



**East, Central and Southern African  
Health Community**

# **MANUAL FOR COMMERCIAL INSPECTION OF FORTIFIED FOODS**



**FIRST EDITION - 2007**



**EAST, CENTRAL AND SOUTHERN HEALTH  
COMMUNITY (ECSA-HC)**

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## Foreword

Over the last five years, the East, Central and Southern African Health Community (ECSA-HC) has continued to undertake advocacy and technical assistance to assist member countries to embrace and scale up food fortification initiatives as a key strategy to reduce micronutrient malnutrition in the region.

ECSA has been working with partners in direct response to resolutions of the Conference of Health Ministers to scale up food fortification initiatives as a critical strategy in fighting the devastating effects of micronutrient malnutrition among populations of member states. ECSA partners in the Regional Food Fortification Initiative include the A2Z Project, USAID, UNICEF, Micronutrient Initiative (MI), and ICCIDD, among others.

Part of the outcome of the intensified collaborative initiative, is a series of fortification guidelines developed to guide the industry during the fortification process of staple foods and provide government food inspectors a reference point in enforcing the standards.

Similarly, food control manuals have been developed for the Industry and the Government to provide technical reference resources that cover the entire fortification process to ensure that the fortified foods are safe and adequately fortified with the required fortificants.

This manual is part of a series of manuals on food fortification and is meant to directly contribute to the overall effort to strengthen food fortification in the region.

It is our hope that the use of this manual will help strengthen food control activities in our countries in order to deliver safe and quality fortified foods to the ECSA population.

Steven Shongwe  
Executive Secretary  
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The manual is as a result of joint work by distinguished food fortification experts in developing countries. During the drafting of this manual, consultations with senior officers from food control departments of the ECSA member states were made and input incorporated.

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### ***Disclaimer***

*The content of this manual can be adapted to suit country specific contexts. In such a case, the content of the resulting document will be the sole responsibility of the organization adapting the manual and will not represent the views of the authors and that of the ECSA-HC. The Use of the content of this manual should be duly acknowledged*

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## **MANUAL FOR COMMERCIAL INSPECTION OF FORTIFIED FOODS**

Commercial inspection is the verification of legal compliance of fortified foods sold in retail supermarkets, markets, grocery stores, and wholesale stores. It also includes inspection at bakeries as a convenient sampling site for fortified foods namely salt, sugar, flour and oil. This monitoring allows for the detection in the market of brands that are not approved by the Ministry of Health or do not comply with local fortification regulations. It also helps to confirm whether brands that have previously been inspected in factories and importation sites are indeed fulfilling the requirements as claimed by inspectors during the external monitoring process. When non-compliance is observed in certain brands, this type of monitoring provides a warning signal to indicate that the quality control and quality assurance procedures are not adequate in the factories, and that the visits by inspectors for auditing and inspection are failing in enforcement. In such a situation there is need for improvement of the enforcement system. Furthermore, commercial monitoring serves as an education tool since food inspectors are able to inform the retailers about the existence of the fortification program, the benefits of fortification, their role as retailers and their rights as consumers.

Commercial monitoring is the responsibility of the Food Control authorities, in cooperation with other governmental bodies in charge of enforcing these regulations such as the department of Consumers Protection Affairs and government officials from ministries of Trade, Industry and Finance. Monitoring at this level should also involve municipal inspectors and other local officials in carrying out inspection visits and taking of samples in their respective areas. Food Control authorities are responsible for preparing the Sampling Plan and providing the technical training to carry out the inspections.

This manual describes the procedures for carrying out the inspection visits at any retail store selling fortified foods. It also describes those responsible for each stage. As any enforcement procedure carried out by a governmental body, warning and legal actions should be given when non-compliances are observed.

Results of commercial monitoring activities should be consolidated in reports to be issued twice a year. The reports assist defining the degree of success in fulfilling the fortification goals and spells out obstacles that need to be overcome and actions to be taken. It is further recommended that an annual report be prepared and published where data is presented graphically to describe the status of the fortification program in the country, along with information from other general food control or surveillance activities.

This manual is divided into two sections:

- Planning commercial monitoring visits
- Conduction inspection visits to retail, wholesale stores and bakeries.

## **A. PLANNING COMMERCIAL MONITORING VISITS**

### **I. Objectives and Accountability**

The purpose of planning for commercial monitoring visits is to ensure that:

- Resources to conduct the visits at retail stores around the country throughout the year are allocated.
- Inspectors receive appropriate training on how to assess the compliance of fortified foods in the field.

