



## Laboratory Module for Food Operations



**AFC Laboratory Quality Manual**

**CONTENTS**

1. Quality System
2. Organization and Management
3. Personnel
4. Laboratory Accommodation and Environment
5. Personal Hygiene
6. Confirmation of Work and Client Requirements
7. Handling Test Items
8. Test Methods
9. Bench Practices
10. Assuring Quality of Results
11. Equipment, Calibration and Measurement Traceability
12. Calibration Standards / Reference Materials
13. Reporting Test Results
14. Records
15. Purchase of Outside Services, Supplies and Laboratory Consumables

Document Reference: IS Laboratory Quality Manual  
Revision: 0 - 1<sup>st</sup> May 2024  
Owned by: Laboratory Manager  
Authorized by: Technical Manager

**Laboratory Quality Manual**

LABORATORY QUALITY POLICY

The policy is to provide competitive services of the highest standards of quality. By achieving this goal, the company will consistently satisfy the requirements of its internal and external customers and achieve success.

Through adoption of a Laboratory management system that complies with ISO 17025 and the CLAS standard and reflects the competence of the Laboratory, potential customers, and independent authorities.

The Laboratory is committed to providing the resources needed to maintain the highest standards of performance and to meet customer requirements. Management are directly responsible for providing organization policies, training and education of all employees and that they are to carry out work as per the testing schedules.

The Laboratory is committed to the training and screening of personnel engaged in testing procedures manual. Activities include chemical analysis, environmental sampling and pathogen detection in the Industry Code of Practice or are International Standards.

The Laboratory follows:

- 1. A Laboratory Management System complying with ISO/IEC 17025
- 2. The highest standards of performance and to maintain the Laboratory's reputation with customers.
- 3. Compliance with relevant legislation and ensure compliance with relevant requirements.
- 4. Customer satisfaction.
- 5. A culture of continuous improvement within the Laboratory.

**Laboratory Quality Manual**

**Scope and its context**

The Laboratory is committed to providing the resources needed to maintain the highest standards of performance and to meet customer requirements. Management are directly responsible for providing organization policies, training and education of all employees and that they are to carry out work as per the testing schedules.

The Laboratory is committed to the training and screening of personnel engaged in testing procedures manual. Activities include chemical analysis, environmental sampling and pathogen detection in the Industry Code of Practice or are International Standards.

The Laboratory follows:

- 1. A Laboratory Management System complying with ISO/IEC 17025
- 2. The highest standards of performance and to maintain the Laboratory's reputation with customers.
- 3. Compliance with relevant legislation and ensure compliance with relevant requirements.
- 4. Customer satisfaction.
- 5. A culture of continuous improvement within the Laboratory.

**Laboratory Quality Manual**

The Laboratory is committed to providing the resources needed to maintain the highest standards of performance and to meet customer requirements. Management are directly responsible for providing organization policies, training and education of all employees and that they are to carry out work as per the testing schedules.

The Laboratory is committed to the training and screening of personnel engaged in testing procedures manual. Activities include chemical analysis, environmental sampling and pathogen detection in the Industry Code of Practice or are International Standards.

The Laboratory follows:

- 1. A Laboratory Management System complying with ISO/IEC 17025
- 2. The highest standards of performance and to maintain the Laboratory's reputation with customers.
- 3. Compliance with relevant legislation and ensure compliance with relevant requirements.
- 4. Customer satisfaction.
- 5. A culture of continuous improvement within the Laboratory.

**Laboratory Quality Manual**

The Laboratory is committed to providing the resources needed to maintain the highest standards of performance and to meet customer requirements. Management are directly responsible for providing organization policies, training and education of all employees and that they are to carry out work as per the testing schedules.

The Laboratory is committed to the training and screening of personnel engaged in testing procedures manual. Activities include chemical analysis, environmental sampling and pathogen detection in the Industry Code of Practice or are International Standards.

