جامعة الملك فهد للبترول والمعادن
King Fahd University of Petroleum & Minerals

Document

Food Safety Manual

Environment, Health, and Safety Department

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Purpose and Scope

The purpose of this document is to ensure safe handling, preparation, storage, and service of food across all food operations within KFUPM, preventing contamination, foodborne illnesses, and unsafe practices. It applies to all food facilities, food handlers, and delivery personnel operating on campus.

These guidelines are aligned with:

- Saudi Food and Drug Authority (SFDA) regulations.
- Recognized international best practices (e.g., Codex Alimentarius and HACCP principles).

Compliance with this document is mandatory and forms part of KFUPM's operational expectations for all food facilities.

Structure and Application of the Guidelines

These guidelines are designed to ensure food safety across the entire food life cycle while addressing supporting hygiene, facility, and personnel requirements that enable safe operations.

Requirements are presented in logical operational order: food receiving, storage, preparation, cooking, temperature holding, service, and disposal. Additional sections cover personnel hygiene, medical fitness, pest control, and the maintenance of LPG, chimneys, electrical equipment, and record keeping.

All food facilities shall implement the sections applicable to their operations and follow the requirements and best practices outlined in these guidelines.

Guidelines

The following section defines the mandatory food safety guidelines, organized into two parts:

A. Food Life Cycle – covers operational steps for safe food handling from receiving to disposal.
B. Supporting Systems – covers the hygiene, infrastructure, and control measures that enable safe food operations which support the operational steps in the Food Life Cycle.

A. Food Life Cycle

Covers all stages from food receiving, storage, preparation & cooking, temperature control, service, delivery, and waste disposal.

1. Receiving Food Items

1.1. Approved Suppliers

- Purchase only from SFDA-registered suppliers and verify HACCP certification where applicable.

1.2. Temperature Checks

- Check temperature of the received food according to its type:

- Chilled foods: ≤ 5°C
- Frozen foods: ≤ -18°C
- Hot foods: ≥ 63°C

- Use calibrated thermometers to check each delivery and reject any items outside these limits.

1.3. Packaging and Appearance

- Inspect packaging for tears, leaks, or dirt.
- Reject damaged, bulging, rusted/dented cans or thawed frozen items.

1.4. Expiration and Shelf Life

- Check shelf life against invoice.
- Reject expired/near-expiry items.

1.5. Documentation

- Display meat source (local/imported) and type (fresh/frozen) for customer transparency.
- Keep records of delivery invoices, batch numbers, and acceptance/rejection status.
- For meat/chicken/fish, keep invoices from licensed slaughterhouses, stores, or importers for traceability.

2. Storage

2.1. Raw Ingredients

- Store meat, poultry, and seafood on the lowest shelves of refrigerators/freezers using dedicated drip trays.
- Store vegetables and fruits in breathable baskets, not sealed plastic covers.
- Avoid over-stacking of items inside refrigerators or freezers to allow air circulation.
- Store dry goods in airtight containers at least 15 cm off the ground & away from walls.
- Always store raw and cooked food separately to prevent cross-contamination.
- All items must be covered, clearly labeled with use-by or expiry dates, and in food-grade containers.
- Maximum refrigerated storage limits:
  - Raw fresh beef & lamb: less than 3 days
  - Raw fresh poultry: 1–2 days

2.2. Cooked and Ready-to-Eat Food (RTE)

- Maintain cooked food at:
  - ≥ 63°C if hot
  - ≤ 5°C if cold
- Label foods with preparation date and discard after the allowed serving time.
- RTE food on display:
  - Maintain hot food on display at ≥63°C
  - Do not mix new batches with existing batches on display
  - Keep foods covered and protected using sneeze guards or lids
  - Discard any food stored below minimum temperature (63°C) after 4 hours

2.3. Storage Hygiene

- Keep all storage areas clean, dry, and pest-free at all times.
- Follow a First-In, First-Out (FIFO) system for stock rotation.

- Inspect food items in storage for spoilage, damage, or contamination.
- Maintain good ventilation and adequate lighting in all storage rooms.
- For dry goods, keep original packaging or ensure expiry date is pasted on clean, airtight containers.
- Do not overload shelves and keep dry goods away from moisture.

