Guidelines of the National Fortification Alliance of Liberia

ENRICHED
Recommended by the National Fortification Alliance

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Acknowledgments

On behalf of the National Fortification Alliance of Liberia, I wish to thank our cooperating partners Project Healthy Children and the Ministry of Health and Social Welfare, especially the Nutrition Division, the Ministry of Commerce and Industry, the Ministry of Information and Tourism, the Ministry of Finance , UNICEF, WFP and all those in the food industry for their support and their determination to fortify the food vehicles all over Liberia. and for their relentless efforts in supporting our program. As the result of their cooperation and their continued support, today our children are ferried from malnutrition.

I knowledge our supporters, who stood by us as a nation in ensuring that our children are free from being born with diseases resulting from micronutrient deficiencies. We give special thanks to Hendrike Braun, Mr. Lasana Donzo, Steve Mambu, Rufus Kakar, and Kou Baawo who stood by us during the difficult time we had.

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We must also express our gratitude to Mrs. Baawo, Mr. Sei Gahn and Mr. Steve Marvie, for the level of coordination that helped us achieve results in all of our activities and programs in the country,

We look forwards to PHC and our cooperating partners for other supports in funding.

Morris Kumeh
Chair of the NFA

Marion Mykers
Vice-Chair of the NFA

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Abbreviations and Acronyms

CFSNS	Liberia Comprehensive Food Security and Nutrition Survey
COA	Certificate of Analysis
DEOH	Division of Environmental and Occupational Health
ECOWAS	Economic Community of West African States
FFL	Food Fortification Logo
GMP	Good Manufacturing Practices
GoL	Government of Liberia
HCCP	Hazard Analysis Critical Control Points
IRR	Implementing Rules and Regulations
LISGIS	Liberia Institute of Statistics and Geo-Information Services
LMNS	Liberia National Micronutrient Survey
MICAT	Ministry of Information, Culture and Tourism
MDG	Millennium Development Goals
MIA	Ministry of Internal Affairs
MoA	Ministry of Agriculture
MoCI	Ministry of Commerce and Industry
MoE	Ministry of Education
MoF	Ministry of Finance
MoHSW	Ministry of Health and Social Welfare
MoJ	Ministry of Justice
MoU	Memorandum of Understanding
NFA	National Fortification Alliance
NSL	National Standards Laboratory
PHC	Project Healthy Children
PMC	Premier Milling Company
QA	Quality Assurance
QC	Quality Control
TOR	Terms of Reference
UEMOA	West African Economic and Monetary Union
USI	Universal Salt Iodization
VMD	Vitamin and Mineral Deficiency
WFP	World Food Program

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Foreword

The first Millennium Development Goal (MDG) focuses on eradicating extreme poverty and hunger. Although much has been achieved, one out of eight people in the world remain hungry – 870 million people[1]. In the past years there has been increased interest specifically around vitamin and mineral or micronutrient malnutrition as one critical means of addressing MDG 1. This form of hidden hunger not only imposes incredibly high economic costs on developing countries, but also substantially contributes to disease on a global level. Among other things, dietary deficiencies of vitamins and minerals, which are only required in small quantities, cause mental retardation in children, higher chances of infection and disease, decreased work capacity, blindness, low-birth weight infants, and premature maternal and child death. Longer-term consequences of such deficiencies can lead to chronic disease. Micronutrient programs have proven to be extremely cost-effective with high returns in terms of both human and economic resources. As a food-based approach, food fortification programs offer a number of advantages over other interventions. Fortified staple foods contain the amount of micronutrients necessary for a well balanced diet and are widely consumed and distributed throughout the population. Fortification, therefore, has the potential to impact the nutritional status of rural and urban populations. Country specific consumption data ensures that staple foods are fortified based on pre-existing food consumption patterns and the unique needs of the country's population. Furthermore, the delivery system for the fortified foods is already established and in place through the private sector. A large number of government ministries, importers, local industry, international non-governmental organizations and the general public are involved in the fortification program, ensuring a holistic and sustainable approach to combating micronutrient malnutrition.

Since 2006, the Government of Liberia has invested over USD 500 million into healthcare and infrastructure necessary to allow access to health care facilities, particularly in the rural regions of the country and especially during rainy season.[2] A range of strategies are ongoing aimed at reducing hunger and malnutrition in the country, the national food fortification program being one of these strategies. On August 18th, 2013, the National Food Fortification Alliance (NFA) of Liberia revised and adopted new food fortification standards for sugar, wheat flour, salt and cooking oil in line with national consumption patterns and harmonized with the Economic Community of West African States (ECOWAS) region in order to preclude any barriers to trade. For maximum impact, the NFA – based in the Nutrition Department of the Ministry of Health and Social Welfare (MoHSW) and chaired by the Ministry of

1 United Nations: We can End Poverty. Millennium Development Goals and Beyond 2015. Target 1.C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger. URL: http://www.un.org/millenniumgoals/poverty.shtml (Last visited: 16.01.2014).

2 Republic of Liberie (2012): 2012 National Sustainable Development Report, pg. 22. URL: http://sustainabledevelopment.un.org/content/documents/598liberiantreport.pdf (Last visited: 16.01.2014).

Commerce and Industry (MoCI) – encompasses a variety of stakeholders, including the Ministry of Education, Ministry of Finance, Ministry of Information and Tourism, Ministry of Internal Affairs, Ministry of Justice, the National Consumer Council, the private sector, civil society and international agencies.

These Guidelines offer a comprehensive overview of the Liberian fortification program, including the strategy, regulations, responsibilities and logo guidelines. They were created in cooperation with the entire NFA, including all ministries, international agencies, importers, and industry and are designed to be used as a national blueprint for the program moving forward. Although mandatory, changes can be made if reviewed by the NFA and approved by the MoHSW and the MoCI. These Guidelines, and the fortification program as such, can only be successful if the comprehensive and all-inclusive approach is continued. Changes in the nutritional status of Liberians can only sustainably improve if all stakeholders, directly or indirectly involved in the production, distribution, or quality of foods, cooperate and effectively fulfill their respective responsibilities.

These Guidelines are unique and we are grateful to our colleagues and our partner Project Healthy Children (PHC) who have supported us in the past and continue to do so to ensure a sustainable food fortification program in Liberia.

Addy Axel
Minister of Commerce and Industry

Dr. Beatrice Dahn
Deputy Minister of Health and Chief Medical Officer

Executive Summary

Chronic malnutrition and micronutrient deficiencies persist in Liberia as outlined by the 2011 Micronutrient Deficiency Survey. As a result, the nation is at risk of losing significant individual and national economic potential not to mention premature death and disability. Food fortification, or the addition of essential vitamins and minerals to commonly consumed staple food products, has been deemed one of the most cost-effective means of addressing this form of malnutrition that exists today. In order to support the Government of Liberia in it's fight against this malady, in 2010 the National Fortification Alliance (NFA), lead by the Ministries of Health and Social Welfare and Commerce and Industry, was established.

In 2010, Liberia adopted a set of food standards from Nigeria. These standards included mandatory fortification standards for maize flour, wheat flour, cooking oil, sugar, and salt. Based on current consumption patterns[3], and current nutrient deficiencies[4], these vehicles were narrowed and the levels adjusted to reflect the needs of the Liberian population. As a result, Liberia now has country-specific and regionally harmonized (ECOWAS and UEMOA) standards for wheat flour, cooking oil, sugar, and salt.

As most foods in Liberia are imported, implementation of the program involves significant importer and domestic producers engagement. Furthermore, focused attention on areas such as consumer advocacy, industry sensitization, and consistent sampling and testing by food inspectors is needed to ensure the program remains on track and relevant for the target population. As a result, the NFA consists of a number of Ministries, each with their own roles and responsibilities. The Guidelines are a compilation of all relevant program documents, including the following:

NFA Regulations: The NFA Regulations give a directive that is to be maintained throughout the fortification program in Liberia. They outline the purpose, scope, and definitions as they pertain to the program and are backed by the use of non-compliance measures intended to ensure importers, manufacturers and industry meet the stated standards needed to impact the health of the population. Various regulatory instruments are defined.

NFA Strategy: This section provides the background and rationale behind the design and implementation of the national fortification program. It addresses the selection of

3 The 2012 Liberia Comprehensive Food Security and Nutrition Survey (CFSNS) conducted by WFP gives an overview of current consumption patterns in Liberia. The survey measured consumption quantity, quality, the economic vulnerability of households as well as their nutrition patterns and coping mechanisms. A total of 13.719 households were interviewed in all 15 counties and in more than 130 districts. For more information: https://wca.humanitarianresponse.info/en/system/files/documents/files/CFSNS%20LIberia%20Executive%20Summary_June2013.pdf.

4 2011 Micronutrient Deficiency Survey

vehicles, policy and regulation, industry and importer engagement and implementation, quality control system, social marketing, and monitoring and evaluation measures.

Roles and Responsibilities: The roles and responsibilities section of these Guidelines clarify the respective responsibilities of the different Ministries and Ministry Divisions, as well as those of the private sector and civil society.

Responsibilities of the NFA Subcommittees: While the NFA is made up of a number of different stakeholders, individual subcommittees have been established to deal with relevant issues. Each committee meets on a regular basis and reports back to the NFA and relevant institutions.

National Fortification Logo Guidelines: These guidelines clearly describe the process of acquiring the Food Fortification Logo .

Sample Inspection and Collection Procedures: To ensure a consistent and clear structure, this document clarifies the responsibilities in the inspection process of food fortification and defines the procedures involved. All inspecting agencies should follow this procedure.

Non-compliance protocol: This sums up the non-compliance measures that will be taken in case foods are not fortified or fortified at incorrect levels. It also takes into consideration inappropriate usage of the logo.

Standard levels: These are the Liberia specific standard levels that have been decided upon and to which all importers, local producers, and manufacturers should comply.

Annex: The Annex includes greater detail for many of individual sections. It includes the food fortification logo that is to be used on all packaging of sugar, salt, wheat flour and cooking oil within the country. Importers and industry have to apply to the National Standards Laboratory to receive the logo, and the application documents are included as Annex II. After submission of the Food Fortification Logo application, the applicant will receive a letter of award or rejection, included in Annex III and IV. In case of a successful application process, a certificate of award will be distributed. The original Terms of Reference for the NFA are included in Annex VI, establishing the mandate of the NFA to serve as the forum for generating policy guidance and coordinating all activities relating to food fortification in Liberia. Annex VII – X include all Memorandum of Understanding with the inspectors from the various ministries as well as the Ministry of Justice, which is responsible for the implementation of non-compliance measures. Annex XI shows the entire budget of the NFA, which

combines the individual subcommittee budgets as well as any costs relating to larger NFA meetings.

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

These Guidelines, including all Annexes and included documents, are mandatory as defined by the technical specification with reference number NFA/MOCI/MOH/10/13[5]For further information please contact nfa.liberia@gmail.com.

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5 The Reference numbers for the commodities that are to be fortified are as follows:
Salt: MOCI/DS 049/2013 GS 811:2006
Refined Oil: MOCI/DS 049:2013 GS 811:2006
Wheat Flour: MOCI/DS 052:2013 FDSL 40:2011
Sugar: MOCI/DS 054:2013 NIS 383:2000

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1. Regulations of the National Fortification Alliance Liberia

Preamble

An Act to regulate the nutritional properties of food, specifically mandating the addition of essential vitamins and minerals to identified staple food products, and for incidental matters, by addressing the law's applicability and exemptions; prohibitions; warranties; licensing of food importers; manufacturers, distributors, sellers, and exporters; quality assurance; packaging, labeling and advertising; transport, storage, and display; fortified foods; inspection and investigation powers of the MoCI and MoHSW; inspections and investigations; appointment of authorized officers; powers and duties of authorized officers; operation of analyzing laboratories; enforcement; civil enforcement by the Ministries of Commerce and Industry and Health and Social Welfare, Republic of Liberia; criminal enforcement; legal proceedings; defenses; private right of action; special treatment of fortified foods; and standardization.

Section 1: Purpose and Scope

Recognizing the devastating effects of preventable micronutrient deficiencies on the health of individuals, on the productivity of the population and of livestock, and on the development potential of the nation, and in support of the declarations and plans of action from the World Summit for Children (New York, 1990), the International Conference on Nutrition (Rome, 1992), and other fora, the national government undertakes the introduction and passage of this Regulation. The entire population is at risk of iodine deficiency disorders, resulting in reduced intellectual capacity in even the case of mild deficiency. Other forms of preventable micronutrient malnutrition, such as vitamin A, iron, folic acid, zinc, and B vitamin deficiencies lead to blindness, anemia, birth defects, decreased immune function and other health problems that increase morbidity and mortality and reduce productivity and human potential. However, relatively simple and inexpensive technology exists for the fortification of certain foods to eliminate or control these problems. The purpose of this Regulation is to strengthen the adopted Food Fortification Standards of the Division of Standards of the MoCI and Food Safety Guidelines of the Division of Environmental and Occupational Health (DEOH) of the MoHSW for the provision, specifically but not limited to, the mandatory fortification of salt, wheat flour, sugar, and cooking oil, and to authorize the MoCI and MoHSW to require or permit the fortification of other foods to address and alleviate other nutritional deficiencies of the people of Liberia and to otherwise promote their nutritional status and health.

The purpose of this Regulation further is to strengthen the already Act that created the Division of Standards of the MoCI and the DEOH of the MoHSW.

Section 2: Definitions

As used in this Regulation, the following terms shall be given the meanings described below:

(a) **"Additive"** means any substance or mixture of substances intentionally added to food for the purposes of preventing deterioration, affecting aroma, color, or flavor, or modifying or preserving the general physical condition of a food. The addition of essential nutrients to foods shall not be considered additives.

(b) **"Adulterate"** means to add any substance or ingredient to a food in order to give it a false or misleading value or to hide defects; to remove any substance or ingredient that results in diminution of a food's nutritive or other desirable properties; or to subject food to any process or treatment that injuriously affects its nature, quality, nutritional value, or other properties.

(c) **"Advertisement"** means any representation by any means for the purpose of promoting directly or indirectly the sale, distribution, or consumption of any food.

(d) **"Authorized officer"** means an officer appointed by the ministry or otherwise authorized to carry out duties under the provisions of this Act.

(e) "Certificate of Analysis" refers to an authenticated document that is generally issued by Quality Assurance that ascertains that a regulated product has met its product specification and quality.

(f) **"Distribute"** with respect to food means to exchange, transmit, convey, consign, supply, deliver, trade, sell, or dispose of, whether or not for remuneration or other consideration.

(g) **"Drug"** means any substance or mixture of substances, other than food, manufactured, sold, or advertised for use in humans or animals in the diagnosis, treatment, mitigation, or prevention of any disease, disorder, or physical or mental impairment, or the signs or symptoms thereof.

(h) **"Essential nutrient"** means any substance, normally ingested, that is necessary for growth, development, and maintenance of health and which is not synthesized in adequate amounts by the body.

(i) **"Export"** with respect to food means to send from this country to another country for distribution in another country.

(j) **"Food"** means any substance or mixture of substances intended in whole or in part for human or, as provided in regulations, animal consumption, including beverages and excluding drugs. All ingredients of such substances, including those used in their manufacture and processing, themselves shall be considered food subject to the provisions of this Act.

(k) **"Fortified food"** or **"enriched food"** means any food to which one or more essential nutrients, such as vitamins, minerals, proteins, essential amino or fatty acids, or other nutritional substances have been added in order to increase the nutritive value of the food and which are absent from the food in its original state or which are lost during normal manufacturing, storage, or handling. Fortified or enriched foods shall not be considered to be drugs.

(l) **"Good Manufacturing Practice"** is a food quality system to ensure that products meet food safety, quality and legal requirements. Food quality controls are necessary to ensure that food supplies are safe, of good quality, and compliant to regulations of the GoL.

(m) "**Hazard Analysis and Critical Control Point"** is a systematic program to assure food safety.

(n) **"Import"** with respect to food means to bring into the country from another country for sale or distribution in this or another country.

(o) **"Ingredient"** means any component or substance, including an additive or fortifying agent, used in the manufacture of a food and present in its final product.

(p) **"Iodized salt"** means salt to which an adequate amount of iodine in all chemical forms fit for human consumption has been added for the purpose of fortifying it as a means of combating iodine deficiency disorders resulting from dietary deficiencies in iodine. When intended for human or animal consumption, either alone or as an ingredient in other substances or mixtures of substances, salt shall be considered a food.

(q) **"Label"** means any tag, brand, mark, logo, written or pictorial design, or other descriptive matter on, attached to, included in, belonging to, or accompanying any food.

(r) **"License"** means authorization pursuant to the provisions of Section 6(c) of this Regulation from the Ministries of Commerce and Industry and Health and Social Welfare to import, manufacture, distribute, sell, or export food.

(s) **"Logo"** means any symbol authorized by the Ministries for use on the packaging or label of certain foods to signify approval by the government.

(t) **"Manufacture"** with respect to food means the making or composing of a food product, including its production, preparation, processing, preservation; combination with other components, substances, ingredients, or products; grading, or other treatment.

(u) **"Ministers"** means the Ministers of Commerce and Industry and Health and Social Welfare charged with administering and enforcing the law.

(v) **"Monitoring"** means the observation and recording of the fortification program, manufacturers, and importers.

(w) **"Non-conformance"** refers to inconsistencies in standard levels that do not meet the mandatory standard levels.

(x) **"Package"** means anything in which any food is partially or wholly covered, wrapped, attached, enclosed, contained, or packed.

(y) **"Person"** means any individual, licensee, business, corporation, firm, partnership, proprietorship, organization, agency, association, facility, or other entity.

(z) **"Premises"** means any building, stall, tent, cart, or any other structure, whether fixed, temporary, or mobile, together with the land on which it is situated and any adjoining land used in connection with it, and includes any vehicle, vessel, or aircraft.

(aa) **"Preventive Maintenance"** refers to the care and servicing by personnel for the purpose of maintaining equipment and facilities in satisfactory operating condition by providing systematic inspection, detection, and correction of incipient failures, before they become major failures.

(bb) **"Quality Control"** refers to a system of maintaining standards in manufactured products by testing a sample of the output against the specification.

(cc) **"Regulatory requirements"** means the provisions of all applicable laws, regulations, decrees, and other government enactments relating to food quality and safety, nutrition, hygiene, and any other aspect of food regulation or control.

(dd) **"Sanitation Operations"** means that all food products must be protected from contamination from receiving through distribution.

(ee)**"Sell"** with respect to food means to offer, expose, or prepare for sale, trade, or exchange, transmit, convey, consign, supply, deliver, distribute, or dispose of for human or animal consumption for any consideration. All words and terms not defined herein shall be given their plain and customary meanings and shall be interpreted in accordance with the context in which they appear.

(ff) **"Verification and Validation"** refers to the inspection processes that verify compliance with the mandatory food fortification standards.