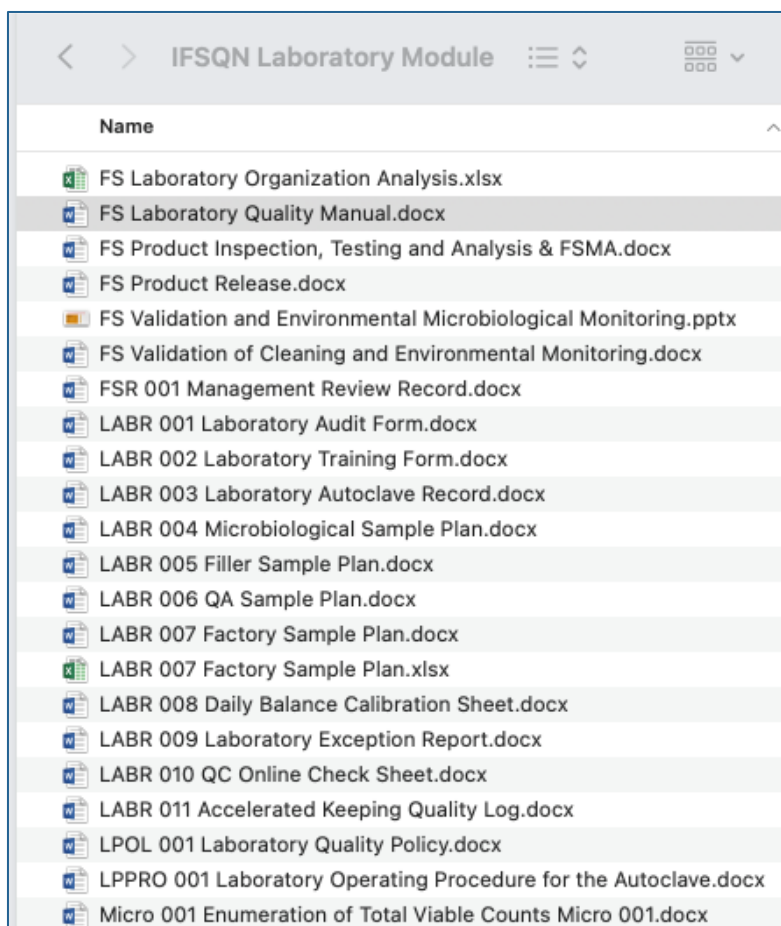
The Laboratory follows:

- 1. A Laboratory Management System complying with ISO/IEC 17025
- 2. The highest standards of performance and to maintain the Laboratory's reputation with customers.
- 3. Compliance with relevant legislation and ensure compliance with relevant requirements.
- 4. Customer satisfaction.
- 5. A culture of continuous improvement within the Laboratory.

# Laboratory Module for Food Operations

## Included in the Laboratory Module for Food Operations:

- ✓ Comprehensive Laboratory Quality Manual
- ✓ Example Product Inspection, Product Release and Environmental Monitoring Procedures
- ✓ Laboratory Standard Method Template Examples
- ✓ Laboratory Audit Template
- ✓ Example Sample Plans
- ✓ Supplementary Laboratory Records



The screenshot displays a file explorer window titled "IFSQN Laboratory Module". The file list includes:

