offices.

Field office and specified service point managers must initiate corrective action and follow-up when needed. The TSD will assist the field offices in resolving intermarket differences and investigate and take necessary action when excessive differences between the NMR oil and reference methods are indicated.

b. Special Studies or Collaboratives.

Special studies or collaboratives, conducted at the discretion of TSD, are designed to resolve differences in NMR oil results within or between markets. Because special studies are normally of an urgent nature, an expedient resolution of the problem is essential. Therefore, all participants must perform the requested tests and report the results to TSD within 5 working days.

5.4 INTERMARKET SAMPLE EXCHANGE

An intermarket sample exchange is used to isolate oil differences between inspection points. Oil testing laboratories will determine oil results on separate portions obtained from the same sample. Oil results are then compared to determine whether significant differences between locations exist. This procedure is particularly useful when there are sunflower seed shipments between two specified service points or an individual applicant is routinely receiving service from two service points.

There are no restrictions as to which offices may exchange samples. Specified service points are encouraged to exchange samples with other service points and field offices for the purpose of investigating and resolving intermarket inspection differences. A copy of the results of the exchange must be provided to the field office and/or TSD for review.