2.4. Monitoring & Record

- Check fridge and freezer temperatures twice daily.
- Check hot holding and display temperatures every 2 hours.
- If temperatures are outside safe limits, move food to another working unit, and discard any food that has been in the danger zone (5°C–63°C) for more than 4 hours.
- Record temperature logs for all refrigerated, frozen, and hot-holding units.

3. Food Preparation & Cooking

3.1. Separation of Tasks

- Prepare raw and cooked foods in separate areas using dedicated cutting boards, knives, and utensils.
- Store raw and cooked foods separately to prevent cross-contamination.
- Ensure RTE preparation areas are protected from splashes or contamination from raw food.
- Do not “top up” or mix new batches into containers holding older food; empty, clean, and sanitize containers before refilling.

3.2. Thawing Procedures

- Thaw frozen food in the refrigerator, under cold running water, or in the microwave.
- Never thaw food at room temperature.
- Never refreeze thawed items.

3.3. Cooking

- Cook all foods to an internal temperature of at least 75°C.
- Hot food must be cooled immediately after cooking using ice/water baths or shallow containers; never store hot food at room temperature.
- Only potable water from sealed bottles should be used for food preparation and cooking.
- Frying oil should be discarded when quality indicators show excessive degradation (e.g., RTU >25% or oil becomes dark).
- Cook foods to an internal temperature of at least 75°C, verified using a calibrated thermometer.
- If cooked food is not served immediately, cool it quickly using ice/water baths or shallow containers. Do not leave hot food at room temperature.
- Use only potable water, preferably from sealed bottles, for all food preparation and cooking.
- Use frying oil within safe quality limits. Replace the oil when indicators show excessive degradation (e.g., oil becomes dark, develops off-flavors, or RTU >25%).

3.4. Re-Heating

- Reheat cold cooked food to a minimum internal temperature of 75°C, verified using a calibrated thermometer.
- Only reheat food once and do not reheat multiple times.
- Use appropriate methods for reheating (stovetop, oven, microwave to ensure even heating throughout.

4. Temperature Control

4.1. Cooking Temperatures

- Poultry: Cook to an internal temperature of 74-75°C.
- Minced Meat: Cook to 72–75 °C
- Fish: Cook to 70°C.
- Eggs: Cook to 70°C.
- Use calibrated thermometers to check internal temperatures.

4.2. Cooling/Rapid Cooling

- Cool hot food from 60°C to 21°C within 2 hours, then from 21°C to 5°C within an additional 4 hours.
- Use shallow containers or ice baths to facilitate rapid cooling.

4.3. Transport / Delivery Temperatures

- Hot Foods: Transport at 63°C or higher.
- Cold Foods: Transport at 5°C or lower.
- Use insulated containers and check temperatures at dispatch and arrival.
- Install thermometers and maintain temperatures during transport.

5. Service of Food

- Protect ready-to-eat food during service using lids or covers.
- Avoid bare-hand contact with food and use gloves and serving tools while serving.
- Ensure staff handling food do not handle cash or other non-food items during service.
- Do not return any food that has been served to customers back into service containers.

6. Delivery Procedures

6.1. Health Cards for Delivery Staff

- Delivery personnel must possess valid health cards indicating medical fitness to handle food.

6.2. Delivery Procedures

- Use food-grade, leak-proof packing to prevent contamination.
- Maintain appropriate temperatures during transport (hot foods at 63°C or higher, cold foods at 5°C or lower).

6.3. Delivery Vehicle Maintenance

- Regularly clean and sanitize delivery vehicles.
- Ensure vehicles are equipped with proper insulated containers to maintain food temperatures.
- Conduct routine inspections to ensure vehicles meet hygiene standards.

7. Waste Management

7.1. Food Waste Disposal

- Separate food waste, recyclables, and general waste.
- Use covered, foot-operated leak-proof bins.
- Remove waste frequently or when ¾ full to prevent waste accumulation, especially at the end of the shift.