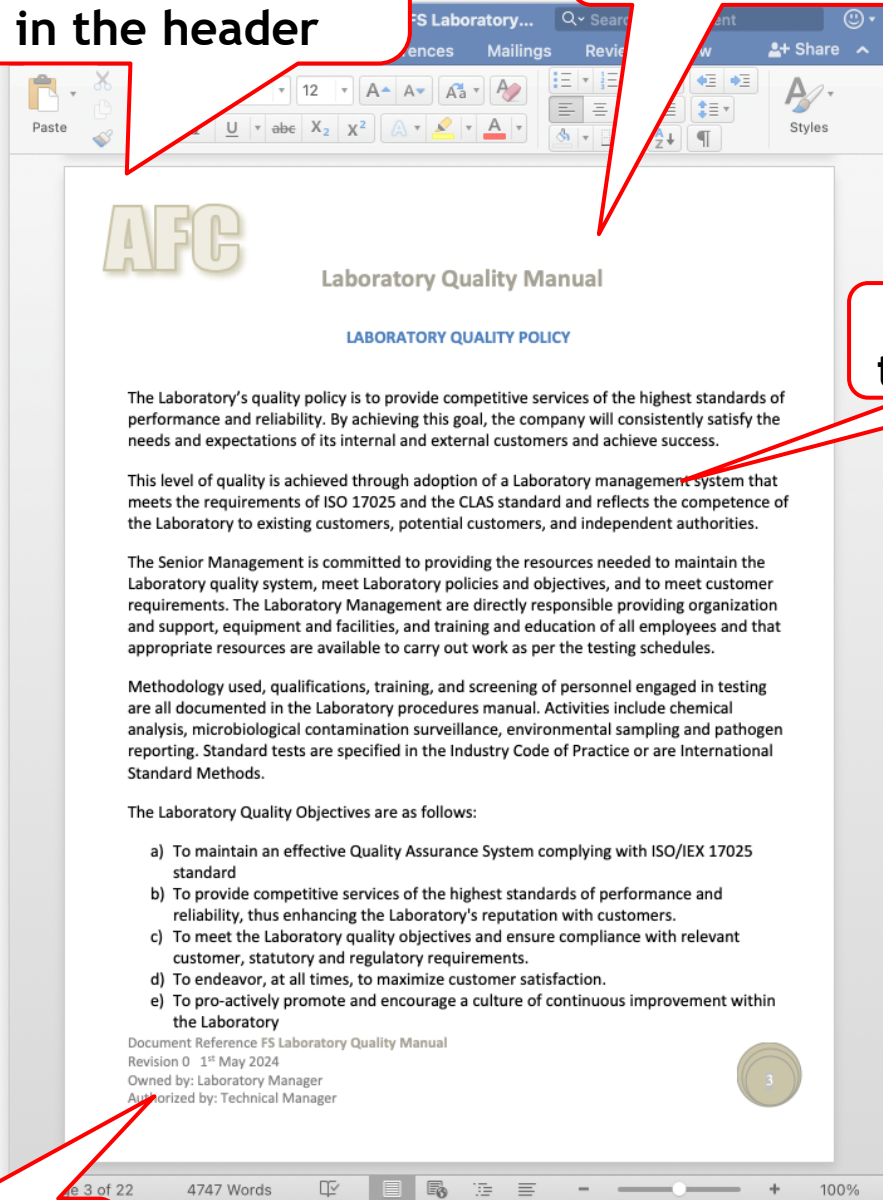
Name
FS Laboratory Organization Analysis.xlsx
FS Laboratory Quality Manual.docx
FS Product Inspection, Testing and Analysis & FSMA.docx
FS Product Release.docx
FS Validation and Environmental Microbiological Monitoring.pptx
FS Validation of Cleaning and Environmental Monitoring.docx
FSR 001 Management Review Record.docx
LABR 001 Laboratory Audit Form.docx
LABR 002 Laboratory Training Form.docx
LABR 003 Laboratory Autoclave Record.docx
LABR 004 Microbiological Sample Plan.docx
LABR 005 Filler Sample Plan.docx
LABR 006 QA Sample Plan.docx
LABR 007 Factory Sample Plan.docx
LABR 007 Factory Sample Plan.xlsx
LABR 008 Daily Balance Calibration Sheet.docx
LABR 009 Laboratory Exception Report.docx
LABR 010 QC Online Check Sheet.docx
LABR 011 Accelerated Keeping Quality Log.docx
LPOL 001 Laboratory Quality Policy.docx
LPPRO 001 Laboratory Operating Procedure for the Autoclave.docx
Micro 001 Enumeration of Total Viable Counts Micro 001.docx