Section 3: Applicability and Exemptions

(a) **Applicability of the Regulation:** The provisions of this Regulation shall apply to all food imported, manufactured, packaged, labeled, stored, transported, displayed for sale or distribution, distributed, or sold in the country, or exported from the country. The provisions of this Regulation shall not apply to any food that is grown or cultivated and consumed solely by an individual or his or her own family or animals.

(b) **Exemptions:** In cases where this Regulation or its implementing regulations mandate the fortification of any particular food, the Ministries may authorize that limited quantities of that food may be distributed and sold in its original state. Such food shall be labeled, stored, distributed, transported, and made available for sale only at specified locations and under conditions prescribed by the Ministries.

(c) The Chair and Vice-Chair of the NFA will review exemption requests and forward the request to the MoCI's Trade Department and the Nutrition Department of the MoHSW. The MoCI and the MoHSW will then come to a joint conclusion on a case-by-case basis.

Section 4: Administration

These Ministries shall establish and amend, as appropriate, implementing regulations that include provisions for the following:

(1) Specifying which foods are required to be fortified and which foods may be fortified;

(2) Standards for composition, nutritive properties, including fortification, strength, potency, purity, quality, safety, hygiene, and any other properties of food;

(3) Licensing procedures and requirements;

(4) Conditions and requirements for the import and export of food;

(5) Conditions and requirements for the manufacture of food;

(6) Conditions and requirements for the storage, handling and transport of food and the nutrients added to food;

(7) Requirements for packaging, labeling, and advertising of food;

(8) Conditions and requirements for the distribution, display, and sale of food;

(9) Quality assurance procedures and requirements to be followed by food manufacturers, importers, packagers, wholesalers, and retailers, including record-keeping and reporting requirements;

(10) Procedures and requirements for Ministry inspections and investigations;

(11) Procedures and requirements for sample taking and analysis, including preservation of evidence and certification of analysis results;

(12) Procedures and requirements for seizing, detaining, condemning and destroying or otherwise disposing of food that does not meet regulatory requirements;

(13) Procedures and requirements for enforcement, including cost recovery to the government;

(14) Legal proceedings;

(15) Applications for duty import exemptions for the vitamin and mineral premix and required equipment to be submitted to the Duty Free Section and/or the Deputy Minister for Revenue at the MoF;

(16) Prescribing anything which is to be or which may be prescribed under this Regulation;

(17) Exempting food from provisions of this Regulation;

(18) Any other matter necessary or desirable for the efficient and effective administration and implementation of this Regulation.

Section 5: General Provisions

(a) General Requirements:

Subject to the provisions of sub-sections 1 and 2 and any exemption authorized by the Ministries, all persons who import, manufacture, package, label, advertise, store, transport, display for sale or distribution, deliver, distribute, sell, or export food shall carry out their activities in a manner that complies with all applicable regulatory requirements. Any person found to have substantially violated any applicable regulatory requirement shall be subject to the enforcement provisions of Section 8.

(1) Where food that does not meet the regulatory requirements of this country is imported into the country, it shall be subject to confiscation. As an alternative, it may

be reconditioned, relabeled, repackaged or otherwise treated as necessary to cure any area of non-compliance with regulatory requirements. While undergoing any curing process, it shall be identified clearly and stored separately from all other food. If not cured within an appropriate period from the date of entry into the country, as established in the regulations, such food shall be subject to forfeiture and destruction as well as any other penalty under Section 8.

(2) Food intended for export that does not meet the regulatory requirements of this country but that does meet the regulatory requirements of the importing country may remain in this country for an appropriate period established in the regulations. Any such food shall be clearly labeled as intended for export only and shall contain a warning that it is not authorized for sale or consumption in this country. Additionally, it shall be stored separately from all other foods. Strict record keeping as required by the Ministries and in regulations shall be followed for export food under this subsection.

(3) If any commercial seller or distributor discovers that any food in his/her possession or control does not meet regulatory requirements, he/she shall: a) return it to the seller from whom it was purchased, who shall be responsible for reconditioning it or replacing it with food that meets regulatory requirements and/or compensating the purchaser for any loss incurred; b) recondition it so that it meets all regulatory requirements or relabeled it for non-consumption purposes; or c) destroy it.

(b) Warranties:

Every person who imports, manufactures, displays, distributes, sells, or exports any food is deemed to warrant to the immediate purchaser that it handled the food in conformity with all regulatory requirements and that the food meets the specifications on its label and in any advertisement. If no written warranty is provided to the ultimate consumer, a warranty nonetheless shall be implied.

(c) Licensing of Food Importers, Manufacturers, Distributors, Sellers, and Exporters:

No importer, manufacturer, distributor, seller, or exporter of food shall operate or advertise its business without having a license as provided in this section.

(1) An application for an initial license shall be made to the Ministries on forms and in a manner prescribed by the Ministries and shall be accompanied by any prescribed fees.

(2) These Ministries shall grant a license only after receiving a complete and accurate application and upon a showing at an inspection that the applicant will be operating in substantial compliance with regulatory requirements. Where an inspection

reveals any area(s) of noncompliance with regulatory requirements 3-5, the applicant shall correct such area(s) of noncompliance within the period specified by the Ministry.

(3) A license is not transferable to any other person, organization or location. Unless restricted, suspended, or revoked, a license shall remain fully valid for a period of 12 months and be subject to renewal.

(4) A license is subject to renewal in accordance with requirements established by the Ministries, including the payment of any prescribed fees and a showing at an inspection of substantial compliance with regulatory requirements. Where an inspection reveals any area(s) of non-compliance with regulatory requirements, such area(s) of non-compliance shall be corrected by the applicant.

(5) Any licensee:

(a) who substantially fails to meet regulatory requirements as outlined by the Fortification Standards and enforced by the Ministries,

(b) who has had a license restricted, suspended, or revoked within the previous twenty-four (24) months or

(c) who has had a history of repeated noncompliance with regulatory requirements, may be denied a license upon initial application or renewal or may be issued a restricted license; provided, however, that any applicant denied a license or issued a restricted license, within 30 days of notification of the denial or restriction, may request an administrative hearing or appeal to a court of competent jurisdiction. If no such request [appeal] is made, the denial or restriction shall be final.

(d) Quality Assurance:

All persons who import, manufacture, package or repackage, label, sell, or export food shall establish procedures and carry out activities for quality assurance in accordance with requirements prescribed in regulations to ensure that their activities and the food in their possession or under their control meets applicable regulatory requirements.

(e) Packaging:

All packaged food shall be packaged in a manner that protects and preserves its composition, quality, purity, hygiene, and safety; protects it from harmful or contaminating substances, agents, or effects; and protects its nutritive properties from excessive heat, moisture, and other conditions that may cause diminution. Food shall be packaged in accordance with prescribed requirements established in the annex of these regulations.

(f) Labeling and Advertising:

All packaged food shall be labeled and advertised in a manner that is true and accurate and that is not likely to mislead the consumer. All food shall be labeled in accordance with requirements prescribed in the annex of these regulations.

(g) Transport, Storage, and Display:

All food shall be stored and transported in a manner that protects and preserves its composition, quality, purity, hygiene, and safety; protects it from harmful or contaminating substances, agents, or effects; protects its nutritive properties, and that is in conformance with any requirements established in regulations. Foods fortified in compliance with regulatory requirements shall be given priority in storage, display, and transport over non-fortified foods of the same class or category.

Section 6: Fortified Foods

Effective 18.09.2013, all identified fortification food vehicles intended for human or animal consumption, unless exempted, shall be fortified in accordance with all specifications and standards established by the Ministries in regulations. Other foods shall or may be fortified as required or authorized by the Ministries in regulations.

Section 7: Inspection and Investigative Powers of the Ministries

Authorized officers shall have the authority to conduct inspections and investigations to determine compliance with regulatory requirements 3-6.

(a) Inspections and Investigations

1. **Inspections:** The premises and operations of all licensees shall be subject to periodic inspection, including for license renewal, after the initial inspection.
2. **Investigations:** Any premises where food is received, held, manufactured, packaged, labeled, stored, displayed, distributed, or sold by any person, whether or not that person is required to hold a license, shall be subject to an investigation whenever an authorized officer has a reasonable basis to question compliance with regulatory requirements of activities, operations, or of food therein.

(b) Appointment or Designation of Authorized Officers:

The Ministers may appoint or designate such persons to act as authorized officers as he or she deems appropriate for the proper enforcement of this Act. All persons so appointed shall be qualified, as determined by the Ministers, by technical training, competent knowledge, skill, and experience. No authorized officer shall be engaged directly or indirectly in any commercial activity in the food industry.

(c) Powers and Duties of Authorized Officers:

Subject to the provisions of subsection (a), authorized officers shall have the power to:

a. enter the premises to conduct inspections or investigations at any time during business or operating hours or at any other reasonable or necessary time;
b. examine, open, and test any equipment, utensils, tools, packages or anything the authorized officer reasonably believes is used or capable of being used for the manufacture, packaging, labeling, storage, or distribution of food;
c. take samples of any food and analyze them or have them analyzed;
d. examine any operation or process carried out in or upon the premises;
e. examine and / or make copies of any books, documents, notes, or other records the authorized officer reasonably believes might contain information relevant to determining compliance with regulatory requirements;
f. interview or question any licensee, owner of the premises, or any person using the premises, and their employees, agents, contractors and workers, all of whom shall cooperate fully and truthfully with any inspection or investigation;
g. stop, search, and detain any aircraft, ship, vehicle or other means of transport or storage in which the authorized officer reasonably believes food is contained or conveyed and examine, open, take samples of and analyze or have analyzed any food or materials found therein; and
h. seize and detain any food the authorized officer reasonably believes does not comply with regulatory requirements, upon providing the licensee or owner of the food, or if they are unavailable, any other person on the premises where the food is located, written notice of the seizure and detention and the grounds for it. If any food so seized and detained is determined to meet regulatory requirements, it shall be returned immediately to the premises from which it was seized. If any food is determined not to meet regulatory requirements, it may be destroyed or otherwise disposed of pursuant to the provisions of Section 7.

(d) Identification of Authorized Officers:

Authorized officers must present proof of their appointment or their identity as authorized officers if requested by the person being inspected or investigated. The identification cards are valid for one year, and will then have to be renewed.

(e) Operation of Analyzing Laboratories:

These Ministries shall establish procedures for analyzing laboratories' operation, including qualifications of its personnel, procedures and methods for sample analysis, preservation of evidence, quality assurance for the laboratory, and other matters necessary or desirable to ensure the proper operation of the laboratory. This provision will depend upon whether there is a procedure for taking administrative actions within the ministry responsible for enforcement (or within another ministry, such as the Ministry of Justice), or whether all actions must be initiated in court. The model assumes that enforcement actions may be taken administratively.

Section 8: Enforcement

(a) Civil Enforcement:

These Ministries may take a civil administrative enforcement action or may commence a civil action in a court of competent jurisdiction against any licensee or person responsible for the importation, manufacture, packaging, labeling, storage, display, advertisement, distribution, sale, or exportation of food found, pursuant to the provisions of subsection (c), not to be or have been in substantial compliance with all provisions of applicable regulatory requirements. Penalties authorized by this section may be imposed for each substantial violation of regulatory requirements and may be imposed singly or in combination, as follows:

a. Imposition of a civil fine of no less than 1000 United States Dollars, in accordance with criteria established in regulations, taking into account the seriousness, including scale of production and the potential harm for the consumers of the violation(s), whether the same or similar violations have occurred previously, and such other factors as the Ministries deems appropriate. In accordance to the severity, the amount charged is at the discretion of the MoCI;
b. Issuance of an order to cease and desist from any activity that does not comply with regulatory requirements;
c. Confiscation and destruction or other disposition of food that does not meet regulatory requirements;
d. Adverse publicity of unfavorable inspection, investigation of analysis results; and
e. License restriction, suspension or revocation.

(b) Legal Proceedings:

Prior to imposing of any penalty pursuant to subparagraph (a), these Ministries first shall provide the licensee or person accused of violating any regulatory requirement with written notice of the alleged violation(s), the intended enforcement action to be taken, and of the right to contest the charges in an administrative hearing [or in a court of competent jurisdiction]. If no such hearing is requested by the accused in writing within the time specified by the Ministries [or by law], the accused shall be deemed to agree to any enforcement action or actions proposed in the notice. If a hearing is requested, it shall be held in accordance with all applicable requirements of the [title of law governing the conduct of administrative enforcement actions, or civil court proceedings, as applicable, citation]. In any hearing under this section, the following shall apply:

a. an affidavit or certification under oath by an analyst from the analyzing laboratory regarding any food which is the subject of the proceedings shall be admissible on its mere production as *prima facie* proof of the violations shown by the examination or analysis of the food; provided, however, that the accused shall be notified in advance of the intent to produce such an affidavit or certification and shall be

advised of the right to compel the live testimony of the analyst in any proceeding in which the affidavit is sought to be used;

b. copies from any record, book, or document certified as true and correct copies by the authorized officer who obtained them shall be deemed admissible into evidence as authentic;
c. where food is found in or on any premises used for the manufacture, distribution, or sale of food, such food shall be presumed to be food intended for manufacture, distribution, or sale;
d. where it is proven that a substance or mixture of substances normally is used for direct human or animal consumption, it shall be presumed that it was intended for human or animal consumption as food;
e. where it is proven that a substance is capable of entry into or being used in the composition or preparation of, or as a vehicle for the preparation of food, it shall be presumed that it was intended for such entry or use;
f. any quantity of food found in or on any premises at the time a sample thereof was taken shall be presumed to possess the same properties as such sample; and
g. the person identified on the label or packaging of any food as the manufacturer, importer, exporter, packager, or seller shall be presumed to have manufactured, imported, exported, or packaged or sold the food, as applicable.

(c) Criminal Enforcement:

It shall constitute a crime to willfully contravene any provision of this Act or applicable regulations. Any person convicted by a court of competent jurisdiction of so doing may be criminally fined in an amount no less than 1000 United States Dollars and\or imprisoned for a period of no less than 72 hours and no greater than 3 months. In accordance to the severity of non-compliance, it shall be at the discretion of the MoCI to increase the fine. Civil and criminal action may be taken singly or in combination for any violation. Any criminal action shall be taken in accordance with the requirements of the law governing criminal proceedings.

(d) Defenses:

It shall be a defense for any food seller or distributor charged with violating any regulatory requirement to prove that he or she:

1) Purchased or received food from another providing a written warranty;
2) Handled the food in a manner in compliance with regulatory requirements;
3) Sold or distributed the food in the same condition it was in at the time of its purchase or receipt or reconditioned it to meet regulatory requirements; and
4) Could not have discovered at the time of purchase or receipt, or thereafter, through the exercise of reasonable diligence that the food did not conform to regulatory requirements. The burden of proving each element of the defense shall lie with the person charged with noncompliance.

(e) Private Right of Action:

Any consumer who has purchased food that does not comply with regulatory requirements shall have a private right of action against any person in the food manufacture-distribution chain who failed to comply with regulatory requirements. Any consumer who prevails in any such action shall be entitled to damages in the amount of the value of the food commodity and recovery of the costs of taking the action, without the necessity of a showing that he or she suffered actual damages.

Section 9: Special Treatment of Fortified Foods

Foods that are fortified in compliance with regulatory requirements shall enjoy priority over non-fortified foods of the same class and category with respect to transport, storage, and display, including retail shelf space; shall be entitled to carry a logo authorized by the Ministries; and shall be entitled to any other favored treatment established by the government.

Section 10: Standardization

In establishing standards for food, the Ministries shall take into account fully the recommended international standards of the Codex Alimentarius Commission, including those related to fortification of foods.

Section 11: Severability

In the event that any provision, sentence, clause, or phrase of this Regulation may be construed by any court of competent jurisdiction to be invalid, illegal, unconstitutional, or otherwise unenforceable, such determination or adjudication shall in no manner affect the remaining provisions. The remaining provisions shall remain in full force and effect.

Section 12: Effective Date and Repeal of Prior Laws

This Regulation shall become effective 01.07.2014 and shall repeal all prior inconsistent provisions of other enactments in force on the effective date.

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Recommended by the National Fortification Alliance

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

2. NFA Strategy Document

Objective

This document is meant to serve as a strategy guide for use by the NFA throughout the design and implementation of Liberia's National Fortification Program. The following program components will be addressed in their own sections throughout the document (components 2-6 are the basis for the five sub-committees formed within the NFA):

1) Selection of Vehicles and Fortificants

2) Policy and Regulation

3) Industry / Importer Engagement and Implementation

4) Quality Control Systems

5) Social Marketing

6) Monitoring and Evaluation

Background

In 2010, the Liberian MoHSW signed a Memorandum of Understanding (MoU) with PHC for the purpose of supporting the government in the design and implementation of a comprehensive, mandatory national food fortification program.

The first phase of this program, research and analysis, culminated in the presentation of a situation assessment by PHC in October 2011. Findings and recommendations from this assessment found Liberia to be a favorable environment for the introduction of a national fortification program. The current status of micronutrient deficiencies throughout Liberia has been determined and potential vehicles for fortification based on coverage and consumption have been identified. Although mandatory fortification of some vehicles (wheat and maize flour, salt, sugar, and oil) were included in the standards the Liberian government adopted from the Nigerian government, levels and vehicles have been adjusted for the Liberian context and harmonized with the region, based on collected data. Enforcement of the quality control regime was found to be poor, and characterized by overlaps and gaps among responsible authorities (e.g. MoHSW, MoCI, Environmental protection agency), which lack capacity and training. As most food in Liberia is imported, implementation of fortification will involve significant engagement with importers as well as the few domestic producers, a process which has begun.

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

The second phase of the program, design and development, was initiated with the finalization of a Terms of Reference (TOR) for a Liberian NFA in July 2012. The first two NFA meetings, held in July and September, established an NFA work plan and five subcommittees based on essential fortification work streams (see Annex VI). This phase focuses on strengthening the role of fortification in national policy, the creation of Liberia-specific standards, increasing the capacity for quality assurance and safety monitoring, engaging with the private sector to create feasible implementation plans, and the preparation of social marketing campaigns.

The third and final phase, implementation, will involve the actual fortification of products and their distribution through market channels, the deployment of social marketing messages, and the monitoring, surveillance and evaluation of program success.

Selection of Vehicles and Fortificants for Creation of Standards

Selection of vehicles will be a technical assessment based on 1) deficiency levels 2) coverage and consumption patterns and 3) other factors, including trade dynamics and legal frameworks.

Deficiency Levels

Deficiency measurements identify priority interventions. Liberia's 2011 National Micronutrient Survey (LMNS 2011), conducted by the MoHSW and UNICEF, present the most recent data.

