

## Working Guidelines of Food Quarantine Laboratory

### Background

Nepal obtained the membership of WTO on 23rd April 2004. However, it has been obligatory to Nepal to meet many of the essential prerequisites within the given deadline (1st Jan, 2007). In this connection, there should be improvement in various infra-structural arrangements and necessary changes to operationalise the system into at full fledged operational. Being a member of WTO, Nepal has become an open market for WTO members. In order, to monitor the trade practices, especially sanitary and phytosanitary measures, Government of Nepal has decided to establish quarantine laboratories at principal custom entry points. Four (Food) quarantine laboratories have already been established at different custom point, namely Kakadvitta, Birgang, Mahendranagar, and Tatopani; Whereas, the regional food technology and quality control offices at Biratnagar and Bhiarahawa have been assigned additional activity of quarantine laboratory at Biratnager and Bhairahawa custom, respectively.

### Human resources and facilities at FQL

The human resources allocation for the food Quarantine Laboratories (FQLs) is as shown in Table 1. All the FQLs will be equipped with minimum laboratory facilities to conduct the necessary tests. The organizational structure of quarantine laboratories is fixed as shown in Fig. 1.

Table 1: Allocation of Human Resources in Quarantine Laboratories

Food Quarantine Laboratory	Food Research Officer (Gaz. III)	Technical Assistant (Non- Gaz.)	Total Staffs
Kakadvitta	1	2	3
Birganj	1	3	4
Mahendra Nagar	1	2	3
Tatopani	1	2	3
TIA Unit	-	1	1

Figure 1: Organizational structure of food quarantine laboratories

### **Duties and responsibilities of food quarantine laboratories (FQL)**

1. Inspection of food consignment at custom points is the prime responsibility of FQLs along with the attachments of certification, and test report of the exporting countries. Documentation and record keeping of imported and exported food products. Each quarantine laboratory should monitor the import and export of food consignments with especial emphasis on SPS related measures as per the proposed format (Annex 1).
2. Quarantine laboratory inspects each consignment of food imported and if it deems necessary FQLs should take sample from each lot. FQLs shall issue the report of analysis to the concerned and importing authority. If the analysis could not be undertaken at quarantine laboratory, the sample should be sent to either Regional Office or to the Central Food laboratory, DFTQC, Kathmandu for necessary analysis.
3. FQLs should check and verify the required documents regarding the SPS measures and other quality certification.
4. FQLs should also facilitate to the importer and exporter by providing necessary inspection documents and other information related SPS measures.
5. FQL should monitor the safety and quality of food products in accordance with Food Act and other relevant International agreements and standards (Codex).
6. FQL shall consult with DFTQC for any technical debate and newly emerging problems or in any other key issues relating to quality and safety matters.
7. FQL has to report regularly about the SPS related information to quality control Division of DFTQC.
8. FQL has to work in close coordination with other quarantine units, such as plant and veterinary quarantine, located at custom points.
9. The In-charge of FQL has to manage both the account and general

administration of the office.

### **Accountability of FQL to DFTQC**

1. The administrative and budgetary procedures are as per the HMG's prevailing Act and regulation.
2. All the activities of FQL have to be reported to Director General of DFTQC on regular basis, such as monthly, quarterly and annually.
3. FQL has to work as per the instruction and guidelines of DFTQC in any technical and administrative matters.
4. FQL has to take pre-approval from DFTQC before implementing any new system, format, reporting system or for any other changes in their working procedures.
5. In-charge of FQL has to take consent from Director General of DFTQC, if he/ she leaves the office.
6. FQL should consult and follow the instruction and guidelines of DFTQC for the preparation of budget and annual program.
7. Any items not mentioned here shall be resolved as per the prevailing act and regulation.