7.2. Oil and Grease Disposal

- Collect used cooking oil in a metallic container.
- Transfer it regularly to a centralized oil tank in a designated area outside the facility to prevent accumulation.
- Dispose of through licensed waste disposal services.
- Ensure the oil collection area is kept safe, with no smoking or open flames nearby.
- Do not pour oil or grease down drains or toilets.

7.3. Charcoal / Coal Ash Disposal (BBQ & Shawarma Operations)

- Used charcoal and ash shall be completely extinguished and cooled before disposal.
- Hot coal must never be disposed of in plastic bins, general waste containers, or near combustible materials.
- Collect coal ash only in heat-resistant metal containers with tight-fitting lids.
- Dispose of coal into a centralized collection container which is stored away from general waste and combustible items.
- Staff handling charcoal shall be trained in safe handling procedures.

7.4. Bin Cleaning and Maintenance

- Clean bins daily to prevent odors and contamination using proper cleaning agents.
- Store bins in a clean, dry area away from food preparation zones.

B. Supporting Systems

Includes health, hygiene, cleaning, pest control, fire, and equipment maintenance requirements that enable consistent food handling throughout all operational steps of the food life cycle.

8. Medical Fitness and Health Certificates

8.1. Medical Fitness

- Ensure all staff are medically fit to handle food.
- Exclude staff with symptoms of disease, open wounds, or blisters until fully recovered.

8.2. Health Certificates

- All food handlers in the food facility must hold a valid health certificate issued in line with municipal requirements and applicable national food-safety regulations.
- The food handlers must undergo a medical examination at an approved health center along with any mandated food safety training.
- Each worker's health certificate must be verifiable in Balady.
- Any worker whose health certificate is expired, suspended, or not verifiable must be immediately excluded from food facility until the certificate is fully compliant.

- Health certificates must be renewed according to municipal timelines, and latest copies must be available on site at all times.

9. Personnel Hygiene

9.1. Uniforms and Protective Clothing

- Provide staff with clean aprons, hairnets or caps, gloves, and closed-toe, non-slip shoes.
- Wear clean uniforms and change them if soiled or after each shift.
- Keep spare uniforms available to ensure a clean one is available while the used one is washed.
- Provide locker rooms and designated areas for personal clothing.

9.2. Handwashing Protocols

- Wash hands before handling food, after using the toilet, after touching waste, after coughing or sneezing, and after handling money or cleaning tasks.
- Use warm water and soap for at least 20 seconds, covering palms, backs of hands, fingers, thumbs, and nails.
- Dry hands thoroughly using disposable paper towels or air dryers.
- Provide liquid soap, paper towels, and handwashing signs at all handwashing stations.

9.3. Gloves

- Use clean, food-grade, and powder-free gloves.
- Gloves must be changed immediately after touching non-food surfaces (e.g., face, phone, door handles).
- Gloves do not replace handwashing. So, wash hands before wearing and after removing gloves.

10. Cleaning and Sanitation

10.1. Utensils and Dishwashing

- Implement a 3-compartment sink system for washing, rinsing, and sanitizing utensils:
  - Washing: Use warm water and detergent to remove food residues.
  - Rinsing: Rinse thoroughly with clean water.
  - Sanitizing: Immerse in a food-graded sanitizer solution at the recommended concentration as per manufacturer instructions.
- Air-dry utensils after sanitization and do not use cloths for drying food-contact surfaces.

10.2. Cleaning of Food Contact Surfaces

- Clean food-contact surfaces such as preparation tables, cutting surfaces, counters, and food-contact parts of equipment before starting work, between tasks, and whenever contamination occurs.
- Use approved food-grade detergents and sanitizers suitable for food-contact surfaces.
- Allow surfaces to air-dry or dry using clean disposable towels.
- Immediately clean and sanitize surfaces after handling raw meat, poultry, or seafood and before contact with ready-to-eat food.

10.3. Cleaning of Non-Food Contact Surfaces

- Clean non-food contact surfaces such as equipment exteriors, shelves, cupboards, doors, and handles as they become dirty and at least daily.
- Clean floors regularly during operations and at the end of each shift to prevent grease, debris, and water accumulation.
- Clean refrigerators, freezers, and storage racks weekly or as needed to maintain cleanliness and prevent contamination.
- Clean waste bins daily and wash them with detergent; perform thorough cleaning at least weekly.
- Clean chimney filters and grease traps at least weekly or more frequently if grease buildup is observed.