The *supervisor of Food Control inspectors* is responsible for achieving these objectives and submitting the monitoring plan to the *Head of the Food Control Authority*.

### **II. Procedure**

The supervisor of the Food Control inspectors will perform the following tasks:

#### **a. Plan, budget and schedule**

1. Plan at least one visit a year to each district based on the total number of districts in the country. Frequency and intensity of sampling depends on the population density, amount of food sold in the region, and risk factors such as location close to the borders with other countries where the food is not fortified. Bakeries may be included as a convenient sampling place.
2. Estimate the financial resources that will be needed considering:
  - Personnel
  - Transportation and fuel
  - Approximate number of samples to be analyzed and the cost
  - Materials (brochures or leaflets)
3. Report to the Head of Food Control Authority on the plan, schedule and estimated budget to carry out the yearly activities.
4. Ensure cooperation and coordination among the governmental parties involved in the enforcement of regulations as this is important in order perform the exercise effectively and make efficient use of resources. It is recommended that Municipal food inspectors be included during commercial monitoring activities in areas under their jurisdiction.



## **b. Prepare educational materials and training for the inspectors**

1. Prepare brochures or leaflets with information on the general labeling requirements for food in general (e.g. registration of approved brands, name and address of supplier, expiration date, net weight, and others) as well as specific information on labeling of fortified foods particularly sugar, salt, wheat flour, maize meal and oil.
2. Plan annual training workshops for the inspectors on how to conduct the inspection visits to wholesale and retail stores and bakeries, and how to take samples and record the information during the visits.
3. List of approved brands per food. This list should be updated every 3 months or more frequent if needed.

## **c. Define actions to be taken**

Define the actions to be taken when non-compliance is found during a visit. These actions might include warning letters and legal actions, which should be considered within the legal framework of the Food Control work. The following actions are suggested:

### **Retail, wholesaler or bakery:**

- At the retail and wholesale level, when a brand is not on the approved list or registered with the Ministry of Health to be marketed in the country, the product shall be quarantined, and investigation started. When it is confirmed that the brand or producer is not registered, then the product should be confiscated.
- In the case of bakeries, they shall prepare bread and other foods derived from wheat flour, oil, salt and sugar, using only products that have been approved. If unauthorized product is found in a bakery, the case should be treated as described above.
- If a brand is registered for commercialization, but it is expired or shows signs of spoiling or non-hygienic conditions, the product should be quarantined and the case reported to the local Food Control Division to take the proper action.
- Micronutrient testing is not carried out at this level; the food samples would be sent by the supervisor of the local food inspection to the central Food Control Authority office together with the report forms.

### ***Actions taken by the central Food Control Authorities***

- When a brand does not meet the minimum legal requirements (micronutrient content, labeling and packaging) depicted in the fortification regulations, a warning letter shall be sent to the factory, packaging plant or importer responsible for the brand. Sampling priority should be given to these brands in future visits. Extra visits to the factories might be considered within the external monitoring activities.
- If the brands belonging to a specific factory consistently fail to comply with the legal minimum, the Food Control authorities should consider organizing a comprehensive audit visit and if there is proof that noncompliance is intentional, they should apply the prescribed legal actions, which may include the banning of the brand.

### **III. Records and Reporting**

The *supervisor of the Food Control inspectors* should keep records of the plan, schedule and estimated budget.

The information is to be reported to the *Head of the Food Control Authority*.

## B. CONDUCTING INSPECTION VISITS TO RETAIL, WHOLESALE STORES AND BAKERIES

### I. Objectives and Accountability

The purpose of the inspection visits to retail, wholesale stores and bakeries is to ensure that:

- Fortified foods comply with the requirements established in the national standard for general labeling of prepackaged foods and that they have been approved by the Food Control authority.
- Fortified food items sold on the market or used in bakeries comply with national criteria for micronutrient fortification. Specifically the fortified food should satisfy the following:

<b>Fortified food</b>	<b>Presence</b> <i>(All <u>single</u> samples tested must show presence of indicator micronutrient)</i>	<b>Levels</b> <i>(80% of <u>composite</u> samples of each brand comply with the minimum and maximum levels of micronutrients)</i>
Oil	Vitamin A (Retinol)	Retinol: 10-45 mg/L
Sugar	Vitamin A (Retinol)	Retinol: 2-15 mg/kg
Refined Wheat Flour	Vitamin A (Retinol) and Iron	Iron: > 40 mg/kg Retinol: 0.5-3 mg/kg
Whole Wheat Flour	Vitamin A (Retinol) and Iron	Iron: > 40 mg/kg Retinol: 0.5-3 mg/kg
Maize Flour	Vitamin A (Retinol) and Iron	Iron: > 15 mg/kg Retinol: 0.2-1.0 mg/kg
Whole Maize Flour	Vitamin A (Retinol) and Iron	Iron: > 30 mg/kg Retinol: 0.2-1.0 mg/kg
Salt	Iodine	Iodine: 20-60 mg/kg