### **Supervision of FQL by Regional Food Technology and Quality Control Office (RFTQCO)**

1. FQL has to report its general activities to the Chief of RFTQCO in monthly basis or as per necessary.
2. FQL has to consult with RFTQCO in any technical or administrative matter.
3. FQL has to inform RFTQCO about any changes in their working procedures.
4. In-charge of FQL has to inform Chief of RFTQCO, if he/ she leaves the office.
5. FQL can request to RFTQCO for temporary requirement of manpower or for any other logistic support.
6. FQL will request to RFTQCO for coordination in organizing any meeting, seminar and workshops.

### **Laboratory facilities at FQL**

It is the responsibility of FQL to equip their laboratory so that they will be capable to conduct basic quality control tests. Based on the available resources, gradually FQL should manage the facilities to perform following basic tests:

- General test for fats and oils.
- Proximate analysis.

- Grading for pulses and cereal grains.
- Color and few major adulteration tests.
- Soxhlet and steam distillation sets.

**Annex-1**



**Government of Nepal  
Ministry of Agriculture and Cooperative  
Department of Food Technology and Quality Control  
Food Quarantine Laboratory,.....**

**Consignment Record Form**

<b>S. N.</b>	<b>Parameters</b>	<b>Observation</b>	<b>Remarks</b>
1.	Record number		
2.	Name of consignment		
3.	Sampled date		
4.	Purpose		
5.	Name of importer		
6.	Name of manufacture		
7.	Quantity of imported goods		
8.	Country of origin		
9.	Manufactured date		
10.	Batch /Lot Identification No.		
11.	Importer License number and date		
12.	Expiry date		
13.	Price of imported goods		
14.	General condition of the consignment		
15.	Imported goods Custom Declaration No.		
16.	Quality certificate of export issued by the exporting country		

17.	SPS certificates issued by the authority of exporting country		
18.	Others		

Prepared by: .....

Checked by: .....

Date: .....

## Annex-2

### Check List for Quick Quality Assessment at Food Quarantine Laboratory

Food commodities	Documents & quality certificates	Label inspection and product details	Physical inspection	Parameters to be tested	Remarks
Alcoholic drinks	✓	✓		Ethanol content	Sample send to DFTQC
Baby foods, Horlics, Boost	✓	✓			Sample send to DFTQC
Canned Fruits/Vegetables	✓	✓		Can condition	
Canned meat/fish	✓	✓		Can condition	
Cheese, Paneer, Butter	✓	✓	✓	Moisture and Fat content	
Chewing gum and Chocolate	✓	✓			Sample send to DFTQC
Chicken flavor	✓	✓	✓		Sample send to DFTQC

Chilli	✓	✓	✓	Color test	
Coffee (Roasted/ Non-roasted)	✓	✓	✓		
Colors	✓	✓	✓	Edible/non- edible color test	
Corn Flaks	✓	✓		Moisture, ash, Protein content	
Crude oils	✓	✓	✓	FFA, BRR	
Edible oils	✓	✓	✓	FFA, BRR, IV, Argemon test (Mustard oil)	
Eggs	✓		✓	Candle test	
Essences	✓	✓	✓		Sample send to DFTQC
Food Chemicals	✓	✓	✓		Sample send to DFTQC
Foods related with Radio active chemicals	✓	✓	✓	Radio active test	
Fresh fruits and vegetables	✓		✓		
Frozen Meat	✓	✓	✓		
Honey	✓	✓		Moisture, Reducing sugar,HMF	
Jam, Jelly, Fruit pulp, Juices	✓	✓		Fruit content, TSS, Acidity, Preservatives.	
Mineral water	✓	✓	✓	Odor/Taste/TSS/ Coliform	
MSG	✓	✓	✓		Sample send to DFTQC
Mushroom	✓	✓	✓		
Noodles	✓	✓		Moisture, ash, Protein content	