10.4. Chemical Safety

- Store cleaning chemicals away from food and food contact surfaces.
- Ensure all chemicals are clearly labeled and stored in original containers.
- Provide staff with appropriate PPE when handling chemicals.

11. Pest Control

11.1. Pest Management Program

- Maintain an active contract with a licensed pest control company.
- Conduct pest control activities only through approved and licensed professionals.
- Inspect the premises regularly for any signs of pests (e.g., insects, rodents, droppings).
- Immediately report any pest activity and arrange treatment without delay.
- Install an adequate number of insect and rodent traps at strategic locations.

11.2. Inspections and Treatments

- Monthly inspections and treatment of storage, kitchen, waste areas (more if needed).
- Maintain records of all sightings, treatments, and inspections.

11.3. Premises Maintenance

- Keep premises clean, dry, and properly sealed to prevent pest entry and harborage.
- Store and dispose of waste in a manner that does not attract pests.
- Train staff on pest prevention measures and reporting procedures.

12. Fire Protection, LPG, Chimney, and Electrical Safety

12.1. Fire Protection

- Equip kitchens with appropriate fire extinguishers suitable for kitchen fires (e.g., Class K for grease fires).
- Inspect and maintain fire extinguishers regularly to ensure they are functional and accessible.
- Ensure smoke and heat detection devices are unobstructed and operational at all times.

12.2. LPG Safety

- Use LPG cylinders supplied only by licensed and certified vendors.
- Inspect cylinders, regulators, and pipelines visually on a weekly basis and through professional inspection at least once every four months.

- Store LPG cylinders upright in well-ventilated areas, away from heat sources, open flames, and combustible materials.
- Maintain a minimum distance of 3 m between unprotected cylinders and exhaust ducts, cooking equipment, or ignition sources.
- Allow only trained personnel to handle LPG cylinders.
- In case of gas leakage, immediately close the valve, ventilate the area, evacuate personnel, and contact emergency services at 013-860-4444.

12.3. Chimneys Hoods

- Clean hoods, ducting, exhaust fans, and grease filters regularly (daily/weekly depending on usage).
- Perform deep cleaning of the chimney through professional cleaning either quarterly or semiannually, depending on usage.
- Conduct periodic inspections to ensure proper airflow of the exhaust of chimney.

12.4. Electrical Equipment

- Regularly inspect electrical equipment, cords, plugs, and outlets for damage or wear.
- Promptly repair or replace faulty equipment.
- Ensure all electrical installations comply with safety standards and are appropriate for high-power kitchen appliances.
- Do not use extension cords for high-power appliances and avoid overloading circuits.

13. ***Documentation and Record Keeping***

- Maintain records for all critical activities, including but not limited to:
  - Health certificates
  - Food receiving and temperature monitoring (Ref. Appendix B,C & D)
  - Cleaning and maintenance of facility equipment (Ref. Appendix A)
  - Pest control inspections and treatments
- Keep records organized, legible, and readily available in the facility in the facility for inspection, review, or verification by authorized personnel.

Conclusion

These food safety guidelines provide a comprehensive framework for food operations at KFUPM, covering both operational steps—from receiving and storage to preparation, cooking, holding, service, delivery, and disposal—and supporting systems, including personnel hygiene, cleaning, pest control, and fire and equipment safety.

All food facilities are expected to integrate these guidelines into their daily operations, continually monitor compliance, and take corrective actions as necessary.