# Editable Laboratory Management System Procedures and Records in Microsoft Word format

For example put your company logo or name and address in the header

You can edit the header

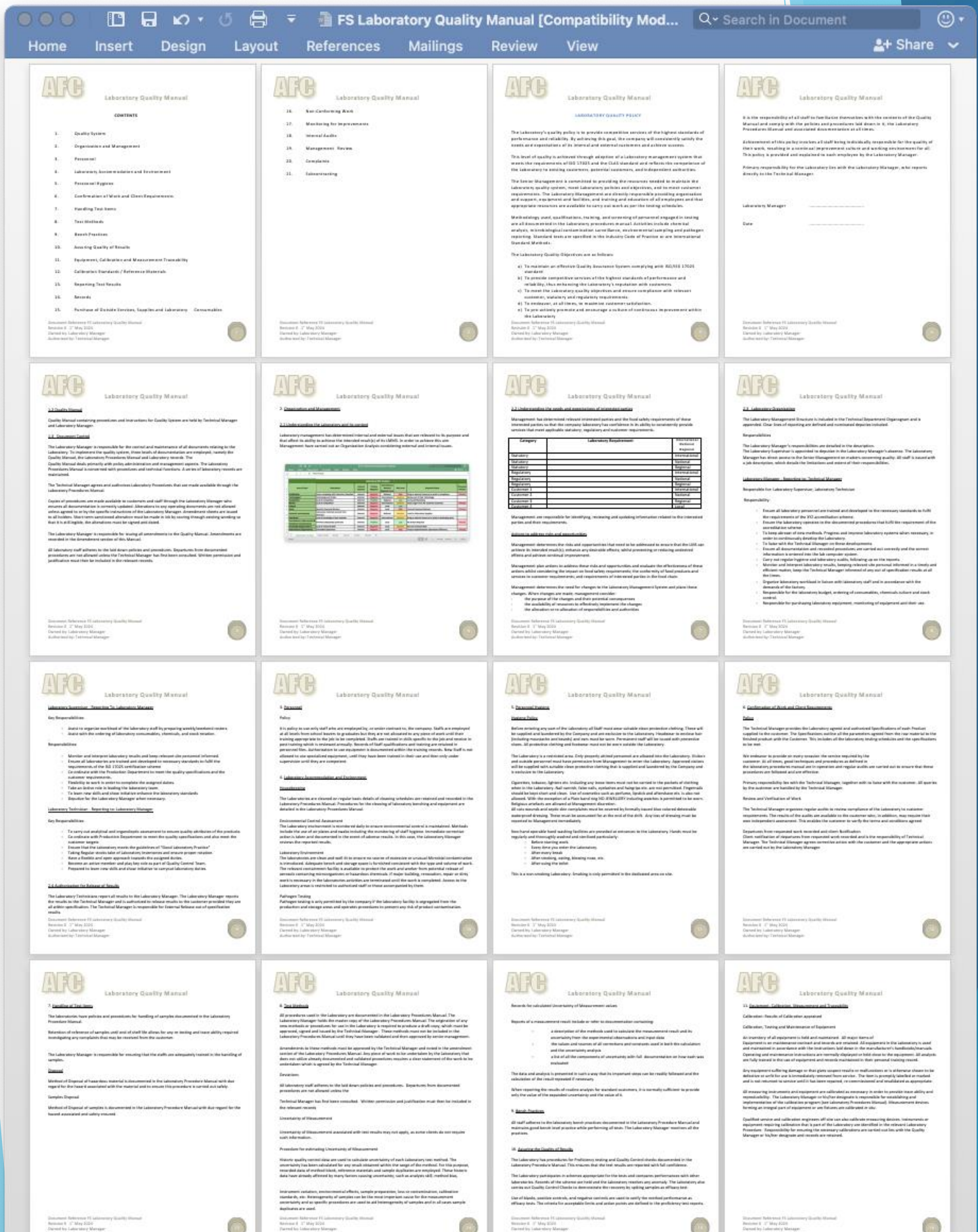
You can edit the main text



You can edit the footer

These Laboratory Management System Templates give you the foundations to develop your laboratory documentation, saving you time and money getting your laboratory up to speed.