1) Anemia and Iron Deficiency: Among children 12 - 59 months old, 59% were anemic. 37.8% of pregnant women and 33.2% of non-pregnant women 15-49 years old were anemic.
2) Vitamin A: 13.2% of children were Vitamin A deficient, and 12% of women suffered from night blindness (a symptom of deficiency)
3) Iodine: 84% of households consumed iodized salt (93% which was adequately iodized). Since final urinary iodine concentrations have not been received, results are to be discussed.
4) Zinc: The 2009 Vitamin and Mineral Deficiency (VMD) Report estimates that zinc deficiency impacts 59.2% of the population[6].
5) Folic Acid: The March of Dimes Foundation estimates that folic acid deficiency contributes to an estimated 482 neural tube defects annually.
6) Malnutrition: The 2011 LNMS indicates that malnutrition is a major concern in Liberia, with 33% of children 6-35 months stunted, 9% wasted, and 22% underweight.

6 Estimates based on stunting rates and consumption patterns

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The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Consumption Data

The 2012 Liberia Comprehensive Food Security and Nutrition Survey (CFSNS) conducted by the World Food Program (WFP) gives an overview of current consumption patterns in Liberia. The survey measured consumption quantity, quality, the economic vulnerability of households as well as their nutrition patterns and coping mechanisms. A total of 13,719 households were interviewed in Liberia's 15 counties and in more than 130 districts: The 2012 data indicates the following:

- Rice: 99.9% of all households report consuming rice. In Monrovia 93.9% consume rice 6 to 7 days a week, while in the rest of the country 86.7% report consuming rice 6 to 7 days a week. Although, rice is mostly cultivated for household consumption, production is not sufficient for yearly household requirements. More than 60% of rice producers depend on imported rice available on the market in the lean season. This decreases to 25% during harvest season.
- Cooking Oil: 99.81% of households report consuming oil. Most people, however, are consuming palm oil produced at the local, small-scale level, as opposed to imported refined oil.
- Flour/Baked Goods: 7.9% of households report consuming flour. 54.88% of households reported consuming bread.
- Bouillon Cubes: An exceptional 99.64% of households report purchasing bouillon cubes.
- Sugar: 52.7% of households report purchasing sugar.
- Salt: 99.39% of households report purchasing salt.

Conclusions

The above data suggest that the following be pursued:

- Cooking Oil with Vitamin A: Higher levels of coverage and consumption suggest that cooking oil is a superior vehicle for the provision of vitamin A. Given that the Liberian diet includes very high levels of oil, the national coverage rate of 99.81% reflects the common use of oil. However, 97.43% of the oil is unrefined, red palm oil produced for home use and farm gate sale. However, as unrefined palm oil is naturally high in vitamin A, priority should be given to the fortification of refined, imported oil. Current standards mandate the fortification of all domestically produced or imported cooking oils of all varieties.
- Fortification of Flour with Multiple Micronutrients: High levels of iron deficiency and anemia suggest that fortification with iron be a priority; deficiency estimates and the interconnectedness of micronutrient malnutrition suggest that multiple micronutrient fortification (zinc, folic acid, B-complex vitamins) also be strongly considered. Although flour is not the staple product that rice is in Liberia, common consumption of baked goods as snacks and the presence of a local,

large-scale flour miller make this strategy worth pursuing. Refining data that differentiates between flour and bread consumption will be necessary, as most flour is not sold directly to consumers, but to bakeries, whose products consumers purchase. The original adopted Nigeria standards require that all domestically produced or imported wheat flour be fortified with 30,000 IU/kg of Vitamin A; 40.7mg/kg of iron; 3.7mg/kg of riboflavin; and 49.5 mg/kg folic acid. All bread is required to be produced using fortified flour. These standards have been revised based on regional data.

- Iodized Salt: Since it appears that most salt in Liberia is already iodized, a focus should be on regulating imports (as all salt is imported). UNICEF in Liberia has a focus on Universal Salt Iodization (USI) legislation. The original Liberian standard require salt to be fortified with potassium iodate at 50mg/kg at port of entrance and 30mg/kg at retail point.
- Rice: Rice is the staple food of Liberia, and so offers the greatest opportunities, but also some of the greatest challenges. PHC has been exploring the possibility of using PATH's UltraRice technology, a method of mixing extruded micronutrient pellets into rice, in two value chains (see below in industry engagement). However, the logistical and technological challenges suggest that rice fortification should not be considered an immediate priority, although this assessment should be revisited with changing circumstances and given considerable attention as a targeted fortification initiative. Standards for rice in Liberia do not include mandatory fortification.
- Bouillon Cubes: The high coverage and consumption of bouillon cubes, locally referred to as "chicken soup", make it a promising vehicle. Two brands, Maggi (Nestle) and Jumbo (Gallina Blanca), already fortify with vitamin A and iodine/iron respectively, indicating technical feasibility. Vita cubes are the most popular, with coverage of 50.35%, followed by Crown cubes, with 15.5% coverage. All bouillon cubes are imported, and there do not appear to be any standards adopted for them, regardless of fortification status. Given Liberia's small market size, regional partnerships with other importing countries in the West Africa regional should be pursued.
- Sugar: General sugar coverage lies at 52%, however, sugar is consumed 0 times a week by 47.3% of Liberians. Apart from Monrovia, where sugar is consumed 1 to 5 times a week by 50% of the population, most of those living in more rural areas do not consume a lot of sugar. Despite limited rural coverage, sugar should be considered as an appropriate vehicle to deliver vitamin A due to higher urban coverage and new local ventures beginning domestic sugar production.

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The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Policy and Regulation

Food fortification is explicitly included in two sets of implementation and regulatory documents: Liberia's National Standards and Liberia's Food Safety Guidelines. These will need to be updated, communicated to the appropriate stakeholders, and enforced. Forthcoming policy will include a UNICEF-supported national implementation or action plan for micronutrients that will include a separate chapter on food fortification.

Liberia National Standards

As mentioned above, Liberia adopted in full a set of Nigerian standards for a number of goods, including potential vehicles for food fortification. These standards are the bailiwick of the Standards Division in the MoCI. The Standards Division is currently responsible for the adoption of standards and their enforcement (although the latter responsibility is devolved to other actors in many circumstances, see below). Eventually, these responsibilities will be transferred to the jurisdiction of a planned National Standards Body, which will oversee the adoption and enforcement of all manner of national standards for Liberia.

Liberia's MoU with Nigeria requires that they change their standards when Nigeria does. Lines of communication should be opened with actors in that country regarding this. The adopted standards as pertain to fortification have been revised to fit the Liberian context, while being harmonized with regional standards. A technical sub-working group of the NFA, supported by external expertise, has been established to review the data and design appropriate standards for the vehicles described above.

Once new fortification guidelines are designated, they must be integrated into the current legally enforceable standards. For vehicles for which fortification is currently mandatory, the process will be a simple one of adding an addendum through internal MoCI processes. Mandating fortification for other vehicles (e.g. rice and bouillon cubes) will not require external processes of validation or legislation, but a change in the NFA Regulation that has to be approved by the NFA, the Minister of Commerce and Industry, and the Minister of Health and Social Welfare.

Liberia Food Safety Guidelines

In March 2012, the DEOH in the MoHSW wrote and validated a set of guidelines for food safety and quality control. These guidelines explicitly include a section on food fortification, adapted from the Codex Alimentarius. These food safety guidelines serve as an implementation aid to authorities responsible for the control of food safety in the country, with reference to the more specific standards adopted by MoCI Standards Division, which include fortification. This document must be widely distributed and implemented as part of the promulgation and enforcement of the quality control regime in Liberia.

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The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Micronutrient Action Plan

As part of the broader national nutrition strategy, UNICEF will be leading a drafting of a national Micronutrient Action Plan, of which fortification is a planned component that will be harmonized with existing interventions addressing micronutrient malnutrition.

Industry / Importer Engagement and Implementation

Based on the system of food production and consumption in Liberia, a two-prong strategy to industry engagement has been taken. For food imported into the country, importers will be engaged directly, and through the Liberia Chamber of Commerce and MoCI. For food produced domestically, the few large-scale producers/processors are being engaged, and small and medium enterprises are being mapped and monitored with an eye to engagement as they scale up. For the latter, the Ministry of Agriculture's (MoA) Subcommittees on Commodities should be engaged. In some cases, given Liberia's small market size, it will be essential to pursue regional partnerships. A commodity-wise discussion of strategy is presented below.

Cooking Oil

As mentioned above, cooking oil of two broad types is currently used in Liberia: unrefined palm oil produced on a small-scale and mostly by hand, which is naturally rich in vitamin A; and imported cooking oil of various types, which is refined (a process in which vitamin A is lost), and should be fortified. The latter accounts for approximately 2.31% of oil consumed in country.

Among imported oils, the Fouani Bros. Corporation dominates the area. They are open to fortification at either the supplier end, or, with support, in their packaging facility in the Freeport. The latter option is more feasible for Fouani than other companies, as their stock is imported in bulk shipment, unbottled. It is stored in 20MT silos, packaged into jerry cans, and sold wholesale to sub-retailers. Other companies import via container ship, already bottled. If importing on the supplier end, allowing for technical feasibility and storage time, is not possible, a strategy will have to be devised to operate a fortification facility at the port. This contingency will have to be explored further with those importers.

Domestically produced oil is not, at time of writing, in a position to be fortified. However, two aspects of domestic production bear monitoring. The first is the growth of small and medium enterprises into larger operations. The second is the presence of large palm oil concessions belonging to three major companies: Equatorial Palm, Golden Veroleum, and Sime Darby. At this time, none of these companies has full refinery operations in country, but Sime Darby has plans for a refinery beginning in 2021.

Flour

There is little reliable, up to date data on the relative quantities of domestically produced and imported flour in Liberia. However, there is one local flourmill, Premier Milling (PMC). The estimates on market coverage vary, with PMC estimating 40% for their product.

PMC has plans to build a new facility in the next two years, into which fortification equipment can be integrated, but their current facility can also accommodate retrofitting. Going forward, support for PMC in terms of marketing strategy and technical support should be provided to help ease their transition to fortification.

In terms of imported flour, Fouta Corporation, until recently the largest importer of wheat flour, seems confident that importers will be able to source fortified flour, either by making requests to current suppliers or switching suppliers. More follow up will have to be done to monitor the volume of imports, pricing, and gather second opinions about the ease of sourcing.

Salt

According to trade and import data from MoCI, 46% of salt is imported by Bridgeway Corporation followed by Fouani Brothers Corporation at 25%. However, the only salt listed on Trade records is described as fortified with iodine. As a result, industry engagement will involve effectively communicating standards and new enforcement regimes to importers.

Rice

Rice of several varieties and from at least 10 country sources is imported through the Freeport in Monrovia and sold throughout the country. “Country,” or domestically grown rice, is grown in the counties for household consumption and more limited sale, mostly within the area in which it is produced. Opportunities for fortification could occur at mixing and packaging facilities at chokepoints in both value chains: with importers at the Freeport, and with up country rice traders in collection facilities. Both “chokepoint” approaches require greater engagement with private sector stakeholders to understand the value chain and economic and technical feasibility.

Bouillon Cubes

All bouillon cubes in the country are imported. Fayad Enterprise and A-Z Corporation dominate the bouillon cube import market with 49% and 24% of the market share, respectively. The strategy going forward will require both engaging with multiple importers, as well as communicating with brands of Bouillon Cubes already fortifying to get a better sense of the marketing and feasibility of fortified cubes. Regional partnerships should be pursued, given the Liberian market’s comparatively small size.

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Recommended by the National Fortification Alliance

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Quality Control Systems

The quality control system is comprised of multiple, sometimes overlapping and sometimes gapping parts and is characterized by low capacity for enforcement. However, strides are being made within the National Standards Laboratory (NSL) and an articulation of roles and responsibilities outlined in the newly adopted Food Safety Guidelines, promulgated by MoHSW DEOH.

Legislation is being drafted that will create a National Standards Body, which will act as an umbrella organization for all enforcement of standards and unification of quality control efforts in the country. However, in the meantime, the current responsible actors will be trained in the appropriate protocols for inspection. These actors include: MoHSW DEOH on points of sale (e.g. rural markets) and in households; MoCI Standards, MoCI Trade, and Ministry of Finance (MoF) custom inspections officers at points of entry; and MoCI Trade and Standards Division on industry compliance. The NSL is responsible for establishing sampling protocols, training inspectors, testing all collected samples, and reporting results to the NFA and back to industry. At the Freeport, a private contracting company, BIVAC International, conducts pre- and post-shipment quality and quantity control. These inspectors will also be trained and responsible for appropriate sample collection. Finally, domestic industry inspectors (e.g. the lab technicians at PMC) will be trained in the essentials for internal quality control measures.

Social Marketing

Part of the mandate of the NFA will be to guide a social marketing campaign, with MoHSW Health Promotion, Ministry of Information, and Ministry of Internal Affairs, and Civil Society representatives taking lead. The campaign will include the branding of fortified products with the regional fortification logo already in use in other countries in the ECOWAS region in addition to the inclusion of fortification into already existing consumer advocacy and awareness campaigns. External support may be sought for this campaign.

Monitoring and Evaluation

Two streams of monitoring and evaluation will be conducted with support from LISGIS, and any additional external support necessary. First, compliance and implementation of the program will be monitored with support from responsible trade and standards organizations (including the MoCI, MoF, and National Standard Laboratory) in addition to MoHSW and industry inspectors. Second, the MoHSW Nutrition Division will design and implement first, a surveillance plan and then a more comprehensive evaluation program to measure the nutritional and health impacts of the fortification program. The baseline for these measures will be considered the 2011 LMNS and/or the 2012 Demographic and Health Survey.

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Recommended by the National Fortification Alliance

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Summary

The following highlights the key action points that will define the food fortification program in Liberia:

Selection of Vehicles and Fortificants for the Creation of Standards

- Using additional data from finalized LMNS findings and consumption surveys, ensure proposed vehicles are in line with needed interventions
- Convene a technical sub-working group of the NFA to determine levels and types of fortificants, adapted to the Liberian context and harmonized with regional standards.

Policy and Regulation

- Amend existing standards to conform to Liberia-specific standards articulated by technical sub-working group and ensure they are mandated through the appropriate body (i.e. National Standards Body or MoCI).
- Ensure inclusion of fortification strategy in the proposed Micronutrient Action Plan
- Ensure dissemination and comprehension of all standards and policies concerning fortification to appropriate actors, particularly private sector and monitoring actors

Industry / Importer Engagement and Implementation

- Continue two-pronged strategy: For imports, engage importers directly and through the Liberia Chamber of Commerce and MoCI. For domestic production, engage the few large-scale producers/processors directly, and map and monitor small and medium enterprises with an eye to engagement during scale up, including networking with Ministry of Agriculture subcommittees.

In both cases, pursue regional partnerships and cooperation where appropriate.

Quality Control Systems

- Continue to push for the establishment of a National Standards Body.
- Map and provide training for identified actors in their respective roles concerning monitoring of fortified foods within the Hazard Analysis and Critical Control Point (HACCP) system.
- Ensure a comprehensive monitoring database is created to house collected national fortification data by staple, importer, brand, and test result and that allows for reporting back on a quarterly basis and so that issues of non-compliance can be dealt with in a timely and effective manner.

Social Marketing

- NFA will guide a social marketing campaign, with MoHSW Health Promotion, Ministry of Information, and Ministry of Internal Affairs taking lead including the identification of a fortification logo and appropriate fortification logo guidelines.

Monitoring and Evaluation

- Monitor compliance with program goals, i.e. the inclusion of fortificants at the proper levels.
- Conduct periodic surveillance of coverage before collecting sentinel site nutritional impact data.
- Design evaluation study of nutritional and health impacts as they relate to the fortification program.

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The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

3. Roles and Responsibilities

NFA

- Guides the national fortification program ensuring up-to-date information is used to adjust programming as and when necessary.

- Maintains all records as they pertain to the program including status and levels of compliance and non-compliance from the National Standards Laboratory.

- Reviews overall performance of the logo program including regular updates on industries and importers who have received the logo.

- Ensures all necessary parties are represented and participate.

MoHSW (Nutrition Division):

- Established as the “home” agency for the NFA, serving as Secretariat preparing, sharing, and maintaining meeting minutes and holding an important leadership position.
- In collaboration with other MoHSW Divisions such as Environmental and Occupational Health, Health Promotion, and Community Health, the Nutrition Division oversees coordination of activities to ensure consistency with national policies and guidelines.

- Receives records and keeps the letters of award for industries, manufacturers and importers that have received the Food Fortification Logo (FFL).

MoHSW (Division of Environmental and Occupational Health):

- Ensures that Environmental Health Technicians are trained and responsible for the inspection of fortified foods at market and community levels in each of the counties and districts.
- Each of the 15 counties has an Environmental Health Officer that is a member of the County Health Team and in charge of food safety. This person will be in charge of the monitoring at country and market/retail level.
- Counties with import sites are manned by Port Health Officers that work closely with the Customs officials in monitoring foods imported into the country.

- The Port Health Officers will be responsible for testing fortified foods at import sites and will advise Custom Officers on whether the foods will be allowed into the country of not.

- Coordinates Environmental Health Technicians acting as inspectors to ensure adequate samples are collected from each county on a quarterly basis.
- Ensures samples from Environmental Health Officers and Port Health Officers are submitted to the NSL by respective county coordinators acting as focal point persons on a quarterly basis.
- Responsible for coordination of activities, ensuring consistency with national policies and guidelines.

MoHSW (Health Promotion):

- Responsible for designing social messaging on the importance of fortified foods, in partnership with MoCI, Consumer Protection Division.
- Responsible for coordination of activities, ensuring consistency with national policies and guidelines.

MoE:

- With MoHSW, helps ensure proper health messaging to youth on the nutritional benefits of fortification, through the schools.

MoF (Customs):

- The Ministries of Commerce (Divisions of Standards, Trade and Industrial Development) and Finance (Divisions of Customs), as authorities responsible for the quality control of imported foods, will coordinate with the development of quality assurance procedures at entry points.
- MoF Customs officers will be responsible for the inspection of fortified foods at the ports of entry and border points.
- Ensures inspection of food imports by designated MoF customs officers on a quarterly basis.
- Ensures quality inspection of imported vitamin and mineral premix.
- Maintains imported vitamin and mineral premix as a duty-free product as long as those requesting duty free imports for their products apply directly to the Duty Free Section or the Deputy Minister for Revenue.
- Ensures samples are submitted by inspectors to NSL every quarter.

MoCI (Inspectory / Industry / Standards):

- The Ministries of Commerce (Divisions of Standards, Trade and Industrial Development) and Finance (Divisions of Customs), as authorities responsible for

the quality control of imported foods, will coordinate with the development of quality assurance procedures at entry points. The MoCI will take the lead in this in close collaboration with the MoF.

- As responsible authority for industry development, MoCI will coordinate with local producers to ensure compliance with programmatic aims.

