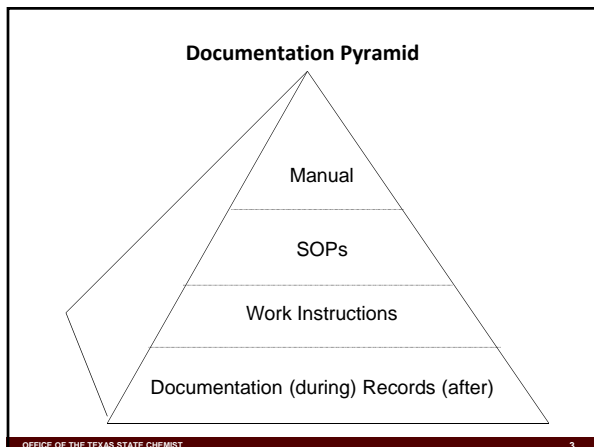


- ### Why do we use SOPs
- ❑ Facilitate easier understanding of a procedure by the person being instructed
 - ❑ Ensure more consistent training of multiple trainees by multiple trainers.
 - ❑ Allow reviewers, auditors, and regulators to evaluate performance of a task in practice to the SOP
 - ❑ Document the procedures to provide evidence of the consistency and completeness of the practice



- ### Criteria for Standard Operating Procedures
- ❑ Title
 - ❑ Purpose (objective or goal)
 - ❑ Scope
 - ❑ Responsibility
 - ❑ Frequency
 - ❑ Critical limits, operating limits, regulatory criteria
 - ❑ Precautions
 - ❑ Materials and Equipment
 - ❑ Procedures
 - ❑ Records
 - ❑ References

STANDARD OPERATING PROCEDURE for MANUFACTURING DIETS CONTAINING MAMMALIAN PROTEIN OVERVIEW

Objective: Implement procedures to prevent contamination of ruminant feeds with mammalian protein meals

Scope: The FDA has published a final ruling prohibiting the use of all animal protein products derived from mammalian sources in ruminant feeds.

Exemptions: Animal protein products derived from porcine or equine single species plants; proteins derived from blood, milk, gelatin and processed meat products that have been cooked and offered for human consumption or further heat processed for animal feed usage. Fat, tallow, amino acids and dicalcium phosphate (by-product of gelatin processing) are exempt. Poultry and fish meals from single species plants.

Standard Operating Procedures, cont.

Proper inventory of mammalian protein products must be maintained. This includes date and amount of receipt and appropriate lot numbers, record of amount added per batch, and ending inventory at the end of each working day.

Blended feed is to be mixed according to the following batch sizes and mix times.

| | |
|---|---------------|
| Forberg Double Paddle Batch Mixer | |
| Batch Size: | 500-1000 lbs. |
| Dry Mix Time: | 120 secs. |
| Wet Mix Time: | 180 secs. |
| Sprout-Waldron Double Ribbon Mixer | |
| Batch Size: | 500-1000 lbs. |
| Dry Mix Time: | 180 secs. |
| Wet Mix Time: | 180 secs. |

Standard Operating Procedures, cont.

- Adequate record keeping (e.g. batching records, batching log) will document any diets manufactured that contain mammalian protein sources (as listed above).
- After diet is manufactured, the mixer will be physically cleaned and pellet mill, conditioner, die and shroud (if diet is pelleted) will be cleaned as well.
- Finished feed that contains any mammalian protein meal must be accompanied by a tag with the statement: Do Not Feed to Cattle or Other Ruminants.
- Flushing will be done with a single 400 pound batch of M-487. Route the flush through the same flow as the diet containing the mammalian protein.
- The flush can be blended back into a diet that is not to be fed to ruminant animals. If the flush cannot be blended, it must be bagged and destroyed. All bags of flush material must possess a tag with the statement: Do Not Feed to Cattle or Other Ruminants.

Approved by _____ Date _____
Approved by _____ Date _____
Approved by _____ Date _____
Approved by _____ Date _____

HACCP-Based Standard Operating Procedures National Food Service Management Institute United States Department of Agriculture

- Title
- Purpose
- Scope
- Keywords
- Instructions
- Monitoring
- Corrective Action
- Verification and Record Keeping



<http://sop.nfsmi.org/HACCPBasedSOPs.php>

Using and Calibrating Thermometers (Sample SOP) – Overview

PURPOSE: To prevent foodborne illness by ensuring that the appropriate type of thermometer is used to measure internal product temperatures and that thermometers used are correctly calibrated for accuracy.

SCOPE: This procedure applies to foodservice employees who prepare, cook, and cool food.