Powder milk	✓	✓		Moisture and Fat content	
Prawn paste	✓	✓			Sample send to DFTQC
Pulses/Cereal grain	✓	✓	✓	Foreign matter, color test	
Soft drink concentrate/Fruit powder	✓	✓	✓		Sample send to DFTQC
Spices	✓	✓	✓	Foreign matter, color test	
Tea	✓	✓		Moisture, TSS, Ash content	
Vegetable ghee	✓	✓	✓	FFA, MP, BRR	
Yeast	✓	✓	✓		
Miscellaneous	✓	✓	✓		As per Food act and regulation

**Remarks:** 5% sample of the total consignments to be sent to DFTQC for routine and regular monitoring purpose.

### Annex-3



**Government of Nepal**  
**Ministry of Agriculture and Cooperative**  
**Department of Food Technology and Quality Control**  
**Food Quarantine Laboratory,.....**

Ref. No.

Date: .....

M/s

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### **Analysis Report**

This is to certify that the analysis result for the sample received with the specified letter is as follows:

#### **Details of sample received and its analysis result**

<b>Food</b>	<b>Code number</b>	<b>Analysis results</b>	<b>Remarks</b>

**Note:** This certificate is applicable only to this sample.

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Issuing Officer

#### **Annex-4**



**Government of Nepal**  
**Ministry of Agriculture and Cooperative**  
**Department of Food Technology and Quality Control**  
Babarmahal, Kathmandu, Nepal.

#### **Analysis parameters and their fee rate**

<b>S. N.</b>	<b>Parameters</b>	<b>Fee rate in Rs.</b>	<b>Required days</b>
1.	Moisture	100	1

2.	Protein	200	2
3.	Carbohydrate	200	4
4.	Sugar	200	2
5.	Starch	200	2
6.	Total solids	200	1
7.	Fat	250	3
8.	Ash	150	2
9.	Vitamin A/ Vitamin C	200	3
10.	Mineral (Metal/ Non-Metal)	200	3
11.	Acidity	100	1
12.	Alkalinity	100	1
13.	Preservatives each	250	1
14.	Colour	250	2
15.	Crude Fiber	300	3
16.	Grading (Cereal, pulses, spices or others) per parameter	100	3
17.	Water soluble ash	150	3
18.	Acid insoluble ash	150	3
19.	Alcoholic extract	150	2
20.	Solubility	100	3
21.	Salt	150	1
22.	Mycotoxin per toxin	1000	4
23.	Pesticide each parameter	1000	4
24.	Radiation	1000	4
25.	Mold count	150	4
26.	Yeast & its spores	150	4
27.	Total bacteria	150	4
28.	Coliform	200	4
29.	Salmonella	300	7
30.	Staphylococcus	300	4
31.	Clostridium botulinum	300	7
32.	Streptococcus	200	7
33.	Bacillus sp.	200	7
34.	Vibrio	200	4

35.	Listeria	200	7
36.	Nematodes, cyst, ova, larva each	50	1
37.	Other microscopic organism	200	6
38.	Refractive Index or BRR	150	1
39.	Saponification value	150	1
40.	Iodine value	150	1
41.	Unsaponifiable matter	200	2
42.	Free Fatty Acid or Acid value	100	1
43.	Bellier's test	100	1
44.	Hexabromide test	100	1
45.	RM value	150	1
46.	Argemone Oil test	250	3
47.	Baoudian test	100	1
48.	Fat test	100	2
49.	Mineral oil test	200	1
50.	Melting point	100	2
51.	Peroxide value	150	1
52.	Boiled water soluble extract	150	2
53.	Caffine	150	2
54.	Phosphotase test	150	3
55.	Methylene blue test	150	2
56.	Resapurine test	150	3
57.	Bicarbonate test	100	1
58.	Glucose test	100	2
59.	Starch test	100	2
60.	Total soluble matter	50	2
61.	Fruit extract	50	1
62.	Drained weight	50	1
63.	Fruit content	200	1
64.	Volatile oil	150	2
65.	Non-volatile oil	150	2
66.	Lead chromate test	50	1
67.	Curcumine test	150	2

68.	Other parameter each	200	
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