- Issues application forms and other information necessary to grant the FFL to industry, importers and manufacturers.

- The MoCI is responsible periodic inspection of food manufacturers by designated MoCI food inspectors. Samples should be submitted to the NSL on a quarterly basis. Assessments should include:

    - The company's quality system relative to fortification including proper premix handling and proper packaging by importers and / or re-packagers and domestic producers with the inclusion of in-house testing capabilities for domestic producers.

    - General plant inspections including Good Manufacturing Practices (GMPs) and HACCP procedures.

    - Compliance with the provisions of the following national standards:

        - Code of practice for hygiene in the food industries

        - General standards for labeling of prepackaged foods

        - General requirements for nutrition labeling of foods

        - General requirements for nutrition and health claims for foods

    - Specification for the fortified food product for which the logo is applied including qualitative testing of finished product.

- Until such a time as the planned National Standards Body is established, the *Standards Division* of the MoCI, as the responsible body for establishing quality assurance standards, will help ratify and house the standards relating to fortification of food.
- The *Consumer Protection Division* will support the MoE and MoHSW to design social messaging on the importance of fortified foods.

- Continuous monitoring of the program shall be performed by the MoCI (Inspectory and Standards Division). Any entity shall be visited by the NSL, the Inspectory Division, and the Standards Division to verify and validate standard levels.

NSL

- Receives samples from all inspecting agencies (MoHSW, MoCI, MoF, and BIVAC) for analytical testing. Assures proper fortification of food through quantitative testing of samples to ensure on-going compliance.
- Distributes and receives all National Food Fortification logo forms and applications.

- Handles all matters concerning the logo application process and sends a copy of all applications, including the required manufacturer and importer documents, to the Inspectory Unit of the MoCI.

- Authorizes use of logo depending on compliance through Letter of Award and Certificate to producer and / or importer. Issuance of the food fortification logo is based on:

    - Assessment of the quality system relative to fortification.

    - Compliance of the product and its processes with provisions of relevant national standards.

- Presents results to the NFA; Letter of Award is signed by NFA Chair. Duplicate copies of the Award and the results are filed and housed in the NSL and the NFA Secretariat (MoHSW Nutrition Division) for record keeping purposes.

- Responsible for follow-up und timely distribution of the Letter of Award, allowing use of the logo by manufacturers.

- Maintains database of all industries, manufacturers and importers that have been awarded the logo and their respective test results and compliance procedures. This database is shared with the NFA and the NFA Secretariat on a monthly basis, to ensure all changes are recorded as a means of monitoring the FFL distribution process. **All changes must be integrated into this database.**

- Initiates review of non-complying industries.

- Any entity shall be visited by the NSL, the Inspectory Division, and the Standards Division to verify and validate standard levels.

Ministry of Internal Affairs (MIA) / Ministry of Information, Culture, and Tourism (MICAT)

- In addition to supporting the social marketing campaigns conducted by MoHSW, MoE, other ministries, and civil society[7], MIA and MICAT will help ensure that local authorities are informed and on board with program priorities, in line with Liberia's drive towards decentralization.

National Consumer Council

- The National Consumer Council will support Government Ministries on consumer education regarding the food fortification logo.

Liberia Institute of Statistics & Geo-Information Services (LISGIS):

- LISGIS will assist the responsible Ministries with data collection and analysis in two major streams of monitoring and evaluating:
    1) Matters of safety and quality (data collection and / or analysis as it pertains to assessing micronutrient levels, carrying out stability studies, etc. as needed), and
    2) Nutritional and public health impact (survey design and execution and other assistance as needed), as well as any other evaluations deemed necessary.

Ministry of Justice (MOJ), MOHSW (Legal):

- Ministry of Justice (MoJ) and the MoHSW legal council will ensure the compliance of the fortification program with Liberian laws and regulation in accordance to its civil enforcement mandate.
- MoJ is the responsible authority for the enforcement of laws and prosecution of non-compliance as it pertains to the food fortification regulations.

Civil Society and Other Development Partners (i.e. UNICEF, USAID, WFP):

- In addition to providing a voice for consumers in determining activities and priorities, participating institutions will assist with social marketing; developing materials and messages with responsible authorities, mobilizing constituents to disseminate

7 Civil society any organizatio or individual that is not government or private industry, e.g. other NGOs, Chamber of Commerce, Rotary, etc.

information, and conducting focus-groups and opinion polls to assess the spread and impact of messages.

Private Sector:

- As well as having primary responsibility for production and distribution of fortified foods (including engaging all companies in relevant industries and sharing best practices related to fortification), private sector representatives will work closely with responsible authorities on matters relating to safety and quality; developing appropriate standards and strong quality assurance plans.

BIVAC:

- Ensures periodic quality inspection of food imports by designated BIVAC customs officers on a quarterly basis.

- Ensures pre-shipment products have been tested with a summary of results provided to the NSL through the BIVAC Committee of the MoCI.

- Results and samples are submitted by BIVAC inspectors to NSL quarterly including both pre- and post-shipment results.

Food Manufacturers and Importers

- Develops and institutes strong quality assurance plans

- Produces and / or distributes fortified foods

- Cooperate with food fortification inspectors

- Complies with standards and logo guidelines. Industries, importers, and manufacturers are not permitted to use the logo unless they are authorized by the NSL.

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

4. Responsibilities and Objectives of the NFA Subcommittees

The NFA has a subcommittee structure. Each Committee is tasked with relevant issues brought up in NFA Meetings. Each committee is responsible for meeting and carrying out the assigned activities and reporting back to the NFA as well as their respective institutions. Each Subcommittee has a lead agency to oversee actions and responsibilities:

1) Policy and Standards Development: MoCI
2) Safety and Quality Assurance: MoCI, NSL
3) Production and Distribution: Industry
4) Social Marketing: Ministry of Information

The chairs of each subcommittee as well as the chairs of the entire NFA are to be elected democratically.

Subcommittee	Key Activities	Responsible Organizations
Production and Distribution	- Involve all relevant industry members - Identify technical/business barriers to fortification, solutions to same - Establish costing models as needed - Participate in standard-setting process - Develop/adopt Quality Assurance/ Quality Control (QA/QC) procedures	Private Sector MoCI: Trade MoCI: Industrial Development MoF National Standards Lab Liberia Chamber of Commerce
Policy and Legislation	- Participate in standard-setting process, based on safe levels of fortification, impact of different variables on stability, retention of micronutrients - Draft and support any additional regulation or legislation necessary to ensure the mandate of fortification - Include fortification in all formal national policies regarding health and nutrition - Produce and circulate quarterly reports on fortification status, actions underway along with Safety and Quality Subcommittee	MoHSW MoCI Legal Counsel MoA MoJ

Safety and Quality	- Establish/build capacity for monitoring / inspection and reporting procedures and establish mechanisms to act upon non-compliance - Establish/build capacity for established sample analysis procedures - Recommend changes to industry as needed - Develop regular reporting on program execution (industry, imports, markets, HH levels) - Design & execute surveillance and impact studies - Produce and circulate quarterly reports on fortification status, actions underway along with Policy and Legislation Subcommittee	NSL MoHSW DEOH MoCI: Standards MoCI: Trade MoCI: Consumer Protection MoF: Customs Legal Counsel MoJ LISGIS MoA MoIA
Social Marketing	- Guide a social marketing campaign. - Branding of fortified products with the regional ENRICHED logo already in use in other countries in the ECOWAS region. - Inclusion of fortification into already existing consumer advocacy and awareness campaigns.	MoHSW: Health Promotion MICAT MIA National Consumer Council MoE

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Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Additional focal areas	Key Activities	Responsible Organizations
Technical and Financial Support	- Assistance with other focal areas as needed - Resource Mobilization	All Actors
Leadership	- Lead the development of the national fortification strategy - Lead the development of the quarterly plan of work for NFA members - Ensure harmonization with on-going nutrition initiatives - Ensure involvement of all relevant stakeholders - Ensure distribution of quarterly report	NFA Chair

Introduction

Recognizing the devastating effects of preventable micronutrient deficiencies on the health of individuals, on the productivity of the population, and on the development potential of the nation, and in support of the declarations and plans of action from the World Summit for Children (New York, 1990), the International Conference on Nutrition (Rome, 1992), and other fora, the national government of Liberia undertakes action to regulate the nutritional properties of food, specifically mandating the addition of essential vitamins and minerals to identified staple foods.

The Liberia National Micronutrient Survey of 2011 indicates that malnutrition is a major concern within Liberia, with 33% of children 6 to 35 months stunted, 9% wasted, and 22% underweight. The entire population is at risk of iodine deficiency disorders, resulting in reduced intellectual capacity even in the case of mild deficiency. Other forms of preventable micronutrient malnutrition, such as vitamin A, iron, folic acid, zinc, and B vitamin deficiencies lead to blindness, anemia, birth defects, decreased immune function and other health problems that increase morbidity and mortality and reduce productivity and human potential. However, relatively simple and inexpensive technology exists for the fortification of certain foods to eliminate or control these problems. The purpose of this Regulation is to strengthen the adopted Food Fortification Standards of the Division of Standards of the MoCI and Food Safety Guidelines of the DEOH of the MOHSW for the provision, specifically but not limited to, the mandatory fortification of salt, wheat flour, sugar and cooking oil, and to authorize the MoCI and MoHSW to require or permit the fortification of other foods as

consumption, deficiency, and technological capabilities change to address and alleviate other nutritional deficiencies of the people of Liberia and to otherwise promote their nutritional status and health.

Fortification, the addition of vitamins and minerals to staple foods, has been widely shown to be a safe and cost-effective means of improving micronutrient status. It is also socially acceptable, requires limited change in food habits and characteristics, and provides a means for reaching a large percentage of the population requiring the micronutrients.

To support the scaling-up of fortification in Liberia, the MoCI has revised and adopted mandatory standards for fortified food products. The Government of Liberia with technical guidance from the NFA, comprised of representatives from government, academia, civil society, and the private sector, has created and adopted the Liberian fortification logo for easy identification of fortified foods and to promote their production and consumption.

The logo will be awarded to producers and importers of fortified foods who comply fully with regulations governing their products. As part of the strategy to promote increased micronutrient intake, the Government of Liberia will undertake an intense promotional campaign to generate public awareness on fortified products on the market and to strengthen public confidence in the logo. This consumer awareness and social marketing will establish the credibility of the claims made by food manufacturers on their product labels and enable consumers to easily make the right nutritious food choices.

The following guidelines describe the policies and procedures that govern the approval for the use of the FFL on fortified food products.

Scope

The guidelines cover the application, issuance, and use of the logo in labelling fortified foods produced in accordance with the national standards.

Manufacturers of commonly consumed foods (salt, sugar, cooking oil, and wheat flour) shall be required to fortify their products. Manufacturers of other food products wishing to fortify their products should consult with MoCI to meet relevant national standards and guidelines on appropriate micronutrients and fortification levels.

Definitions

For the purpose of these guidelines, the following definitions shall apply:

Fortification means the addition of nutrients to foods such as wheat flour, sugar, cooking oil, and salt based on the national standards set by MoCI.

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Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Micronutrients are nutrients needed by the body in small amounts for proper immune development, growth, health and human wellbeing.

FFL is the logo for fortified foodstuffs that will be awarded to manufacturers who will fortify their products according to the national standards and will be used to promote the use and consumption of such products.

Food manufacturers refer to millers, refiners, and processors of food, re-packers and importers.

Management of the FFL

The management of FFL shall be the responsibility of the NSL. The NSL will work with other agencies to review food manufacturer readiness for fortification, administer use of the FFL and carry out periodic monitoring to ensure compliance with fortification standards.

The NSL will make final approval and report to the NFA Secretariat on a monthly basis to issue the food fortification logo. Notwithstanding, **the NFA shall have the power to initiate review of any food manufacturer in the case of suspected misuse of the FFL or noncompliance with the relevant food standards.**

Roles and Responsibilities

1. MoCI

- Assures periodic inspection of food manufacturers by designated MoCI food inspectors on a quarterly basis. Assessments should include:
    - The company's quality system relative to fortification including proper premix handling and proper packaging by importers and / or re-packagers and domestic producers with the inclusion of in-house testing capabilities for domestic producers
    - General plant inspections including GMPs and HACCP procedures
    - Compliance with the provisions of the following national standards:
        - Code of practice for hygiene in the food industries
        - General standards for labeling of prepackaged foods

- General requirements for nutrition labeling of foods
- General requirements for nutrition and health claims for foods
- Specification for the fortified food product for which the logo is applied including qualitative testing of finished product

- Inspectors submit samples to the NSL quarterly.

2. NSL

- Issues application forms and other information necessary to grant the logo to industry, importers and manufacturers.
- Receives application documents for the use of the FFL from food manufacturers.
- Receives samples from all inspecting agencies (MoHSW, MoCI, MoF, and BIVAC) for analytical testing.
- Assures proper fortification of food through the quantitative testing of samples to ensure on-going compliance.
- Authorizes use of logo depending on compliance through Letter of Award and Certificate to producer and / or importer. Issuance of the food fortification logo is based on:
  - Assessment of the quality system relative to fortification
  - Compliance of the product and its processes with provisions of relevant national standards.
- Presents results to the NFA; Letter of Award is signed by NFA chair. Duplicate copies of the Award and the results are filed and housed in the NSL and the NFA Secretariat for record keeping purposes.

- Responsible for follow-up und timely distribution of the Letter of Award, allowing use of the logo by manufacturers.

- Maintains database of all industries, manufacturers and importers that have been awarded the logo and their respective test results and compliance procedures. This database is shared with the NFA and the NFA Secretariat on a monthly basis, to ensure all changes are recorded as a means of monitoring the FFL distribution process. **All changes must be integrated into this database.**

- Initiates review of non-complying industries.

3. MoHSW

- Serves as Secretariat of the NFA.

- Monitors fortified foods at district, community and market level.

- Receives records and keeps the letters of award for industries, manufacturers and importers that have received the FFL.

- Coordinates Environmental Health Technicians and Port Health Officers acting as inspectors to ensure adequate samples are collected from each county on an quarterly basis.

- Samples are submitted by respective county coordinators that will act as focal point persons to NSL on a quarterly basis.

4. NFA

- Reviews overall performance of the logo program.

- Receives updates on fortification.

- Receives regular updates on industries that received the logo.

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Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

5. Ministry of Finance

- Ensures inspection of food imports by designated MoF customs officers on a quarterly basis.
- Samples are submitted by inspectors to NSL every quarter.

6. BIVAC

- Assures periodic inspection of food imports by designated BIVAC customs officers on a quarterly basis.
- Assures pre-shipment products have been tested with a summary of results provided to the NSL through the BIVAC Committee of the MoCI.
- Certificate of Conformity for each of the samples submitted to NSL quarterly.

7. Food Manufacturers and Importers

- Develops and institutes strong quality assurance plans.
- Produces and / or distributes fortified foods.
- Cooperates with food fortification inspectors.
- Complies with standards and logo guidelines. Industries, importers, and manufacturers are not permitted to use the logo unless they are authorized by the NSL.

8. National Consumer Council (Ministry of Information)

- Supports Government Ministries on consumer education regarding the food fortification logo.

In summary, the fortification logo will be distributed by the NSL to those manufacturers and importers that comply with the fortification standards of Liberia. The NSL will issue an official letter of approval to industry, signed by the chair of the NFA and the NSL. The NFA Secretariat, located within the MoHSW, will be given a copy of each distributed FFL certificate and letter to be filed in order to track logo distribution. Duplicate copies will be housed at the NSL.

Industry, importers and manufacturers are not permitted to use the logo unless they are authorized by the NSL. Authorization means the following: NSL will test the products annually to renew importer's, manufacturer's and industry's right to use the FFL. NSL will notify manufacturers each year of their fortification logo use status. Misuse of the logo will result first in a warning to the manufacturer of the issue. If the issue is not resolved in three weeks time, a fine of no less than $2,000 United States Dollars, is applied in accordance with criteria established in regulations, taking into account the seriousness, including the scale of production and the potential harm to consumers as a result of the violation(s), whether the same or similar violations have occurred previously, and such other factors as the Ministries deems appropriate will be applied. Finally, if compliance is still an issue, the MOCI will have the authority to pull the products from the shelves.

Procedural Guidelines

1. Application requirements

- Duly filled application forms (see Annex II)
- A certified copy of registration certificate of the company
- If applicable, copy of the most recent inspection report
- Sample of proposed product label, including nutrition information, FFL and any associated benefit claims

2. Process of application

The manufacturer applying for the logo submits all the documentary requirements to the NSL.

3. Evaluation of the application

Upon receipt of the application, the NSL conducts a desk review to check the completeness of the documentary requirements. If documentary requirements are

incomplete the applicant is informed through a notice of deficiency and defers the conduct of further evaluation until the applicant meets the requirements completely.

4. Evaluation of the food processing facility

If the NSL judges that the documentary requirements are complete, the coordinator will request for an evaluation of the applicant's plant for consistent compliance with the applicable national standards through the Standards Division of the MoCI.

After receiving the outcome of the plant inspection from the MoCI Standards Division, the NSL will submit a report establishing national standards compliance to the NFA Secretariat. The report will include certificate(s) of analysis for the product(s) inspected.

5. Final evaluation of the application

The NSL will make the final decision concerning the distribution of the FFL based on the plant inspection report and review of the documentary requirements. The NSL may decide to visit the plant to verify any requirements.

6. Awarding of the fortification logo

If applicant is approved based on the recommendations from the NSL, the Letter of Award of the Fortification Logo as well as the certificate will be issued by the NSL.

If approval is not recommended, the NSL will inform the applicant through a letter or notice of deficiencies/notice of denial. The letter of disapproval/reconsideration will contain instructions on the appropriate corrective actions.

Use of the Logo

The compliant food manufacturers should display the Letter of Award of the FFL issued by the NSL.

Quality monitoring

If a product is approved to use the FFL, NSL shall submit both an annual monitoring plan and the results of each monitoring visit to the NFA.

The food manufacturers whose product samples do not comply with the acceptable levels of fortification shall be warned accordingly by the NSL through a letter informing the company of non-compliance.

Companies are expected to adopt corrective measures and inform the NSL of these corrective measures in writing within **one month** from their receipt of the letter of non-compliance.

The National Fortification Alliance of Liberia
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nfa.liberia@gmail.com

A second monitoring visit will be initiated by the NSL to ensure the corrective action has been taken. **Failure to pass the second inspection shall mean cancellation of the food fortification logo use.**

The NFA will institute appropriate sanctions, which may include a full product recall. The NFA Secretariat will inform the company of the cancellation of the food fortification logo use and request the company to return the Letter of Award and provide a deadline to discontinue using the logo. The MoCI inspectors will monitor compliance and report to the NSL.