The *Food Control Authority inspectors* or *municipal/district food inspectors* are responsible for checking compliance of packaging and labeling, and for taking samples of the foods for analysis. They should report on the results of their visits to their *supervisor*. The *supervisor* is then responsible of sending samples to the central office, and for consolidating the reports on the findings and reporting every month to

the *Head of the Food Control Authority*. In turn, the Food Control Authority should prepare consolidated reports every 6 months and send to other government and auxiliary bodies, such as the National Food Fortification Alliance, involved in the supervision of the food fortification programs.

## II. Procedure

### (a) Visits by Inspectors

1. When inspectors arrive in the villages, towns or cities, they should visit the most popular grocery stores, markets or supermarkets, bakeries and distribution centers, where people buy their supplies.
2. Inspectors should enter the store and show their credentials identifying them as inspectors of the Food Control authorities. They should follow on with a brief explanation about the purpose of the visit.
3. They should record the name and address of the store, date of visit, name and address (town, village, district, others), in **Table B-1**.
4. Inspectors should be able to identify the approved brands sold in the store and using **Table B-1** they should record name, responsible of the product, use of the fortification logo, the expiration date and lot number if specified.
5. Choose a sealed packaged of about **0.5 kg** or **0.1 L** of each brand of each fortified food in the store. If the food is not available in such quantities, take the nearest larger retail-size presentation. If packages are much smaller, collect sufficient packages to make up the specified weight; ( e.g. 2 packages of 250 g).
6. If the food is sold by weight or volume from large sacks or a barrel, take approximately 0.5 kg or 0.1 L sample from this food product. Ensure that the sack or the barrel is new; otherwise there is no guarantee that the product inside corresponds to the factory name in the container.
7. Pack the samples inside a box and transport them to the local Food Control office, which in turn sends copies of report and the samples to the Food Control Authority headquarters every month.

### b. Labeling samples and sending them to the laboratory for analysis

8. Upon arrival at the Food Control headquarters, the person in charge of the food fortification programs should split each package of

sample taken in two. Label each sample using an appropriate code for each brand, and consecutive numbers for each sample of each brand. Code of each brand can be modified during the year.

Send one replicate of each sample to an appropriate laboratory. Keep the other replicate as reference until the results from the laboratory are received and acceptable.

### **c. Analysis of the samples**

9. Upon receipt of the samples, the laboratory should first detect the presence of the key micronutrients in all single samples using qualitative tests.
10. Composite samples based in brand are then prepared by mixing equal amounts (approximately 500 g or 100 mL) of the single positive samples. Up to 5 single samples may be mixed in the same composite sample.

Quantitative determinations are then carried out for key micronutrients.

11. The laboratory prepares reports that include the total number of single samples per brand, the number and percent of positive single samples per each micronutrient tested qualitatively, and the individual results of the quantitative tests of each micronutrient analyzed in the composite samples per brand. Results could be categorized in the following micronutrient levels: below the legal minimum, within the legal range, above the upper tolerable level (see **Table B-2** for an example).
12. Laboratory reports are sent to the responsible of the food fortification programs in the Food Control headquarters, and the supervisor of food control in the corresponding local office.

### **III. Records and reporting**

Every 6 months, the Food Control Authority should prepare a consolidated report from the commercial monitoring, broken down by brand, presenting the percentage of samples showing the presence of the nutrient, below the legal minimum, within the legal range, and above the upper tolerable level, as well as any action taken when failures were detected. These reports should also be forwarded to the National Coordinating Committee of the Fortification Programs, as well as the supervisors of food inspectors in all the local offices.

**COMMERCIAL MONITORING-TABLE B-1**

**LABELING OF BRANDS AND COLLECTION OF SAMPLES IN RETAIL STORES AND BAKERIES**

Date: \_\_\_\_\_ Page No. \_\_\_\_\_  
 Place (village/town/neighborhood/city): \_\_\_\_\_ District./Region: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Store Owner: \_\_\_\_\_  
 Store Name: \_\_\_\_\_ Address: \_\_\_\_\_

Sample No.	FOOD	BRAND	LABELING INFORMATION					OBSERVATIONS
			Fort. Logo	Responsible	Lot #	Exp. date	Health/Nutritional Claims	





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