# ISO 17025 compliant Laboratory Quality Manual plus other supplementary laboratory documentation



# Template Laboratory Records, Procedures and Product Sampling Plans.

**AFC**  
LABR 009 Laboratory Exception Report [Compatibil...]

## Laboratory Daily Exception Report

Date:

Area	RO Water	Process Checks	Fresh		Packing		
			Filler 1	Filler 2	1	2	3
Enteros							
ATP Swab/Rinse							
TVC							
AKQ							
Shelf Life							
Chemical Analysis							
Weight/Volume							

CIP Checks	Caustic Strengths Target 1.8 – 2.2%	Acid Strengths Target 1.3 – 1.7%	Report any issues with each CIP set
CIP 1			
CIP 2			
CIP 3			
CIP 4			

Document Reference Laboratory Daily Exception Report  
Revision 0 1<sup>st</sup> August 2023  
Owned by: Laboratory Manager  
Authorized By: Quality Manager

**AFC**  
Factory Sample Plan

Sample	Point	Test / Inspection	Frequency	Standard	Method Ref	Spec Ref	Record / Log Ref
Liquid Ingredient 1	Tank	% AW	Each Load F & R	Max. 85%	AP 001	LSP 001	LBR 001
		% Fat	"	> 5%	AP 002	LSP 001	LBR 001
		% Acidity	"	0.1 - 0.2	AP 003	LSP 001	LBR 001
		Enterobacteriaceae	"	< 10/ml	MP 001	LSP 001	LBR 001
		TVC	"	< 10,000/cu/g	MP 002	LSP 001	LBR 001
		Phosphatase	"	Pass	AP 004	LSP 001	LBR 001
		Smell	"	Fresh Normal	AP 005	LSP 001	LBR 001
		Taste	"	Fresh Normal	AP 006	LSP 001	LBR 001
		Temperature	"	< 7 °C	AP 007	LSP 001	LBR 001
		Antibiotics	"	< 0.004 µg	AP 008	LSP 001	LBR 001
Ingredient in Storage	Silo	Age	Daily	< 48 Hours	AP 001	LSP 001	LBR 001
		% Acidity	"	0.1 - 0.2	AP 003	LSP 001	LBR 001
		Smell	"	Fresh Normal	AP 005	LSP 001	LBR 001
		Taste	"	Fresh Normal	AP 006	LSP 001	LBR 001
Ingredient 3	Tank	% Fat	Each Flow Box	10% +/- 1%	AP 002	LSP 001	LBR 001
		% Acidity	"	0.10 - 0.20	AP 003	LSP 001	LBR 001
		Enterobacteriaceae	"	< 10/g	MP 001	LSP 001	LBR 001
		Phosphatase	"	Pass	AP 004	LSP 001	LBR 001
Smell	"	Fresh Normal	AP 005	LSP 001	LBR 001		

Document Reference Factory Sample Plan LAB 007  
Revision 0 1<sup>st</sup> August 2023  
Owned by: Laboratory Supervisor  
Authorized By: Quality Manager

**AFC**  
LPOL 001 Laboratory Quality Policy

## Laboratory Quality Policy

The Laboratory's quality policy is to provide competitive services of the highest standards of performance and reliability. By achieving this goal, the company will consistently satisfy the needs and expectations of its internal and external customers and achieve success.