KEY WORDS: Thermometers, Calibration

Using and Calibrating Thermometers (Sample SOP) – Instructions

- Train foodservice employees on using these procedures.
- Follow State or local health department requirements.
- Follow the food thermometer manufacturer's instructions for use. Use a food thermometer that measures temperatures from 0 °F (-18 °C) to 220 °F (104 °C) and is appropriate for the temperature being taken. For example:
 - Temperatures of thin products, such as hamburgers, chicken breasts, pizza, filets, nuggets, hot dogs, and sausage patties, must be taken using a thermistor or thermocouple with a thin probe.
 - Bimetallic, dial-faced stem thermometers are accurate only when measuring temperatures of thick foods. They may not be used to measure temperatures of thin foods. A dimple mark located on the stem of the thermometer indicates the maximum food thickness that can be accurately measured.
 - Use only oven-safe, bimetallic thermometers when measuring temperatures of food while cooking in an oven.

Using and Calibrating Thermometers (Sample SOP) – Instructions, cont.

- Have food thermometers easily-accessible to foodservice employees during all hours of operation.
- Clean and sanitize food thermometers before each use. Refer to the Cleaning and Sanitizing Food Contact Surfaces SOP for the proper procedure to follow.
- Store food thermometers in an area that is clean and where they are not subject to contamination.

Using and Calibrating Thermometers (Sample SOP) – Monitoring

- Foodservice employees will use either the ice-point method or boiling-point method to verify the accuracy of food thermometers. This is known as calibration of the thermometer.
- To use ice-point method:
 - Insert the thermometer probe into a cup of crushed ice.
 - Add enough cold water to remove any air pockets that might remain.
 - Allow the temperature reading to stabilize before reading temperature.
 - Temperature measurement should be 32 °F (± 2 °F) [or 0 °C (± 1 °C)]. If not, adjust according to manufacturer's instructions.

Using and Calibrating Thermometers (Sample SOP) – Monitoring, cont.

- To use boiling-point method:
 - Immerse at least the first two inches of the probe into boiling water.
 - Allow the temperature reading to stabilize before reading temperature.
 - Reading should be 212 °F (± 2 °F) [or 100 °C (± 1 °C)]. This reading may vary at higher altitudes. If adjustment is required, follow manufacturer's instructions.
- Foodservice employees will check the accuracy of the food thermometers:
 - At regular intervals (at least once per week)
 - If dropped
 - If used to measure extreme temperatures, such as in an oven
 - Whenever accuracy is in question

Using and Calibrating Thermometers (Sample SOP) – Corrective Action

- Retrain any foodservice employee found not following the procedures in this SOP.
- For an inaccurate, bimetallic, dial-faced thermometer, adjust the temperature by turning the dial while securing the calibration nut (located just under or below the dial) with pliers or a wrench.
- For an inaccurate, digital thermometer with a reset button, adjust the thermometer according to manufacturer's instructions.
- If an inaccurate thermometer cannot be adjusted on-site, discontinue using it, and follow manufacturer's instructions for having the thermometer calibrated.
- Retrain employees who are using or calibrating food thermometers improperly.

Using and Calibrating Thermometers (Sample SOP) – Verification & Record Keeping

Foodservice employees will record the calibration temperature and any corrective action taken, if applicable, on the Thermometer Calibration Log each time a thermometer is calibrated. The foodservice manager will verify that foodservice employees are using and calibrating thermometers properly by making visual observations of the employees during the calibration process and all operating hours. The foodservice manager will review and initial the Calibration Log daily. The Calibration Log will be kept on file a minimum of 1 year. The foodservice manager will complete the Food Safety Checklist daily. The Food Safety Checklist is to be kept on file for a minimum of 1 year.


DATE IMPLEMENTED: _____ BY: _____
DATE REVIEWED: _____ BY: _____
DATE REVISED: _____ BY: _____

Office of the Texas State Chemist SOPs

- Purpose
- Scope
- Responsibility
- Reagents
- Equipment
- Interferences and Troubleshooting
- Sample Preparation
- Determination
- Calculations
- Appendix

Summary

- Emphasize consistency and completeness
- Utilize SOPs in prerequisite programs
- Utilize SOPs in HACCP plan



END

Dr. Tim Herrman
Professor, State Chemist & Director,
Office of the State Chemist
Texas A&M University
(979) 845-1121
tjh@otscc.tamu.edu

OFFICE OF THE TEXAS STATE CHEMIST
Texas Feed and Fertilizer Control Service • Agriculture Analytical Service