Appendix A- Cleaning Record Sheet/ سجل تدوين أعمال النظافة

	الجهاز / الموقع Equipment/Area	Sunday الأحد		Monday الأثنين		Tuesday الثلاثاء		Wednesday الأربعاء		Thursday الخميس		Friday الخميس		Saturday السبت	
		Time الوقت	Sign التوقيع	Time الوقت	Sign التوقيع	Time الوقت	Sign التوقيع	Time الوقت	Sign التوقيع	Time الوقت	Sign التوقيع	Time الوقت	Sign التوقيع	Time الوقت	Sign التوقيع
First Time/المرة الأولى	Kitchen Floors/أرضيات المطبخ														
	Countertops/أسطح المطبخ														
	Cooking Equipment/معدات الطهي														
	Refrigerators/Freezers/الثلاجات														
	Preparation Tables/طاولات التحضير														
	Dishwashing Area/غسيل الصحون														
	Waste Disposal Area/ التخلص من النفايات														
Second Time/المرة الثانية	Kitchen Floors/أرضيات المطبخ														
	Countertops/أسطح المطبخ														
	Cooking Equipment/معدات الطهي														
	Refrigerators/Freezers/الثلاجات														
	Preparation Tables/طاولات التحضير														
	Dishwashing Area/غسيل الصحون														
	Waste Disposal Area/ التخلص من النفايات														
Third Time/المرة الثالثة	Kitchen Floors/أرضيات المطبخ														
	Countertops/أسطح المطبخ														
	Cooking Equipment/معدات الطهي														
	Refrigerators/Freezers/الثلاجات														
	Preparation Tables/طاولات التحضير														
	Dishwashing Area/غسيل الصحون														
	Waste Disposal Area/ التخلص من النفايات														

	Sunday/الأحد	Monday/الأثنين	Tuesday/الثلاثاء	Wednesday/الأربعاء	Thursday/الخميس	Friday/الخميس	Saturday/السبت	Sunday/الأحد
Date/تاريخ	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /
Sign / التوقيع								

Appendix B-Food Deliver Record / سجل استلام الأطعمة النيئة

Date/التاريخ	Food Item /نوع الطعام الأطعمة النيئة (لحوم / دواجن / أسماك)	Supplied By / اسم المورد	Expiry Date / تاريخ الصلاحية	Temp./درجة الحرارة *°C	Comments/تعليقات	Sign/التوقيع

Note: 1. Chilled food: max. **5 C**; 2. Hot Food: minimum **63C**

ملاحظة: درجة حرارة الطعام المبرد بحد أقصى **5 درجات** مئوية و درجة حرارة الطعام الساخن على الأقل **٦٣ درجة** مئوية.

Weekly Verification/التحقق الأسبوعي	/ /	/ /	/ /	/ /	/ /
Sign / التوقيع					

Appendix C-Hot Hold/Display Records /سجل تدوين درجات الحرارة لوحدة عرض الطعام السخان

Date/التاريخ	Food/الطعام	Time put in Hot-Hold وقت وضع الطعام للتسخين	Core Temp. (after 2 hrs.) درجة الحرارة بعد ٢ ساعات	Core Temp. (after 4 hrs.) درجة الحرارة بعد ٤ ساعات	Core Temp. (after 6 hrs.) درجة الحرارة بعد ٦ ساعات	Comments/تعليقات	Sign/التوقيع

Note: Keep hot food above **63C**

ملاحظة: احفظ الطعام الساخن على درجة حرارة **٦٣ مئوية** .

Weekly Verification/التحقق الأسبوعي	/ /	/ /	/ /	/ /	/ /
Sign / التوقيع					

Appendix D- Fridge/Cold Room/Display Chill Temperature Records

سجل تدوين درجة حرارة ثلاجة العرض – الثلاجة - الفريزر

Month/الشهر: ..... Year/السنة: .....

Temp. درجة مئوية	ثلاجة ١/ Ref. 1		ثلاجة ٢/ Ref. 2		ثلاجة ٣/ Ref. 3		ثلاجة ٤/ Ref. 4		ثلاجة ٥/ Ref. 5		تعليقات/Comments	التوقيع/Sign
تاريخ/ Date	AM صباحا	PM مساءا	AM صباحا	PM مساءا	AM صباحا	PM مساءا	AM صباحا	PM مساءا	AM صباحا	PM مساءا		
1.												
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31.												

Note: Temperature of food must be at least **5℃.** ملاحظة : درجة الحرارة المثالية للثلاجات **٥ مئوية**

Weekly Verification التحقق الأسبوعي/	/ /	/ /	/ /	/ /	/ /
Sign / التوقيع					