This level of quality is achieved through adoption of a Laboratory management system that meets the requirements of ISO 17025 standard and reflects the competence of the Laboratory to existing customers, potential customers, and independent authorities. The Senior Management is committed to providing the resources needed to maintain the Laboratory quality system, meet Laboratory policies and objectives, and to meet customer requirements. The Laboratory Management are directly responsible providing organization and support, equipment and facilities, and training and education of all employees and that appropriate resources are available to carry out work as per the testing schedules.

Methodology used, qualifications, training, and screening of personnel engaged in testing are all documented in the Laboratory procedures manual. Activities include chemical analysis, microbiological contamination surveillance, environmental sampling and pathogen reporting. Standard tests are specified in the Industry Code of Practice or are International Standard Methods.

The Laboratory Quality Objectives are as follows:

- To maintain an effective Quality Assurance System complying with the ISO 17025 standard - General requirements for the competence of testing and calibration laboratories
- To provide competitive services of the highest standards of performance and reliability, thus enhancing the Laboratory's reputation with customers.
- To meet the Laboratory quality objectives and ensure compliance with relevant customer, statutory and regulatory requirements.
- To endeavor, at all times, to maximize customer satisfaction.
- To pro-actively promote and encourage a culture of continuous improvement within the Laboratory
- To ensure inspections and analyses are completed at regular intervals as required to agreed specification and legal requirements

Document Reference Laboratory Quality Policy LPOL 001  
Revision 0 1<sup>st</sup> August 2023

**AFC**  
Laboratory Audit Form

Laboratory..... Audited By..... Date.....

GLP - Good Laboratory Practice  
Major NC - Major Non-Conformance Immediate Corrective Action Required  
Minor NC - Minor Non-Conformance Timely Corrective Action Required  
R - Recommendation for Improvement

Area/Activity/ Procedure	GLP	Major NC	Minor NC	R	Comments and Corrective Action Required	Person Responsible for Action	Time Scale	Sign & Date
Laboratory Environment								
Location in relation to other activities								
Control of entry of non-laboratory personnel								
Protective clothing and equipment for visitors/non-laboratory personnel								
Site (in relation to laboratory's activities)								
Floors								

Document Reference Laboratory Audit Form LAB 003  
Revision 0 1<sup>st</sup> August 2023  
Owned by: Laboratory Manager  
Authorized By: Quality Manager

**AFC**  
MICRO 001 Enumeration of Total Viable Counts

## Enumeration of Total Viable Counts

Microbiology Standard Operating Procedure  
Micro 001  
For the Enumeration of Total Viable Counts

Author: Laboratory Supervisor .....

Date .....

Authorised By: Technical Manager .....

Date .....

Document Reference Micro 001 Enumeration of Total Viable Counts  
Revision 0 21<sup>st</sup> November 2023  
Owned by: Laboratory Manager  
Authorised By: Technical Manager

**AFC**  
Laboratory Audit Form

Area/Activity/ Procedure	GLP	Major NC	Minor NC	R	Comments and Corrective Action Required	Person Responsible for Action	Time Scale	Sign & Date
Methodology								
Approved methods								
In-house validation evidence (if required)								
Fully documented								
Available to staff								

Document Reference Laboratory Audit Form LAB 003  
Revision 0 1<sup>st</sup> August 2023  
Owned by: Laboratory Manager  
Authorized By: Quality Manager

# Template Laboratory Procedures and Sampling Plans



PowerPoint Slide Show - [FS Validation and Environmental Microbiological Monitoring]

## Environmental Monitoring

- Food Contact Surface – Inside Storage Tank
- Food Contact Surface – Filler Nozzle
- Food Contact Surface – Foil Lidding
- Non-Food Contact Surface – Inside Door Filler Cabinet
- Non-Food Contact Surface – Floor under Filler
- Non-Food Contact Surface – Outside Storage Tank
- Non-Food Contact Surface – Drain
- Non-Food Contact Surface – Wall
- Non-Food Contact Surface – Floor near Entrance
- Non-Food Contact Surface – Cleaning Equipment
- Non-Food Contact Surface – Hand Wash Sink

Micro 001 Enumeration of Total Viable Counts Micro 001 [Compatibility Mode]

### AFC

#### Enumeration of Total Viable Counts

**Microbiology Standard Operating Procedure**  
**Micro 001**

*For the Enumeration Of*  
**Total Viable Counts**

Author: Laboratory Supervisor.....