Cost for use of the FFL

There will be a processing fee of 15 United States Dollars for manufacturers, 10 United States Dollars for importers, and 10 United States Dollars for brokers (beyond that already incurred for certification of compliance) apply for the use of the FFL.

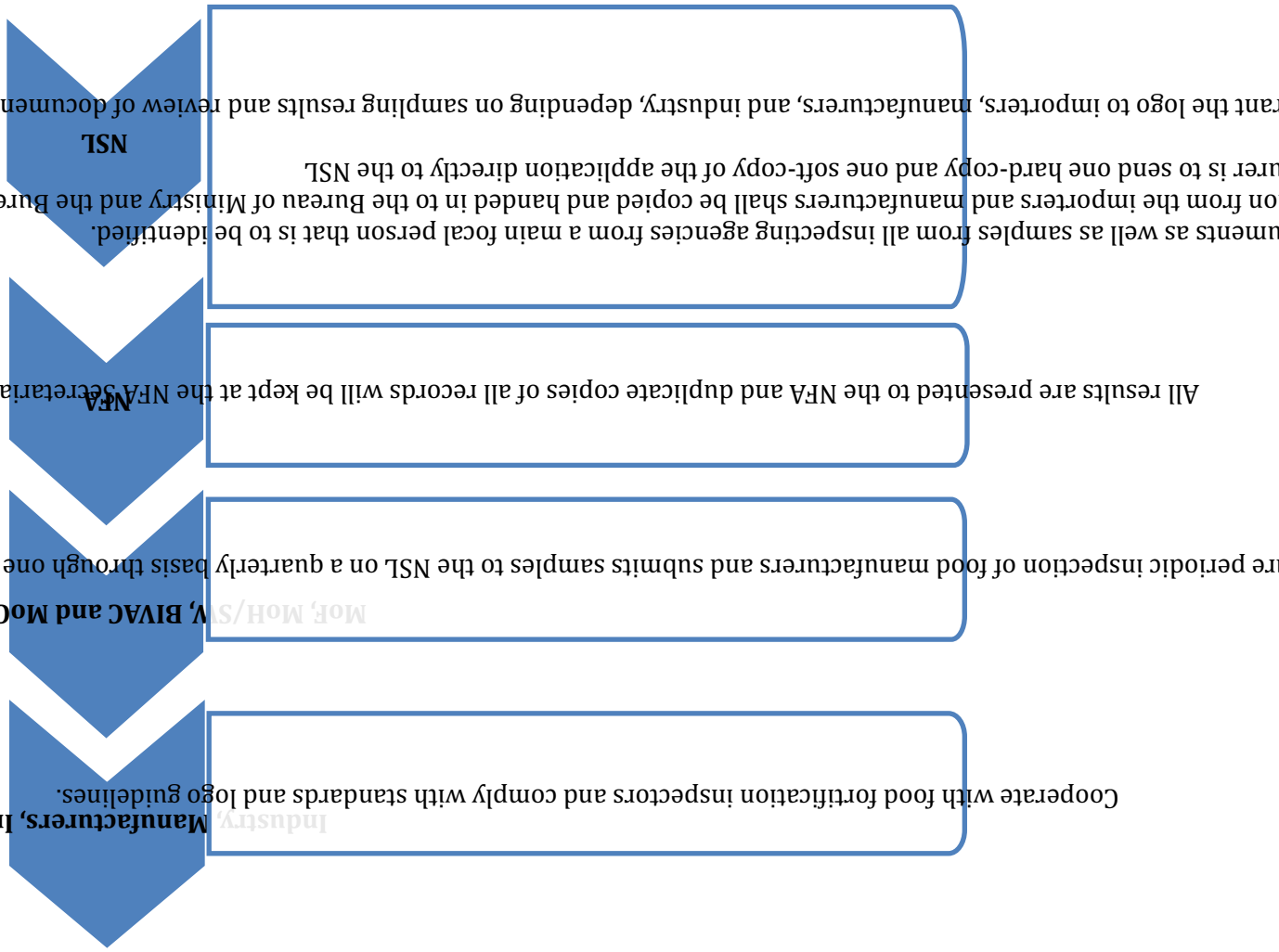
Validity and duration of FFL

The Letter of Award permitting the use of the FFL shall be valid from the date of issue and shall remain so for an indefinite period unless revoked for a cause such as, if the monitoring indicates non-compliance and failure to immediately implement the corrective action.

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Logo Application Process Flow Chart



*The entire certification process should take **NO MORE** than 6 months to complete, unless an industry decides to expedite the process at their own cost*

ENRICHED
Recommended by the National Fortification Alliance

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Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

6. Sample Inspection and Collection Procedures

1. Purpose

The Government of Liberia is aware of the effects of micronutrient deficiencies for Liberians, and a variety of ministries – including the Ministry of Health and Social Welfare, the Ministry of Commerce and Industry, the Ministry of Agriculture, the Ministry of Justice, the Ministry of Finance, and the Ministry of Internal Affairs – are collaborating to ensure that this problem is addressed in an appropriate and effective manner through the fortification of staple foods. The food vehicles for food fortification appropriate for Liberia have been defined in line with regional standards and national consumption patterns and are as follows: salt, sugar, cooking oil and wheat flour. Fortified foods must meet the standards elaborated on in the adopted national regulations.

In order to ensure consistency and a clear structure, this section clarifies the responsibilities in the inspection process of food fortification and defines the procedure involved. All inspection processes should follow this procedure, regardless of the industry, manufacturer, or importer being inspected.

2. Inspection and Compliance

The following Ministries and agencies are charged under the law with inspecting fortified foods and ensuring compliance with standards and regulations:

- The Standards officers of the MoCI: Responsible for random sampling procedures at domestic production level. This also includes the inspection of supermarkets.
- The Environmental Health Technicians and Port Health Officers of the MoHSW: Responsible for testing of food products in markets (EHTs) and at borders (in collaboration with MoF Customs Officers) in addition to having the sole inspection responsibility in the districts and counties.
- The Customs officers of the MoF: Responsible for random sampling of food commodities at the ports and borders.
- The MoJ for non-compliance procedures
- BIVAC inspectors: Responsible for pre-shipment inspections. A certificate is left so that the Customs officers inspecting at the port of entry do not re-inspect these commodities.

There are three levels of inspection: imports (Port of Monrovia and other border entry points), local industry, markets, and households. The breakdown of inspector responsibilities is as follows:

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Market and HH inpections at County and District levels

Inspectors

Environmental Health Technicians (EHT), MoHSW

EHT responsibilities

1. Every quarter, composite samples for each staple food brand (oil, sugar, flour, and salt) are collected.
2. Random qualitative tests are conducted on oil and sugar brand samples using BASF test kits. Iodine spot test kits are used for salt.
3. Results are recorded in appropriate forms

EHT transfers samples and forms to Food Safety Coordinator (FSC)

The EHTs transfers completed forms and samples for quantitative testing to the CHT Food Safetey Coordinator each quarter via airplane or road. Transfer of samples must happen within 24 hrs of collection.

FSC transfers samples and forms to NSL

The FSC transfers completed forms and samples for quantitative testing to NSL each quarter. Transfer of samples must happen within 24 hrs of collection.

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Port and Border Level inspections

BIVAC:
Responsible for pre-shippment inspections

MoF Custom Officers

MoHSW Port Health Officers

Custom Officer Responsibilities

1. Every quarter, composite samples for each imported staple food brand (oil, sugar, flour, and salt) are collected at designated borders / ports.
2. Every quarter these samples are transfered to the Port Health Officer located at the respective port / border.

Port Health Officer Responsibilities

1. Qualitative tests are conducted by the Port Health Officer on oil and sugar brand samples using BASF test kits. Iodine spot test kits are used for salt.
2. Results are recorded in appropriate forms.
3. Results and samples for quantitative testing are provided to the Food Safety Coordinator, MoHSW

Food Safety Coordinator

Food Safety Coordinator Responsibilities

1. The Food Safety Coordinator transfers samples for quantiative testing and qualitative results to NSL within 24 hours.

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Industry Level Inspections

Inspectors

Standards Officer, MoCI

Standards Offier Responsibilities

1. Every quarter, composite samples for each domestically produced staple food product are collected.
2. If a qualititave testing method exists, they are conducted.
3. Results are recorded in appropriate forms.

Standards Officer transfers samples and forms to Standards Director, MoCI

This happens each quarter via airplane or road. Transfer of samples must happen within 24 hrs of collection.

Standards Director tansfers forms to NSL

Samples and results are then transfered to the NSL for quantiative testing.

This happens each quarter via airplane or road. Transfer of samples must happen within 24 hrs of collection.

The National Fortification Alliance of Liberia
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nfa.liberia@gmail.com

National Standards Laboratory

Receives samples every quarter from:

1. *Food Safety Coordinator, MoHSW*
2. *Standards Director, MoCI*

NSL Responsibilities:

1. Tests all composite samples quantitatively using iChecks
2. Inputs quantitative data and qualitative data from submitted forms into the Monitoring Tool
3. Reports results to NFA Secretariat and GAIN on a quarterly basis
4. Issues National Fortification Logo to importers and producers after application and conformity have been confirmed
5. Conducts refresher training for inspectors on sampling and monitoring procedures as needed
6. Follows outlined procedures in the case of non-compliance
7. After third warning to non-compliant producer or importer, NSL reports event to Ministry of Justice. MoJ

3. Responsibilities of Ministries

- The MoHSW has an Environmental Health Technician in each county that is a member of the County Health Team and in charge of food safety at county and district level, including markets and households. Counties with import sites are manned by Port Health Officers that work closely with the Customs officials in monitoring foods imported into the country. The Port Health Officers will be responsible for testing fortified foods at import sites and will advise Custom Officers on whether the foods will be allowed into the country of not.
- The MoCI, through their Standards Officers, is responsible for inspecting local industry and manufacturers in cooperation with the MoHSW;
- The Customs Department of the MoF, through their Customs Officers, is responsible for inspecting the ports of entry and border points in cooperation with the MoHSW;
- The MoJ is responsible for the implementation of non-compliance procedures;
- BIVAC inspectors are responsible for pre-and post-shipment inspections at the multiple ports of entry.

4. Frequency of Inspections

- All producers in the country must be inspected at least three times per year by MoCI inspectors. For new facilities that become established, testing should be done once a month for the first three or four months.

- All importers and re-packagers within the country must be inspected at least three times per year.
- The contents of all containers/products attempting to cross the border must be tested, through the selection of random samples by lot/batch/brand. On-the-spot qualitative tests must be conducted to determine whether or not the product can enter into the country. If a positive qualitative test is obtained, the product can cross the border. If a negative qualitative test is obtained, the product will be prohibited from entering the country. Document review is important to confirm that the product is fortified according to specifications.
- Wholesalers and retailers should be inspected at least once per quarter.

Inspections following the initial inspection cycle may be limited to industries and importers that have a history of non-compliance. However, all industries must be inspected once a year regardless of compliance.

All inspections must be unannounced.

5. Scope of Inspections and Auditing

Raw product inspections should be done according to normal procedures, while inspections and auditing at production and repackaging facilities should examine the following:

- Raw products before fortification (currently including salt, wheat flour, cooking oil, and sugar) to ensure basic hygiene and Good Manufacturing Practice (GMP) parameters and standards are met.
- The fortificant premix to ensure it is stored properly (cool, dry places away from direct sunlight), not expired, that adequate amounts are in stock, and that the Certificate of Analysis (COA) is present and indicates appropriate fortificants and levels according to the Liberian standard for fortification.
- The fortified food product to ensure it meets Liberia's national standards through both qualitative and quantitative tests.
- Production processes of local manufacturers or producers to ensure that the fortificants are mixed with the food vehicle in the appropriate manner. This will vary depending on the product being fortified. Adequate dosing, proper and thorough mixing, proper handling and storage, and proper record keeping (premix used vs. product produced) should be verified.
- General QA practices and record keeping including sample collection, production procedures, and equipment maintenance. This includes ensuring appropriate hygiene levels.
- Appropriate product packaging to ensure that the fortificants levels claimed are in accordance with the standard levels. In the same manner, the storage areas and practices must be inspected. Manufacturers of processed foods or food products shall include on the label a statement of "nutrition facts" indicating the nutrient(s) and the quantities of said nutrients added in the food. Proper

packaging for fortified products includes the use of opaque (where possible) and airtight materials to avoid unnecessary nutrient degradation during transport and storage on the market.

- Product nutrient labeling with usage of the ENRICHED logo in accordance with the logo guidelines.

Inspections at points of entry for **imported foods** collected by MoHSW, MoF, and BIVAC inspectors should include the following:

- All consignments will be reviewed in terms of documentation for import and the CoA or Certificate of Conformity (CoC) that accompanies the import documentation. The CoA must provide evidence of fortification in line with Liberia Standards.
- Appropriate product packaging will be ensured to preserve fortificants levels in accordance with the standard levels. As outlined above, appropriate product packaging includes a label of nutrition facts and airtight packaging.
- All products designated as fortified should bare the ENRICHED logo in accordance with the logo guidelines.
- The required fortification should be verified as completed by the producers / manufacturers of the imported food products.
- Samples must be drawn randomly to determine PRESENCE of the added nutrients (qualitative/spot test) and then tested quantitatively to confirm that the product is imported with nutrient levels within the “market range”. It is important to establish that the product is fortified before transporting to NSL for quantitative testing (see sample collection table below). BASF test kits can be used for qualitatively determining if vitamin A is present in sugar and oil. Other equivalent testing methods can be used in its place.
- Samples should be transported to the NSL in opaque, airtight containers within 24 hours.
- Officers must note the brand name of consignments that comply and record in appropriate forms – examples and details provided in the ECSA Manual for Monitoring at Import sites[8]
- If the iCheck is available, quantitative testing can be conducted at import sites otherwise the samples should be sent to the National Standards Laboratory for determining the level of an indicator nutrient (e.g. vitamin A for oil and sugar, iron for flour and iodine for salt). WYD iodine checkers are appropriate for quantitative iodine testing at the border following testing with a rapid test kit.

Inspections at the market level collected by MoHSW, inspectors should include the following:

8 http://www.a2zproject.org/node/74

- The monitoring cycle should be conducted every three months and be based on a breakdown by counties (see sample collection table below).
- Inspectors should decide on the practical number of samples to be inspected qualitatively in their county. This inspection will include assessment of label information, packaging and other details as outlined in *Manual*[9] *for Monitoring Fortified Foods at Commercial level.*
- Monitoring shall include as many varieties of product as possible and the brand names should be noted during the exercise.
- Inspectors shall sample as widely as possible in their area of jurisdiction. If for example, a county is divided into four divisions of equal populations, sample numbers should be close to reflect the population distribution.
- The National Standards Laboratory must advise on the total number of samples they can test quantitatively so results are provided on time when samples are submitted.
- Sampling for every quarter should be done over a period of time and sampling in different areas of the county will be done at different times.
- Tests at market level shall include qualitative tests as the first method of choice. Samples that are positive to the qualitative testing shall be grouped (by brand name) to make one composite sample of the brand for the area. The composite samples are sent to the National Standards Laboratory or they are tested in the county if iChecks are available. Due to the nature of reagents used for some qualitative tests, the following should still be done in a laboratory. The County Water Laboratories would serve as ideal sites for such test to be conducted;
    - Qualitative test for sugar - with color reagents
    - Qualitative test for oil - with color reagents
    - Qualitative test for iron - iron spot test
    - Qualitative test for iodine in salt can be done on site with rapid test kits
- It is important to keep track of the brand performance and at least one composite sample of the brand should be sent for quantitative testing.
- Based on county population representations, the National Standards Laboratory can restrict the number of samples that a county can send for quantitative testing or demand an increase in numbers submitted in order to make the results representative of the county.
- The actual number of samples to be submitted by each county is determined by a consultative process with Country Environmental Officers who know the

9 http://www.a2zproject.org/node/74

distribution of the population and can provide realistic number of samples that can be inspected during every quarter. No samples should be collected if there is no capacity to test qualitatively or quantitatively.

The table below provides number of samples to be tested quantitatively either at the National Standard Laboratory or using the iCheck at county level. These numbers are based on the population distribution in the country and number of samples that can be tested every quarter. Through consultations with inspectors, sample collection numbers established make sure that at least one representative sample of each brand is sent for testing from each county. Where the population is large, two or three representative samples of the same brand can be sent to the laboratory depending on the area sampled.

If 3 brands are recognized at country level, each county will have to send 3 representative samples for quantitative testing or conduct tests using the iCheck. In this example Grand Bassa will send through 5 samples of salt and 4 samples of flour every quarter whereas Bong County will submit 10 samples of salt and 5 samples of flour. Where some known samples are not available during sampling duplicate samples of the same brand can be sent. The objective is to get indicative compliance of brands at county level and national level.

Number of samples to be tested quantitatively – number based on ensuring at least each brand is represented from each county

County	**Population**	**% of population**	**Samples to test at NSL**				**Capital**
			# OIL	**# FLOUR**	**# SUGAR**	**# SALT**	
			40	50	30	90	
Number of recognized brands			3 Brands	4 Brands	2 Brands	5 Brands	
Bomi	82,036	2%	3	4	2	5	Tubmanburg
Bong	328,919	9%	4	5	4	10	Gbarnga
Gbarpolu	83,758	2%	3	4	2	5	Bopolu
Grand Bassa	224,839	6%	3	4	2	5	Buchanan
Grand Cape Mount	129,055	4%	3	4	2	5	Robertsport
Grand Gedeh	126,146	4%	3	3	2	5	Zwedru
Grand Kru	57,106	2%	3	4	2	5	Barclayville
Lofa	270,114	8%					Voinjama

			3	4	2	10	
Margibi	199,689	6%	3	4	2	5	Kakata
Maryland	136,404	4%	3	4	2	3	Harper
Montserrado	1,144,806	33%	10	12	8	20	Bensonville
Nimba	468,088	13%	6	8	4	10	Sanniquellie
Rivercess	65,862	2%	3	4	2	5	Cestos City
River Gee	67,318	2%	3	4	2	5	Fish Town
Sinoe	104,932	3%	3	4	2	5	Greenville
15 counties	3,489,072	100%	95	122	70	193	

6. General Quality Assurance and Quality Control System for Food Fortification

The quality assurance system of the manufacturers and importers of fortified food products should include or address the following:

1. Examining the fortificant(s) to ensure that specification are met.
   - Certificate of analysis exists for every delivery of the fortificant(s).
   - Check if the fortificant(s) used is still within the market shelf-life.

2. Identifying measures put in place for fortificant(s) handling and storage.
   - Fortificant(s) properly sealed and stored in a cool, dry place.
   - Sensitive fortificant(s) are in a packing size that can be consumed for one batch of product or for one day's production.
   - Fortificant(s) are properly weighted and appropriate records maintained.
   - Weighed fortificant(s) are properly handled; used as soon as possible.
   - Container source of the fortificant(s) are immediately sealed after use and stored in a cool dry place.