Date.....

Authorized By: Quality Manager.....

Date.....

Document Reference Enumeration of Total Viable Counts Micro 001  
Revision 0: 1<sup>st</sup> May 2024  
Owned by: Laboratory Manager  
Authorized by: Quality Manager

### AFC

#### Enumeration of Total Viable Counts

**Introduction**

There is no cultural method for determining the 'total viable count' of a mixed micro flora of unknown composition, as found in most foods. The choice of medium, incubation temperature and gaseous atmosphere will exhibit the growth of some organisms, but will inhibit the growth of others.

A colony that grows on a plate must not be assumed as being derived from a single organism. Bacteria may occur in lumps or chains that may not be fragmented on dilution. Viable counts must, therefore, be referred to as colony-forming units per millilitre/gram (cru/ml or g), rather than bacteria per millilitre/gram.

When examining the spoilage potential of micro flora, the chosen medium used for testing should simulate the habitat or consist of nutrients found in the sample in question.

**Scope**

Spoilage micro-organisms pose a quality hazard to raw materials, in-process and finished products. Contamination of products occurring post process are usually of environmental origin.

**Application**

Samples and processes listed in the 'Test and Inspection Schedule' are tested by the Microbiology Department for microbial levels of contamination, in order to provide and assess Quality Assurance.

**Culture Media and Reagents**

**Culture Media**

- Oxoid Agar**, Code CM21, prepared in accordance with the 'Microbiology Standard Operating Procedure for the Preparation of Laboratory Media'.

Document Reference Enumeration of Total Viable Counts Micro 001  
Revision 0: 1<sup>st</sup> May 2024  
Owned by: Laboratory Manager  
Authorized by: Quality Manager

### AFC

#### Enumeration of Total Viable Counts

- Oxoid Tryptone Soya Agar**, Code CM131, prepared in accordance with the 'Microbiology Standard Operating Procedure for the Preparation of Laboratory Media'.
- Oxoid Maximum Recovery Diluent**, Code CM733, prepared in accordance with the 'Microbiology Standard Operating Procedure for the Preparation of Laboratory Media'.

**Reagents**

- Oxoid Thiosulphate Ringer Solution**, Code BR48, prepared in accordance with the 'Microbiology Standard Operating Procedure for the Preparation of Laboratory Media'.
- Neutraliser Diluent** prepared in accordance with the 'Microbiology Standard Operating Procedure for the Preparation of Laboratory Media'.
- Laboratory Disinfectant**, prepared in accordance with the 'Microbiology Standard Operating Procedure for the Preparation of Detergents and Disinfectants'.

**APPARATUS**

- Cleaning Cloths
- Petri-dishes
- Indelible Marker Pen
- Sterile Disposable Pasteur Pipettes
- Autoclave Bag Stand
- Autoclave Bags
- Boxes for Poured Plates

Document Reference Enumeration of Total Viable Counts Micro 001  
Revision 0: 1<sup>st</sup> May 2024  
Owned by: Laboratory Manager  
Authorized by: Quality Manager

Page 1 of 8   1461 Words   English (US)   100%

FS Product Inspection, Testing and Analysis & FSMA [Compatibility Mode]

### AFC

#### Product Inspection, Testing and Analysis

**Introduction**

The company has planned, documented and implemented applicable methods for Product Inspection, Testing and Analysis in order to demonstrate compliance product authenticity, safety, legality, and quality requirements using appropriate procedures, facilities and standards.

**Scope**

The scope of Product Inspection, Testing and Analysis includes all the products manufactured on site and the activities conducted on site. The company has considered the type, method (including statistical techniques) and extent of these activities necessary to ensure the products meet specification.