3. Establishing/Identifying quality assurance on the fortification process.
   - The correct equipment is used appropriately for the product being fortified.
   - Mixing method as described is an approved production process.
   - Mixing time is observed and recorded.

4. Routinely undertake analyses of the fortification level of the fortified products (indicating frequency).
   - In-house analysis of the micronutrient levels/presence in the finished product.
   - Quantitative analysis done by external laboratories.

5. Conduct equipment calibration
   - Equipment and measuring devices calibrated as scheduled.

- Calibration records are maintained.

6. Putting in place a recall system in case of product recall is needed.

7. General Sample Taking Procedure at Point of Production

- Sampling during production will be done every shift or every batch to confirm that fortification is taking place. In continuous processes, a sample is collected every hour or two hours depending on production volumes and tested qualitatively. A composite sample is made for the shift (or day) and tested quantitatively in-house where possible.
- Samples of the fortificant premix must be taken during every inspection visit and sent out for testing to an external laboratory. Producers have the responsibility of re-testing fortificants they receive from time to time to confirm information provided on the certificate of analysis.
- A minimum of five 10g samples will be taken from the end of the production line and tested qualitatively.
- A random sample of the finished product will be taken from packages of the product at the production facility. The smallest package shall be collected. If bulk packing is used the following minimum weights shall be collected:
  100g for salt;
  100g for sugar;
  100g for flour
- Initial testing of fortified food will be done using a qualitative test such as test kits. Negative or questionable results must be confirmed quantitatively with the National Standards Laboratory.
- Each sample must be taken in duplicate [or as the law requires], sealed with sample collection materials, and marked in accordance with applicable law and with an attached copy of the relevant provisions – sampling form.
- If requested by an inspecting agency or business representative, a third sample will be marked, and given to the representative for the company's own tests.

8. Premix Handling

- Premix packages should be checked upon receipt to ensure proper sealing and to ensure it contains a Certificate of Analysis (COA). A copy of the COA should be forwarded to the Production Manager for verification of compliance.
- Number of containers received should be recorded along with lot #, expiry date, and name of person receiving the delivery. The inventory for premix should be updated immediately.
- Containers should be stored in a clean, cool, dry area away from chemicals (ideally in an air conditioned room).
- Premix should be used on "first-in, first-out" (FIFO) basis based on expiration date.

- At least once a week, quality control personnel should ensure the premix is being used in the order of expiry date and records are kept up-to-date.
- Ensure the amount of premix discharged is in accordance with the flow of flour (i.e. verification of feeder discharge rate).
- Ensure the ratio of flour produced to premix used is close to the theoretical ratio calculated.
- Ensure proper feeder calibration and discharge rate: The weight of premix discharged over a specific time period (1-2 minutes) should be measured and compared to the target weight for the premix. Premix addition should be checked daily by running a 'check feed rate' on the feeder. This can be done by placing a plate or cup under the feeder for 60 seconds and weighing the amount of premix collected. The amount of premix discharged should be adjusted according to any change in the flour flow rate.
- Premix inventory and usage records should be kept including reconciliation of actual usage versus target usage. Measuring premix usage against actual flour produced is another way (although less accurate) of ensuring proper usage.

Shift sample collection

- Every hour, 500g samples should be taken. Iron-spot tests should be conducted at least every 8 hours. If success criteria are not fulfilled the testing frequency should be increased to 2-4 hours on 250g of the samples taken.
- At the end of each shift, a 'shift composite sample' should be prepared by mixing all the hourly samples collected from that particular shift.
- A 'daily composite sample' should be prepared by mixing 500g of each of the shift samples. The same iron-spot test should be conducted on the day's composite sample and within facility laboratories.
- The remaining flour from the sample should be stored in an airtight, opaque container with brand name and date.

9. External quality control testing

- External inspectors to facilities should have a total of 5 flour samples and one premix sample from each visit:

I. Three random samples chosen from the facility's laboratory of daily composite samples. Samples should be from the current month:
   - The quality control manager of the facility must randomly select 3 daily-composite samples and send them to an external reference laboratory for the quantitative determination of iron and / or vitamin A. All samples must be protected from direct sunlight or indoor lighting and well labeled with the name of the mill, date, and type of flour.

II. One composite sample from that day's production:

- From production, 500g of flour from any bag in the packaging area before it is weighted and sealed should be taken. Every 10 minutes this step must be repeated until 8 samples have been collected. Using a spot-test, the verification of the presence of iron will be assured. The eight 500g samples from the production line will be combined into one composite sample.

III. One composite sample from the storage warehouse:
- From the storage, 8 samples will be taken through random selection. A composite sample must be created by collecting 500g from each bag and mixing them properly.

IV. One 50g sample of premix used on the day of the visit:
- One 50g sample of the premix being used for fortification at the time of inspection should be labeled with the name of the mill, name of the manufacturer, micronutrient content indicated and date of sample collection.

Inspections will include assuring adherence to Hazard Analysis Critical Control Points (HACCP) and Good Manufacturing Practices (GMPs). Inspections will also include a review of hygiene standards.

10. Salt Sample Taking Procedure

Since salt is currently not being produced locally in Liberia, the quality control of fortified salt is only important at this time.

- All salt samples must contain the regulatory minimum amount of iodine as defined at border ports, at the market, and within households.
- Qualitative testing should be done using Rapid Test Kits by those inspectors responsible for market and border inspection.
- 80% of samples must have iodine levels in line with the Standard Levels of Liberia.
- Fortified salt must be packaged and labeled as required.

11. Cooking Oil Sample Taking Procedure

Internal quality control and quality assurance (pertains to domestic producers and any facility fortifying their product at the port of entry):

- Premix packages should be checked upon receipt to ensure proper sealing and to ensure it contains a Certificate of Analysis (COA). A copy of the COA should be forwarded to the Production Manager for verification of compliance.
- Number of containers received should be recorded along with lot #, expiry date, and name of person receiving the delivery. The inventory for premix

should be updated immediately.

- Containers should be stored in a clean, cool, dry area away from chemicals (ideally in an air conditioned room).
- Premix should be used on “first-in, first-out” (FIFO) basis based on expiration date.
- At least once a week, quality control personnel should ensure the premix is being used in the order of expiry date and records are kept up-to-date.
- At least once a month, two 30g samples of premix should be collected, packaged in opaque, airtight containers, and sent to an external lab to confirm the vitamin A content. Results should be reported to the Production Manager.
- Equipment should be adequately calibrated and, where appropriate, the pumping system should be checked to ensure it delivers the vitamin A premix without leakages or delays.
- The ratio of oil produced (MT) / vitamin A compound (kg) should be verified as close to the theoretical ratio based on quantities used.
- Mechanical dosifiers should be checked at least once during each shift (preferably at the beginning) to ensure they are functioning properly. In order to verify that a dosifier is functioning properly, a worker will collect the premix dispensed from the dosifier over a given period (1 minute or more). The collected premix is then weighed in order to determine the amount dispensed per minute. This amount is then compared with the amount of premix that should be added to food, which is contingent on the refinery’s production volume. If a dosifier is not adding the required amount of premix, the problem is corrected by adjusting the dosifier.

The responsible party for collecting fortified product samples for testing is the Quality Control Department in order to ensure: 1) all samples contain the established regulatory minimum level, 2) 80% of samples contain vitamin A within the regulatory range, and 3) the fortified product is packaged and labeled as required, the following activities are required:

- At least one sample should be taken per shift (~every 8 hours) for in-house testing.
- (This assumes that the facility has a basic laboratory to conduct these tests).
- A composite sample can be prepared by collecting 200mL of oil / hour, and placing in an opaque 2-L container. At the end of the day, the samples should be labeled with the date, hour, and number of batch or batches. The amount of oil produced during the period should be included and samples sent to the Quality Control Department.
- Semi-quantitative analysis should be done hourly for each sample. In the lab, take 50g to use for the determination of vitamin A concentration using the

'semiquantitative method for determining retinyl palmitate in fortified oil', or the 'spectrophotometric quantitative method' if the necessary equipment is available.

- Samples should be sent on a monthly basis to an external lab for verification and / or proper quantitative testing if this cannot be done in the facility's laboratory.
- A supervision person should be appointed from the Quality Control Department to make unannounced visits to check that the amount of premix dispatched by the feeder is verified; the feeder contains the vitamin A premix and is working properly, and that the presence of vitamin A is being checked in hourly samples using a qualitative assay. The supervisor should ensure personnel in the packaging site are taking samples every hour and mixing equal amounts of single samples to constitute shift

12. External quality control testing:

External inspection procedures will include the following:

- Ensuring that the premix is received and stored properly as well as the timely use of the premix at appropriate sampling intervals.
- Facilities beginning fortification must be visited on a monthly basis, while established facilities should be visited at least three times a year.
- Inspections will include assuring adherence to Hazard Analysis Critical Control Points (HACCP) and Good Manufacturing Practices (GMPs). Inspections will also include a review of hygiene standards.
- Collection of fortified oil by sampling production of the day of the visit and samples from storage:
    - Inspector should collect one retail-size bottle of fortified oil or at least 0.5 liters before packaging and sealing stage.
    - Collection must be repeated every ten minutes until 8 samples have been collected. 200mL of each sample will be mixed to produce a composite sample from the production line.
    - This collection of 8 samples will be repeated at the storage warehouse through the selection of retail size bottles from the boxes at random. A composite storage warehouse sample will then be created in the same manner a composite sample from the production line was taken.
    - A bottle of the unfortified oil will be used as a control.
- Appropriate storage and labeling in sealed, opaque containers with the name of the manufacturer and the date of collection.
- Premix storage handling and sampling:
    - A 30g sample of the Vitamin A premix being used for fortification must be taken, labeled with the name of the manufacturer, stated vitamin A content and date.
- Daily composite samples from the facilities laboratory:

- Daily composite samples from the last 30 working days must be present in the facilities laboratory and adequately stored.
- Three daily composite samples are chosen at random. Production date, estimated vitamin A level, and other information found on the sample label must be recorded.

13. Sugar Sample Taking Procedure

Internal quality control and quality assurance (pertains to domestic producers and any facility fortifying their product at the port of entry):

- Internal QA/QC: Collection of fortified sugar by sampling production of the day of the visit and samples from storage:
  - Daily composite samples from the last 30 working days must be present in the facilities laboratory and adequately stored.
  - Three daily composite samples are chosen at random. Production date, estimated vitamin A level, and other information found on the sample label must be recorded.
  - One sugar sample should be taken from each line of production every 2 hours. A total of 1 kg should be accumulated from a series of small samples. These samples should be pooled and mixed daily and a 100g sample taken for analysis. Refineries with a high sugar output should repeat this process after every 50MT of production. Once the daily composite sugar sample of each line has been well blended, 250g should be removed and stored in an opaque, airtight container. Refineries should retain daily composite sugar samples corresponding to the last 30 days of production.
  - To test the vitamin A content and allow changes to be made as needed, the semi-quantitative colorimetric method should be used to test for vitamin A. A quantitative method will then be used on the daily composite sample to verify the reliability of the results obtained from the semi-quantitative testing method. If the sample does not meet the requirements, dosing and homogenization must be reviewed and composite samples prepared for each 8-hour shift until the limitation is overcome.
  - In the laboratory, the composite samples will be mixed and 100g taken to determine the retinol concentration using the semi-quantitative method or the spectrophotometric quantitative method.
  - A daily composite sample is prepared mixing 500g from each of the shift composite samples collected. Level of vitamin A is then determined and recorded.

14. External quality control testing:

External inspection procedures will include the following:

- Ensuring that the premix is received and stored properly as well as the timely use of the premix at appropriate sampling intervals.
- Facilities beginning fortification must be visited on a monthly basis, while established facilities should be visited at least three times a year.
- 5 daily-composite samples that have been stored by the producer should be collected during each visit to check for the reliability of the results obtained by the producer. 5 further samples should be taken from each line of production for testing. From each sample,3 aliquots should be prepared: one is kept at the sugar facility and the second as a control, while the third is tested.
- Inspections will include assuring adherence to Hazard Analysis Critical Control Points (HACCP) and Good Manufacturing Practices (GMPs). Inspections will also include a review of hygiene standards.
- Appropriate storage and labeling in sealed, opaque containers with the name of the manufacturer, the result of vitamin A and the date of collection. The unfortified sugar and fortified sugar should be labeled and stored apart. To the extent possible, the storage and transport of fortified sugar should take place in a cool environment, and should not be exposed to direct sunlight.
- Premix storage handling and sampling:
    - A 30g sample of the vitamin A premix being used for fortification must be taken, labeled with the name of the manufacturer, stated vitamin A content and date.

15. Inspection Records and Reports

Record keeping is essential to ensure that the food fortification program is conforming to Liberian regulations. An inspection/investigation record form and checklist are available at the NSL for proper reporting and record system.

1) The industry/importer/distributer will keep adequate records of all inspections taking place internally and externally.
2) The inspectors will give their inspection documents to the NSL of the MOCI. They will be responsible for all inspection records and will pass necessary information on to the Secretariat of the NFA, e.g. in case of continuous non-compliance.
3) The NSL will be responsible for compilation and data entry as it pertains to all fortification sample results into the Fortification Monitoring Tool. Quarterly reports will be shared with the NFA and with the Global Alliance for Improved Nutrition (GAIN) as suppliers of the quantitative iCheck testing method.

7. Non-compliance Protocol

Administrative Sanctions

The MoJ after notice and hearing, shall impose any or all of the following administrative sanctions in cases of noncompliance with the food fortification guidelines it has set:

a. Denial of registration of the processed foods and food products by the MoCI if the processed foods or food products do not comply with the food fortification requirements. Said processed foods or food products shall not be allowed to be put in the market.
b. Order the recall of the processed foods or food product(s); and
c. Impose a suspension of registration for the first and second violation; and a fine of no less than 1000 United States Dollars and cancellation of the registration of the product for the third violation of the provisions of this Act or its Implementing Rules and Regulations (IRR).

Enforcement

(a) Civil Enforcement:

These Ministries may take a civil administrative enforcement action or may commence a civil action in a court of competent jurisdiction against any licensee or person responsible for the importation, manufacture, packaging, labeling, storage, display, advertisement, distribution, sale, or exportation of food found, pursuant to the provisions of subsection (c), not to be or have been in substantial compliance with all provisions of applicable regulatory requirements. Penalties authorized by this section may be imposed for each substantial violation of regulatory requirements and may be imposed singly or in combination, as follows:

a. Imposition of a civil fine that is up to the discretion of the MoCI, in accordance with criteria established in regulations, taking into account the seriousness, including scale of production and the potential harm for the consumers of the violation(s), whether the same or similar violations have occurred previously, and such other factors as the Ministries deems appropriate;
b. Issuance of an order to cease and desist from any activity that does not comply with regulatory requirements;
c. Confiscation and destruction or other disposition of food that does not meet regulatory requirements;
d. Adverse publicity of unfavorable inspection, investigation of analysis results; and
e. License restriction, suspension or revocation.

(b) Legal Proceedings:

Prior to imposing of any penalty pursuant to subparagraph (a), these Ministries first shall provide the licensee or person accused of violating any regulatory requirement with written notice of the alleged violation(s), the intended enforcement action to be taken, and of the right to contest the charges in an administrative hearing [or in a court of competent jurisdiction]. If no such hearing is requested by the accused in writing within the time specified by the Ministries [or by law], the accused shall be deemed to agree to any enforcement action or actions proposed in the notice. If a hearing is requested, it shall be held in accordance with all applicable requirements of the [title of law governing the conduct of administrative enforcement actions, or civil court proceedings, as applicable, citation]. In any hearing under this section, the following shall apply:

a. an affidavit or certification under oath by an analyst from the analyzing laboratory regarding any food which is the subject of the proceedings shall be admissible on its mere production as *prima facie* proof of the violations shown by the examination or analysis of the food; provided, however, that the accused shall be notified in advance of the intent to produce such an affidavit or certification and shall be advised of the right to compel the live testimony of the analyst in any proceeding in which the affidavit is sought to be used;
b. copies from any record, book, or document certified as true and correct copies by the authorized officer who obtained them shall be deemed admissible into evidence as authentic;
c. where food is found in or on any premises used for the manufacture, distribution, or sale of food, such food shall be presumed to be food intended for manufacture, distribution, or sale;
d. where it is proven that a substance or mixture of substances normally is used for direct human or animal consumption, it shall be presumed that it was intended for human or animal consumption as food;
e. where it is proven that a substance is capable of entry into or being used in the composition or preparation of, or as a vehicle for the preparation of food, it shall be presumed that it was intended for such entry or use;
f. any quantity of food found in or on any premises at the time a sample thereof was taken shall be presumed to possess the same properties as such sample; and
g. the person identified on the label or packaging of any food as the manufacturer, importer, exporter, packager, or seller shall be presumed to have manufactured, imported, exported, or packaged or sold the food, as applicable.

(c) Criminal Enforcement:

It shall constitute a crime to willfully contravene any provision of this Act or applicable regulations. Any person convicted by a court of competent jurisdiction of so doing may be criminally fined in an amount no less than 1000 United States no greater than 3 months. The non-compliance fining fee and penalty apply and - in accordance to the

severity – it's at the discretion of the MoCI to increase the fine. Civil and criminal action may be taken singly or in combination for any violation. Any criminal action shall be taken in accordance with the requirements of the law governing criminal proceedings.

(d) Defenses:

It shall be a defense for any food seller or distributor charged with violating any regulatory requirement to prove that he or she:

a. Purchased or received food from another providing a written warranty;
b. Handled the food in a manner in compliance with regulatory requirements;
c. Sold or distributed the food in the same condition it was in at the time of its purchase or receipt or reconditioned it to meet regulatory requirements; and
d. Could not have discovered at the time of purchase or receipt, or thereafter, through the exercise of reasonable diligence that the food did not conform to regulatory requirements. The burden of proving each element of the defense shall lie with the person charged with noncompliance.

(e) Private Right of Action:

Any consumer who has purchased food that does not comply with regulatory requirements shall have a private right of action against any person in the food manufacture-distribution chain who failed to comply with regulatory requirements. Any consumer who prevails in any such action shall be entitled to damages in the amount of the value of the food commodity and recovery of the costs of taking the action, without the necessity of a showing that he or she suffered actual damages.