**Measuring and Monitoring**

The company has identified and implemented the monitoring, measurement, and analytical processes required to maintain the food safety management system and ensure the release of safe products. Measurement and Monitoring Procedures have been established, documented and implemented in the following ways:

- HACCP plan requirements
- Operational requirements
- Quality requirements

HACCP plan requirements and Operational requirements are defined in the HACCP manual and individual operational procedures. The establishment of HACCP plan and Operational control measures, monitoring procedures, critical control points, control limits, corrections and corrective actions are documented in the HACCP Manual.

Quality requirements for measurement and monitoring have been designed using a similar approach to hazard analysis in identifying the monitoring, measurement, and analytical processes required to maintain product conformity to requirements.

All the monitoring, measurement, and analytical processes required have been planned by following the process below which identifies the specific processes at each stage of manufacturing:

- Stage 1 - A flow diagram is prepared of the steps in the process. An analysis is conducted by identifying control options**
- Stage 2 - The Control Points in the process are identified**
- Stage 3 - Monitoring, measurement and analytical limits which must be met to ensure control are established**

Document Reference FS Product Inspection, Testing and Analysis  
Revision 0: 1<sup>st</sup> May 2024  
Owned by: Technical Manager  
Authorized by: General Manager

### AFC

#### Product Inspection, Testing and Analysis

- Measurement, monitoring and analysis procedures are established and frequency scheduled for each stage.**
- The corrective action to be taken when limits are exceeded are established.**
- All procedures and records appropriate to the monitoring, measurement and analysis processes for obtaining product samples (including where appropriate, their delivery to a laboratory) and acceptable limits at each stage are documented and implemented in a Product Control Plan. Methodology and Standard tests are specified in the Industry Code of Practice.**
- Verification that the monitoring, measurement and analysis processes are working effectively is carried out.**

This system considers each stage of the process from raw material intake to product dispatch. Releases of ingredients, in-process and finished product are controlled and documented by authorized personnel.

The experience, qualifications and training of authorized personnel engaged in monitoring, measurement or analysis is documented in their personnel and training file. All test results are recorded as evidence of conformity with the appropriate acceptance criteria.

Process characteristics monitored include process temperatures, pressures and cleaning chemical concentrations as listed in the HACCP Plan, Operational Procedures and the Product Control Plan.

Product characteristics are monitored, measured and analyzed as per the HACCP Plan, Operational Procedures and Product Control plans to ensure compliance with specifications and regulatory requirements.

Key chemical, microbiological and physical parameters are specified such as size, weight, and acceptable bacteria levels. Organoleptic testing is carried out at regular intervals by trained laboratory staff as per the product specification.

Test and Inspection results for all analyses are recorded and reviewed. Routine shelf life assessment is carried out by chemical, microbiological and sensory analysis to ensure that product meets the criteria laid down in the product specification. Ongoing records and results validate that the product meets the minimum shelf life indicated on the product. The Corrective Action to be taken when results are unsatisfactory or adverse trends are identified in HACCP Plan, Operational Programs and Product Control plans and are recorded. Statistical techniques are used to monitor process capability for example in product weight control.

**FSMA Module Requirement:**  
**\$117.110 Defect action levels.**  
**(a) The company must at all times utilize quality control operations that reduce natural or unavoidable defects to the lowest level currently feasible.**

Document Reference FS Product Inspection, Testing and Analysis  
Revision 0: 1<sup>st</sup> May 2024  
Owned by: Technical Manager  
Authorized by: General Manager

Page 1 of 5   1527 Words   English (US)   100%

## Technical Support



### Free Online Technical Support

One of the unique features of our packages is that we provide technical support.

This package includes online technical support and expertise to answer your questions and assist you in developing your Laboratory Management System.

**[Click here to order the Laboratory Module for Food Operations](#)**