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Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

8. Standard Levels

Nutrient	Fortificant Compound	Level of Addition	Tolerable analytical range at factories and borders		Border / Production Average	Claim level at the market	Market Range	Household Range	Fortification Cost	Price of Unfortified Food	Price Increase	Cost per Person consuming daily the serving size	Serving size per capita
			Min	Max									
		mg / kg	mg/kg		mg / kg	mg / kg	mg / kg	mg / kg	USD / MT	USD / kg	%	USD / year	g / day
Salt													
Iodine	Potassium Iodate	45	40	60	50	40	30-60	15-60					
Refined Oil													
Vitamin A	Retinyl Palmitate	20	17.4	22.6	20	20	15.2-22.6	12.2-22.6	5.10	0.50	1.02%	0.093	45g
Wheat Flour													
Thiamine (B1)	Thiamin mononitrate	8.5	5.1	13.3	9.2	8.5	4.8-13.3	4.3-13.3	6.99	1.58	0.44%	0.234	57g
Riboflavin (B2)	Riboflavin	5	3.1	8.1	5.6	5	3.0-8.1	2.8-8.1					
Niacin (B3)	Niacinamide	59	38.1	99.9	69	59	35-99.9	34.3-99.9					
Iron	Ferrous fumarate	60	47	91	69	60	47-91	47-91					
	NaFeEDTA	40											

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Folic Acid	Folic acid	2.6	1.6	4.2	2.9	2.6	1.5-4.2	1.4-4.2					
Zinc	Zinc oxide	95	70	136	103	95	70-136	70-136					
Vitamin B12	Vitamin B12 0.1% WS	0.04	0.022	0.058	0.04	0.04	0.020-0.058	0.020-0.058					
							Sugar						
Vitamin A	Vitamin A Palmitate (water disp.)	15	8	22	15	15	6.0-22	4.0-22	10.50	0.78	1.50%	0.11	14-16g

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Monrovia, Liberia

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9. Annex

Annex I: Food Fortification Logo

1. Monochromatic renderings are acceptable in the case of single-color printed packaging.
2. Sizing is at the discretion of the logo recipient provided all text remains legible and overall logo size is in proportion with other packaging logos
3. Logo **MUST** be located on the **FRONT** of packaging

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Annex II: FFL Application

NATIONAL FOOD FORTIFICATION PROGRAM

Application form for the use of Food Fortification Logo

An application fee of 15 USD for manufacturer and 10 USD for importers and brokers is to be paid to:

The Ministry of Commerce and Industry
National Standards Laboratory
Fines and Fees Account at Liberia Bank For Development and Investment (LBDI)
Account Number: 001USD213-222807-01

Please complete all sections and attach the following:

1) Certified copy of the registration certificate of the company
2) Copy of the most recent inspection report or certificate
3) Sample of proposed product label and packaging
4) Receipt of payment

Submit to:

National Standards Laboratory
Ministry of Public Works Compound
Lynch Street
1000 Monrovia, Liberia

A: General Information

Name of applicant firm:
_____

Address:
_____

_____
__

Town / City:
_____

County:
_____

Telephone:

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

_____

Email Address:

_____

Factory address *(if different from above)*:

Postal
Address:_____

_____

Town / City:

_____

County:

_____

Telephone:

_____

Email Address:

_____

Name and title of person responsible for Quality Management:

Name:

_____

Title:

_____

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Ministry of Health and Social Welfare
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Monrovia, Liberia

nfa.liberia@gmail.com

B: Product Identification

Name of product:
_____

Brand name:
_____

Name of product varieties:

(a)
_____

(b)
_____

(c)
_____

(d)
_____

Type of Packaging used (e.g. paper, plastic):
_____

Packaging sizes used:
_____

C: Fortification

Nutrient(s) added:		Fortificant(s) used	Source of Fortificant(s)	Amount of Fortificant added per kg
(a)				
(b)				
(c)				
(d)				

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Brief description of the production process, including how fortification will be incorporated:
Brief description of the quality control process proposed, including how the products will be checked to ensure proper fortification:
D: Declaration I/We hereby apply to use on the above named commodity the Food Fortification Logo established by the Liberian Government with technical guidance from the National Fortification Alliance to indicate to consumers the addition of beneficial vitamins and minerals to enhance the nutritional content of a product. I/We undertake to observe the guidelines for fortification of the said commodity, as well as all other requirements contained in the Regulations. I/We hereby agree that monitoring results done by the NSL can be shared with the Food Fortification Logo committee for decision making Signature: _____ Designation: _____ Name in full: _____ Date:_____

Note: Products with the same formulation process and brand: one application
Products with the same formulation process and brand but different flavours: one application
Products with the same formulation process, but different brands one application
Products with the same formulation but different process and brands: one application per process
Products with the same process but different formulation and brand: one application per formulation

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Annex III: FFL Letter of Award

GOVERNMENT OF LIBERIA
NATIONAL FOOD FORTIFICATION PROGRAM

Date

Name

Designation

Organisation

RE: LETTER OF AWARD FOR USE OF FOOD FORTIFICATION LOGO

Following the review of your application, I am pleased to inform you that *[Name of the Organisation]* has been granted permission to use the Food Fortification Logo on the packaging of the *[Name of the Product]* indefinitely, subject to continued compliance with the governing standard for *[Name of the Product], Liberia standard [#].*

Note that my office in collaboration with the MOHSW and other stakeholders shall continuously monitor the product to ensure compliance.

Enclosed is the Award Letter, which should be displayed in your factory. Please retain a copy of this letter for your records (you may be asked to produce it during future monitoring visits).

Thank you for your role in helping to improve the wellbeing of the Liberian people.

Sincerely,

Director, National Standards Laboratory

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Annex IV: FFL Letter of Rejection

GOVERNMENT OF LIBERIA
NATIONAL FOOD FORTIFICATION PROGRAM

Date

Name

Designation

Organisation

RE: LETTER OF REJECTION FOR USAGE OF THE FORTIFICATION LOGO

Following the review of your application and the recommendation from the National Standards Laboratory, I regret to inform you that [*Name of the Industry]* has **NOT** been granted permission to use the Food Fortification Logo on the packaging of *[the Name of the Product], due to lack of noncompliance with Liberia standard #____*.

I wish to advise you that immediate action must be taken to comply with the relevant Liberia standard, and to resubmit the application to the Director of the National Standards Laboratory after addressing the shortfalls as attached.

I look forward to your usual cooperation in this important matter.

Sincerely,

Director, National Standards Laboratory

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

Annex V: Certificate of Award for Industry

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

nnex VI: National Fortification Alliance Terms of Reference

Background

The government of Liberia recognizes malnutrition as a serious problem, one that impacts the wellbeing of millions of citizens, as well as the overall social and economic development of the country. Malnutrition is projected to be the underlying cause of 45,000 child deaths by 2015. Currently 33% of Liberian children are stunted. One major component of this malnutrition is the deficiency of micronutrients critical for proper health. Although necessary in only minute quantities, their lack prevents proper growth, impedes immune function and weakens both mental and physical capacity. The 2011 Liberia Micronutrient Deficiency Survey (LMNS) revealed that 13.2% of children under five were vitamin A deficient; 29.8% of children under five, 19.3% of pregnant women, and 19.6% of non-pregnant women were iron deficient; and 59.1% children under five were anemic.

Food fortification is the process, used since the 1920s, of adding micronutrients (essential vitamins and minerals) to some staple foods in order to correct known

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

deficiencies of those nutrients in the population. It has been widely shown to be a safe and cost effective means of improving micronutrient status. The government of Liberia has articulated the urgent need to prevent and control nutritional disorders, and has recognized fortification specifically in the National Food Security and Nutrition Strategy.

Mandate

The National Fortification Alliance (NFA) will serve as the forum for generating policy guidance and coordinating all activities relating to food fortification in Liberia.

Core Functions

To identify new products appropriate for fortification; draft and adopt Liberia-specific food fortification standards using up-to-date deficiency and consumption data, design, adopt and implement a national food fortification strategy; help to develop education/advocacy materials and sensitize stakeholders to the importance of food fortification; develop, mobilize resources for, and implement specific fortification programs; advise on proper regulation, and help coordinate promotion of standards and quality assurance measures; monitor these programs and report performance to stakeholders; assess the impact of fortification on the nutritional status of the population; periodically review established fortification programs and adjust as needed; ensure fortification complements ongoing nutrition initiatives.

Composition

Members will be drawn from relevant government bodies, academia, development partners, civil society and industries that produce or import fortified or fortifiable foods. Membership will pertain to the relevant organizations, with each member organization responsible for appointing representatives to attend NFA meetings on a regular basis and serve as focal points for activities relating to fortification. The focal person for each institution shall serve as a representative of that institution and as a link between his or her institution and the NFA. He or she will need to communicate between the two bodies to make sure the organization is aware of the various activities happening at the NFA and likewise to inform the NFA of the activities which his or her institution is performing. The NFA will allow time for each focal person to present and report on any new, emerging information to share with the other members. The focal person should be the one attending the NFA meeting, but wherever this is not possible, he or she should be sure that the person sent in his or her place is the appropriate person, well versed on the happenings and history of the NFA.

Leadership Positions

Chair: The chair is responsible to schedule and lead meetings, set the agenda for meetings, mobilize stakeholders, and represent and advocate for the NFA with government, private sector, and development partners, as needed. The chair may be, but does not have to be from the “home” agency of the NFA (in Liberia, Ministry of Health and Social Welfare). The most important trait in electing a NFA Chair is leadership and mobilization qualities.

Vice Chair: The vice chair will assist the chair with advocacy and scheduling as needed, and substitute the chair in case of absence.

Secretariat: The secretariat maintains an up to date members contact list, coordinates meeting logistics, keeps attendance and minutes for meetings, and circulates these to the membership. Provides any other logistical or communications support necessary to the chair. This position should be held by someone in the “home” agency.

These positions shall rotate among membership. Every two years at the beginning of the first quarter of year, members will nominate new chair, vice char, and secretariat from among themselves. In the case of multiple nominations, positions will be selected by simple majority vote in a secret ballot election.

Subcommittees

The NFA will have a subcommittee structure. Each Committee will be tasked with relevant issues brought up in the NFA Meeting. They will then meet to carry out activities assigned and report back to the NFA and to their respective institutions. Each Subcommittee should choose a “lead agency” among its members to oversee actions and responsibilities of the committee as a whole. It will be the decision of each committee on its own to chose their respective lead. Depending on their focus, subcommittees may be long standing or formed for a short period of time on an ad hoc basis.

Funding for the NFA

Funding for the NFA itself is minimal. The “home” Ministry for the fortification program will be responsible for providing space for the meeting and any incidental costs of printing for the meetings themselves. Programmatic costs for the fortification program may be supported by the appropriate agency, by development partners, or by seeking external funding, as appropriate.

Joining the NFA

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

The NFA, as a multi-sector and multi-agency organization, is always willing to review requests for membership from new departments, organizations, etc. Any agency that would like to join the NFA needs only to contact the Chair for information and approval. The “home” Ministry should regularly review participation and ensure there are no new individuals, agencies, industry, or other that should be part of the Alliance.

Roles and Responsibilities

Ministry of Health and Social Welfare (MoHSW)

The MoHSW through the Nutrition Division and in collaboration with other MOHSW Divisions such as Environmental and Occupational Health, Health Promotion, and Community Health, will oversee coordination of activities to ensure consistency with national and sectoral policies and guidelines. MoHSW will be considered the “home” agency for the NFA.

Ministry of Commerce and Industry, Ministry of Finance (Customs); Ministry of Agriculture, MoHSW Division of Environmental and Occupational Health; National Standards Laboratory

The Ministries of Commerce (Divisions of Standards, Trade and Industrial Development) and Finance (Divisions of Customs), as authorities responsible for the quality control of imported foods, will coordinate with the development of quality assurance procedures at entry points. Ministry of Agriculture and Ministry of Health and Social Welfare will also play regulatory roles, and all samples will be tested by the National Standards Laboratory.

Ministry of Commerce and Industry (MoCI) (Industry)

As responsible authority for industry development, MoCI Industry will coordinate with local producers to ensure compliance with programmatic aims.

Ministry of Commerce and Industry (MoCI) (Standards)

Until such a time as the planned National Standards Body is established, the Standards Division of the MoCI, as the responsible body for establishing quality assurance standards, will help ratify and house the standards relating to fortification of food.

Ministry of Health and Social Welfare (National Health Promotion); Ministry of Commerce and Industry (Consumer Protection) Ministry of Education (School Feeding)

Health Promotion will be responsible for designing social messaging on the importance of fortified foods, in partnership with Ministry of Commerce, Consumer Protection Division. MoE will, with MoHSW, help ensure proper health messaging to youth on the nutritional benefits of fortification, through the schools.

Ministry of Internal Affairs (MoIA); Ministry of Information (MoI)

In addition to supporting the social marketing campaigns conducted by MoHSW, MoE, other ministries, and the civil society, MoIA and MoI will help to ensure that local authorities are informed and on board with program priorities, in line with Liberia's drive towards decentralization.

LISGIS

LISGIS will assist the responsible Ministries with data collection and analysis in two major streams of monitoring and evaluating: 1) matters of safety and quality (assessing micronutrient levels, carrying out studies of stability, etc. as needed), and 2) nutritional and public health impact (survey design and execution and other assistance as needed), as well as any other evaluations deemed necessary.

Ministry of Justice (MoJ), Ministry of Health and Social Welfare (MoHSW) (Legal)

MoJ and the MoHSW legal counsel will ensure the compliance of the fortification program with Liberian laws and regulation. MoJ is the responsible authority for the enforcement of laws and prosecution of non-compliance, including regulation of food fortification.

Civil Society

In addition to providing a voice for consumers in determining activities and priorities, participating institutions will assist with social marketing; developing materials and messages with responsible authorities, mobilizing constituents to disseminate information, and conducting focus-groups and opinion polls to assess the spread and impact of messages.

Private Sector

As well as having primary responsibility for production and distribution of fortified foods (including engaging all companies in relevant industries and sharing best practices related to fortification), private sector representatives will work closely with responsible authorities on matters relating to safety and quality; developing appropriate standards and strong quality assurance plans.

Focal Areas and Key Activities

Focal Area	**Key Activities**	**Responsible Organizations**
Production	Involve all relevant industry members	Private Sector

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

and Distribution	Identify technical/business barriers to fortification, solutions to same Establish costing models as needed Participate in standard-setting process Develop/adopt QA/QC procedures	MoCI: Trade MoCI: Industrial Development MoF National Standards Lab Liberia Chamber of Commerce
Policy and Legislation	Participate in standard-setting process, based on safe levels of fortification, impact of different variables on stability, retention of micronutrients Draft and support any additional regulation or legislation necessary to ensure the mandate of fortification Include fortification in all formal national policies regarding health and nutrition	MoHSW MoCI Legal Counsel MoA MoJ
Safety and Quality	Establish/build capacity for monitoring / inspection and reporting procedures and establish mechanisms to act upon non-compliance Establish/build capacity for established sample analysis procedures Recommend changes to industry as needed	NSL MoHSW DEOH MoCI: Standards MoCI: Trade MoCI: Consumer Protection MoF: Customs Legal Counsel MoJ
Social Marketing	Integrate Regional fortification logo into education/advocacy materials Carry out policy maker sensitization workshops, industry sensitization meetings	MoHSW: Nutrition MoHSW: Health Promotion

The National Fortification Alliance of Liberia
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Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

	Carry out consumer education campaigns	MoE School Feeding National Consumer Council MoCI: Consumer Protection MoI MoIA Private Sector
Monitoring, Evaluation and Impact Assessment	Develop regular reporting on program execution (industry, imports, markets, HH levels) Design & execute follow-up survey MN deficiencies	LISGIS MoHSW MoCI MoF MoA MoIA
Program Management	Develop national fortification strategy Ensure harmonization with on-going nutrition initiatives Ensure involvement of all relevant stakeholders Develop quarterly plan of work for NFA members Produce and circulate quarterly reports on fortification status, actions underway	MoHSW: Nutrition MoA MoCI Development partners
Technical and Financial Support	Assistance with other focal areas as needed Resource Mobilization	All Actors

Amendment of the TOR

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia, Liberia

nfa.liberia@gmail.com

This TOR should be reviewed at the beginning of the first quarter, every year, and changes submitted for amendment.

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia Liberia

nfa.liberia@gmail.com

Annex VII: MoU for the MoCI Standards Inspectors

I. Preamble

Due to high rates of chronic malnutrition and micronutrient deficiencies that remain to persist in Liberia as outlined by the 2011 Micronutrient Deficiency Survey, Liberia is at risk of losing significant individual and national economic potential not to mention premature death and disability. Food fortification has been deemed one of the most cost-effective means of addressing micronutrient malnutrition that exist today.

This document is a Memorandum of Understanding (MOU) between the National Fortification Alliance (NFA) and the Standards Inspectors of the Ministry of Commerce and Industry, who will be acting as inspectors at commercial level, including producers, manufacturers, supermarkets, and importers. In order to ensure consistency and a clear structure, this document outlines the inspector's responsibilities.

II. Purpose and Background

The food vehicles for food fortification appropriate for Liberia have been defined in line with regional standards and national consumption patterns and are as follows: salt, sugar, cooking oil and wheat flour. To ensure that all of identified food vehicles being imported, sold, produced or manufactured in Liberia meet the standard levels elaborated on in the adopted national regulations, all producers, importers and re-packagers, as well as wholesalers and retailers in the country must be inspected at least three times per year at the borders and ports, county, district, community, and market levels.

The following Ministries and agencies are charged under the law with inspecting fortified foods and ensuring compliance with Standards and regulations:

a. The Standards Officers of the MoCI are responsible for commercial inspections of the industry and manufacturers in Monrovia through their standards officers. This includes process control, raw material control, and finished product control as specified in the NFA Sampling Plan.
b. The Environmental Health Technicians and Port Health Officers of the MoHSW are responsible for inspections at the county- and district levels. This includes the inspection of households and local markets, to ensure that all products being sold and consumed are adequately fortified. While the Environmental Health Technicians will act as food inspectors, they will report to their designated Community Health Director of the County Health Team, who is in turn responsible to report to the Environmental Health Supervisor. As the responsible officials for Food Security issues within Liberia, the Environmental Health Technicians will collaborate with the MoCI and MoF inspectors and

receive the collected forms and samples of inspected foods from them to pass on to the Environmental Health Supervisor and finally the NSL.

c. The Customs Officers of the MoF are responsible for inspections at the borders and ports of entry.
d. The MoJ will ensure implementation of non-compliance procedures.
e. BIVAC inspectors are responsible for pre-shipment inspections.

The NFA is housed within the Nutrition Division of the Ministry of Health and Social Welfare and chaired by the Ministry of Commerce and Industry.

III. Inspector Tasks

The finished, fortified food product will be tested randomly in accordance with the NFA Sampling Procedures. Administratively, the standard inspectors are responsible to their supervisor, who will be designated by the MoCI.

Standard inspectors are to ensure the following:

Training (qualitative testing and form completion)

The responsible inspectors are trained by the National Standards Laboratory on qualitative testing procedures, issues of non-compliance, and the proper means of completing and submitting inspection forms with all required information.

Sample Collection

A total of five samples and on premix sample (50 g) should be taken from each industry. This includes three random samples from the facility's lab of daily composite samples, one composite sample from the days production (eight 500 g samples), and one composite sample from the warehouse (eight 500 g samples)

All samples as well as completed forms and qualitative testing results are to be delivered to the respective Supervisor on a quarterly basis. The supervisor is responsible for transferring testing results to the National Standards Laboratory on a quarterly basis.

Product Nutrient Labeling

The ENRICHED logo adopted by the NFA is used adequately in line with the Logo Guidelines. That is the logo has been granted to the producer by the NSL and is printed on the front of the packaging in a size proportionate to other logo labeling

Good Manufacturing Practice (GMP)

The raw products before fortification meet basic hygiene and GMP parameters and standards.

Quality Assessment Practice

a. General QA practices and record keeping including sample taking;
b. Packages should be checked to ensure proper sealing and packaging;
c. All items should be stored in a dry, clean, and cool area away from chemicals;
d. All samples must contain the regulatory minimum amount of micronutrients and vitamins as defined in the Standard Levels included in the NFA Guidelines;
e. All products must be labeled as required, including the Food Fortification Logo, which should be placed on the front of the packages and easily legible.

General Terms

a. This MoU is effective upon signature of the NFA Chair and the head of the Standards Department of the MoCI.
b. The Parties may amend this MoU in writing at any time, and any such amendment will become effective when agreed to by both parties per re-signing.
c. The Standards Department agrees to cooperate with the National Standards Laboratory and the NFA Secretariat.

Annex VIII: MOU for the MoF Customs Inspectors

I. Preamble

Due to high rates of chronic malnutrition and micronutrient deficiencies that remain to persist in Liberia as outlined by the 2011 Micronutrient Deficiency Survey, Liberia is at risk of losing significant individual and national economic potential not to mention premature death and disability. Food fortification has been deemed one of the most cost-effective means of addressing micronutrient malnutrition that exist today.

This document is a Memorandum of Understanding (MOU) between the National Fortification Alliance (NFA) and the Custom inspectors of the Ministry of Finance, who will be acting as inspectors at port and border levels. In order to ensure consistency and a clear structure, this document outlines the inspector's responsibilities.

II. Purpose and Background

The food vehicles for food fortification appropriate for Liberia have been defined in line with regional standards and national consumption patterns and are as follows: salt, sugar, cooking oil and wheat flour. To ensure that all of identified food vehicles being imported, sold, produced or manufactured in Liberia meet the standard levels elaborated on in the adopted national regulations, all producers, importers and re-packagers, as well as wholesalers and retailers in the country must be inspected at least three times per year at the borders and ports, county, district, community, and market levels.

The following Ministries and agencies are charged under the law with inspecting fortified foods and ensuring compliance with Standards and regulations:

a. The Standards Officers of the MoCI are responsible for commercial inspections of the industry and manufacturers in Monrovia through their standards officers. This includes process control, raw material control, and finished product control as specified in the NFA Sampling Plan.
    f. The Environmental Health Technicians of the MoHSW are responsible for inspections at the county- and district levels. This includes the inspection of households and local markets, to ensure that all products being sold and consumed are adequately fortified. While the Environmental Health Technicians will act as food inspectors, they will report to their designated Community Health Director of the County Health Team, who is in turn responsible to report to the Environmental Health Supervisor. The Environmental Health Supervisor will report to the NSL. As the responsible officials for Food Security issues within Liberia, the Environmental Health Technicians will collaborate with the MoCI and MoF inspectors and receive the collected forms and samples of inspected foods from them to pass on to the Environmental Health Supervisor and finally the NSL.

b. The Customs Officers of the MoF are responsible for inspections at the borders and ports of entry.
c. The MoJ will ensure implementation of non-compliance procedures.
d. BIVAC inspectors are responsible for pre-shipment inspections.

The Customs Inspectors of the Ministry of Finance will be responsible for all inspections at the borders to Sierra Leone, Guinea, and Ivory Coast as well as the ports within Liberia including:

Freeport	Freeport, Monrovia
Parcel Post	Ministry of Post & Telecommunication (Main Office)
RIA	Harbel, Margibi
JSP	Sinkor, Monrovia
Loguatou	Nimba County
Ganta	Nimba County
Buchanan	Grand Bassa County
Greenville	Sinoe County
Toe Town	Grand Gedeh County
Harper	Maryland County
Yealla	Lofa County
Jorwah	Bong County
Butuo	Nimba County
Mendicorma	Lofa County
Bo-Waterside	Grand Cape Mount County

The NFA is housed within the Nutrition Division of the Ministry of Health and Social Welfare and chaired by the Ministry of Commerce and Industry.

III. Inspector Tasks

The finished, fortified food product will be tested randomly in accordance with the NFA Sampling Procedures. Administratively, the Customs officers are responsible to the designated immediate supervisor, who'll be identified by the MoF.

Custom officers are to ensure the following:

IV. Training (qualitative testing and form completion)

The responsible inspectors are trained by the National Standards Laboratory on qualitative testing procedures, issues of non-compliance, and the proper means of completing and submitting inspection forms with all required information.

V. Sample Collection

Samples of wheat flour, cooking oil, sugar, and salt are to be taken from the ports and borders on a quarterly basis: At least two 5g or 5ml random samples of each food commodity should be taken quarterly. Each food commodity brand should be duly represented.

All samples as well as completed forms and qualitative testing results are to be delivered to the respective Supervisor on a quarterly basis. The supervisor is responsible for transferring testing results to the National Standards Laboratory on a quarterly basis.

VI. Product Nutrient Labeling

The ENRICHED logo adopted by the NFA is used adequately in line with the Logo Guidelines. That is the logo has been granted to the producer by the NSL and is printed on the front of the packaging in a size proportionate to other logo labeling

VII. Good Manufacturing Practice (GMP)

The raw products before fortification meet basic hygiene and GMP parameters and standards;

VIII. Quality Assessment Practice

a. General QA practices and record keeping including sample taking;
b. Packages should be checked to ensure proper sealing and packaging;
c. All items should be stored in a dry, clean, and cool area away from chemicals;
d. All samples must contain the regulatory minimum amount of micronutrients and vitamins as defined in the Standard Levels included in the NFA Guidelines;
e. All products must be labeled as required, including the Food Fortification Logo, which should be placed on the front of the packages and easily legible.

IX. General Terms

This MoU is effective upon signature of the NFA Chair and the head of the Customs Department.

The Parties may amend this MoU in writing at any time, and any such amendment will become effective when agreed to by both parties per re-signing.

The Customs Department agrees to cooperate with the National Standards Laboratory and the NFA Secretariat.

Annex IX: MOU for MoHSW Environmental Health Technicians

I. Preamble

Due to high rates of chronic malnutrition and micronutrient deficiencies that remain to persist in Liberia as outlined by the 2011 Micronutrient Deficiency Survey, Liberia is at risk of losing significant individual and national economic potential not to mention premature death and disability. Food fortification has been deemed one of the most cost-effective means of addressing micronutrient malnutrition that exist today.

This document is a Memorandum of Understanding between the National Fortification Alliance (NFA) and the Ministry of Health and Social Welfares' Environmental and Occupational Health Team, who will be acting as inspectors within the counties on market and household level. In order to ensure consistency and a clear structure, this document clarifies the responsibilities in the inspection process of food fortification on county, district, and community levels including markets.

II. Purpose and Background

The food vehicles for food fortification appropriate for Liberia have been defined in line with regional standards and national consumption patterns and are as follows: salt, sugar, cooking oil and wheat flour. To ensure that all of identified food vehicles being imported, sold, produced or manufactured in Liberia meet the standard levels elaborated on in the adopted national regulations, all producers, importers and re-packagers, as well as wholesalers and retailers in the country must be inspected at least three times per year at the borders and ports, county, district, community, and market levels.

The following Ministries and agencies are charged under the law with inspecting fortified foods and ensuring compliance with Standards and regulations:

a. The Standards Officers of the MoCI are responsible for commercial inspections of the industry and manufacturers in Monrovia through their standards officers. This includes process control, raw material control, and finished product control as specified in the NFA Sampling Plan.
b. The Environmental Health Technicians of the MoHSW are responsible for inspections at the county- and district levels. This includes the inspection of households and local markets, to ensure that all products being sold and consumed are adequately fortified. While the Environmental Health Technicians will act as food inspectors, they will report to their designated Community Health Director of the County Health Team, who is in turn responsible to report to the Environmental Health Supervisor. As the responsible officials for Food Security issues within Liberia, the Environmental Health Technicians will collaborate with the MoCI and MoF inspectors and receive the collected forms and samples of inspected foods from them to pass on to the Environmental Health Supervisor and finally the NSL.

Each of the 15 counties has an Environmental Health Officer that is a member of the County Health Team and in charge of food safety. This person will be in charge of the monitoring at county and market/retail level. Counties with import sites are manned by Port Health Officers that work closely with the Customs officials in monitoring foods imported into the country. The Port Health Officers will be responsible for testing fortified foods at import sites and will advise Custom Officers on whether the foods will be allowed into the country of not.

c. The Customs Officers of the MoF are responsible for inspections at the borders and ports of entry.
d. The MoJ will ensure implementation of non-compliance procedures.
e. BIVAC inspectors are responsible for pre-shipment inspections.

The Environmental and Occupational Health team is informed by the National MoHSW Policy and Plan as well as the National Environmental and Occupational Health Policy.

The division of Environmental and Occupational Health has mandates on Food Safety, Water Quality, Port Health, Health Care Waste Management, Occupational Health and Safety, Vector and Vermin control, Water Quality, Environmental Sanitation and Hygiene promotion.

III. Tasks

The finished, fortified food product will be tested randomly on a quarterly basis in accordance with the NFA Sampling Procedures – At least two samples of at least 5g or ml must be taken per food commodity. Each food commodity brand should be duly represented. The inspectors are to ensure the following:

Product Nutrient Labeling

The ENRICHED logo adopted by the NFA is used adequately in line with the Logo Guidelines;

Quality Assessment Practice

General QA practices and record keeping including sample taking;

Training

The responsible inspectors will be trained on quantitative testing procedures as well as the proper means of filling out the inspection forms.

Quantitative Testing

Product passes the rapid test for fortification. If the product doesn't pass this testing procedure, it is to be taken off the shelves and the NSL as well as the NFA are to be informed immediately.

Forms

The inspector forms are to be filled out in a proper manner.

Transferring information

The Environmental Safety Inspectors are to inspect the markets and households in their respective counties.

The filled out forms as well as the quantitative testing results are then to be delivered to the respective coordinator.

The coordinator will be responsible for transferring testing results to the National Standards Laboratory on a monthly basis.

IV. General Terms

This MoU is effective upon the signature of representatives of the representatives of the Parties.

The Parties may amend this MoU in writing at any time, and any such amendment will become effective when agreed to by both parties per re-signing.

The Environmental and Occupational Health team agrees to cooperate with the National Standards Laboratory and the NFA Secretariat.

ENRICHED
Recommended by the National Fortification Alliance

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia Liberia

nfa.liberia@gmail.com

Annex X: MoU: Ministry of Justice and NFA

III. Preamble

Due to high rates of chronic malnutrition and micronutrient deficiencies that remain to persist in Liberia as outlined by the 2011 Micronutrient Deficiency Survey, Liberia is at risk of losing significant individual and national economic potential not to mention premature death and disability. Food fortification has been deemed one of the most cost-effective means of addressing micronutrient malnutrition that exist today.

This document is a Memorandum of Understanding (MOU) between the National Fortification Alliance (NFA) and the Standards Inspectors of the Ministry of Justice and Industry, who will be responsible for implementing non-compliance measures as they relate to products samples at the commercial level, including producers, manufacturers, supermarkets, and importers. In order to ensure consistency and a clear structure, this document outlines the inspector's responsibilities.

IV. Purpose and Background

The food vehicles for food fortification appropriate for Liberia have been defined in line with regional standards and national consumption patterns and are as follows: salt, sugar, cooking oil and wheat flour. To ensure that all of identified food vehicles being imported, sold, produced or manufactured in Liberia meet the standard levels elaborated on in the adopted national regulations, all producers, importers and re-packagers, as well as wholesalers and retailers in the country must be inspected at least three times per year at the borders and ports, county, district, community, and market levels.

The following Ministries and agencies are charged under the law with inspecting fortified foods and ensuring compliance with Standards and regulations:

a. The Standards Officers of the MoCI are responsible for commercial inspections of the industry and manufacturers in Monrovia through their standards officers. This includes process control, raw material control, and finished product control as specified in the NFA Sampling Plan.
b. The Environmental Health Technicians of the MoHSW are responsible for inspections at the county- and district levels. This includes the inspection of households and local markets, to ensure that all products being sold and consumed are adequately fortified. While the Environmental Health Technicians will act as food inspectors, they will report to their designated Community Health Director of the County Health Team, who is in turn responsible to report to the Environmental Health Supervisor. As the responsible officials for Food

Security issues within Liberia, the Environmental Health Technicians will collaborate with the MoCI and MoF inspectors and receive the collected forms and samples of inspected foods from them to pass on to the Environmental Health Supervisor and finally the NSL.

c. The Customs Officers of the MoF are responsible for inspections at the borders and ports of entry.
d. The MoJ will ensure implementation of non-compliance procedures.
e. BIVAC inspectors are responsible for pre-shipment inspections.

V. Tasks

Administrative Sanctions

The MoJ after notice and hearing from the Ministry of Commerce and Industry, shall impose any or all of the following administrative sanctions in cases of noncompliance with the food fortification guidelines it has set:

a. Denial of registration of the processed foods and food products by the MoCI if the processed foods or food products do not comply with the food fortification requirements. Said processed foods or food products shall not be allowed to be put in the market.
b. Order the recall of the processed foods or food product(s); and
c. Impose a fine and suspension of registration for the first violation; fine and suspension of registration for the second violation; and fine and cancellation of the registration of the product for the third violation of the provisions of this act or its IRR.

Enforcement

(a) Civil Enforcement:

These Ministries may take a civil administrative enforcement action or may commence a civil action in a court of competent jurisdiction against any licensee or person responsible for the importation, manufacture, packaging, labeling, storage, display, advertisement, distribution, sale, or exportation of food found, pursuant to the provisions of subsection (c), not to be or have been in substantial compliance with all provisions of applicable regulatory requirements. Penalties authorized by this section may be imposed for each substantial violation of regulatory requirements and may be imposed singly or in combination, as follows:

a. Imposition of a civil fine of no less than 1000 United States Dollars, in accordance with criteria established in regulations, taking into account the seriousness, including scale of production and the potential harm for the consumers of the violation(s), whether the same or similar violations have

occurred previously, and such other factors as the Ministries deems appropriate. In accordance to the severity of non-compliance, it shall be at the discretion of the MoCI to increase the fine.

b. Issuance of an order to cease and desist from any activity that does not comply with regulatory requirements;
c. Confiscation and destruction or other disposition of food that does not meet regulatory requirements;
d. Adverse publicity of unfavorable inspection, investigation of analysis results; and
e. License restriction, suspension or revocation.

(b) Legal Proceedings:

Prior to imposing any penalty pursuant to subparagraph (a), these Ministries first shall provide the licensee or person accused of violating any regulatory requirement with written notice of the alleged violation(s), the intended enforcement action to be taken, and of the right to contest the charges in an administrative hearing [or in a court of competent jurisdiction]. If no such hearing is requested by the accused in writing within the time specified by the Ministries [or by law], the accused shall be deemed to agree to any enforcement action or actions proposed in the notice. If a hearing is requested, it shall be held in accordance with all applicable requirements of the [title of law governing the conduct of administrative enforcement actions, or civil court proceedings, as applicable, citation]. In any hearing under this section, the following shall apply:

a. an affidavit or certification under oath by an analyst from the analyzing laboratory regarding any food which is the subject of the proceedings shall be admissible on its mere production as *prima facie* proof of the violations shown by the examination or analysis of the food; provided, however, that the accused shall be notified in advance of the intent to produce such an affidavit or certification and shall be advised of the right to compel the live testimony of the analyst in any proceeding in which the affidavit is sought to be used;
b. copies from any record, book, or document certified as true and correct copies by the authorized officer who obtained them shall be deemed admissible into evidence as authentic;
c. where food is found in or on any premises used for the manufacture, distribution, or sale of food, such food shall be presumed to be food intended for manufacture, distribution, or sale;
d. where it is proven that a substance or mixture of substances normally is used for direct human or animal consumption, it shall be presumed that it was intended for human or animal consumption as food;
e. where it is proven that a substance is capable of entry into or being used in the composition or preparation of, or as a vehicle for the preparation of food, it shall be presumed that it was intended for such entry or use;

f. any quantity of food found in or on any premises at the time a sample thereof was taken shall be presumed to possess the same properties as such sample; and
g. the person identified on the label or packaging of any food as the manufacturer, importer, exporter, packager, or seller shall be presumed to have manufactured, imported, exported, or packaged or sold the food, as applicable.

(c) Criminal Enforcement:

It shall constitute a crime to willfully contravene any provision of this Act or applicable regulations. Any person convicted by a court of competent jurisdiction of so doing may be criminally fined in an amount no less than 1000 United States Dollars and\or imprisoned for a period of no less than 72 hours. In accordance to the severity of non-compliance, it is at the discretion of the MoCI to increase the fine. Civil and criminal action may be taken singly or in combination for any violation. Any criminal action shall be taken in accordance with the requirements of the law governing criminal proceedings.

(d) Defenses:

It shall be a defense for any food seller or distributor charged with violating any regulatory requirement to prove that he or she:

a. Purchased or received food from another providing a written warranty;
b. Handled the food in a manner in compliance with regulatory requirements;
c. Sold or distributed the food in the same condition it was in at the time of its purchase or receipt or reconditioned it to meet regulatory requirements; and
d. Could not have discovered at the time of purchase or receipt, or thereafter, through the exercise of reasonable diligence that the food did not conform to regulatory requirements. The burden of proving each element of the defense shall lie with the person charged with noncompliance.

(e) Private Right of Action:

Any consumer who has purchased food that does not comply with regulatory requirements shall have a private right of action against any person in the food manufacture-distribution chain who failed to comply with regulatory requirements. Any consumer who prevails in any such action shall be entitled to damages in the amount of the value of the food commodity and recovery of the costs of taking the action, without the necessity of a showing that he or she suffered actual damages.

VI. General Terms

The National Fortification Alliance of Liberia
Ministry of Health and Social Welfare
Oldest Congo Town
Monrovia Liberia

nfa.liberia@gmail.com

This MoU is effective upon the signature of representatives of the representatives of the Parties.

The Parties may amend this MoU in writing at any time, and any such amendment will become effective when agreed to by both parties per re-signing.

The Ministry of Justice inspection team agrees to cooperate with the National Standards Laboratory and the NFA Secretariat.