

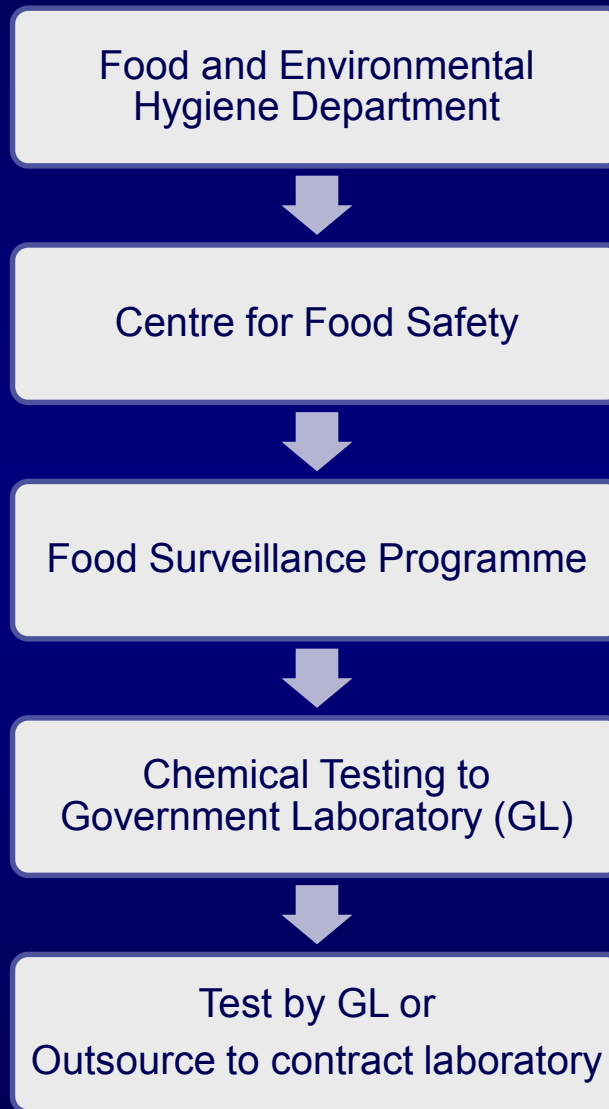


Briefing Session on
Outsourcing of
Food Tests:
Review and Way Forward

Government Laboratory
October 2015

Review of Outsourcing Contracts in 2015-16

Food Monitoring

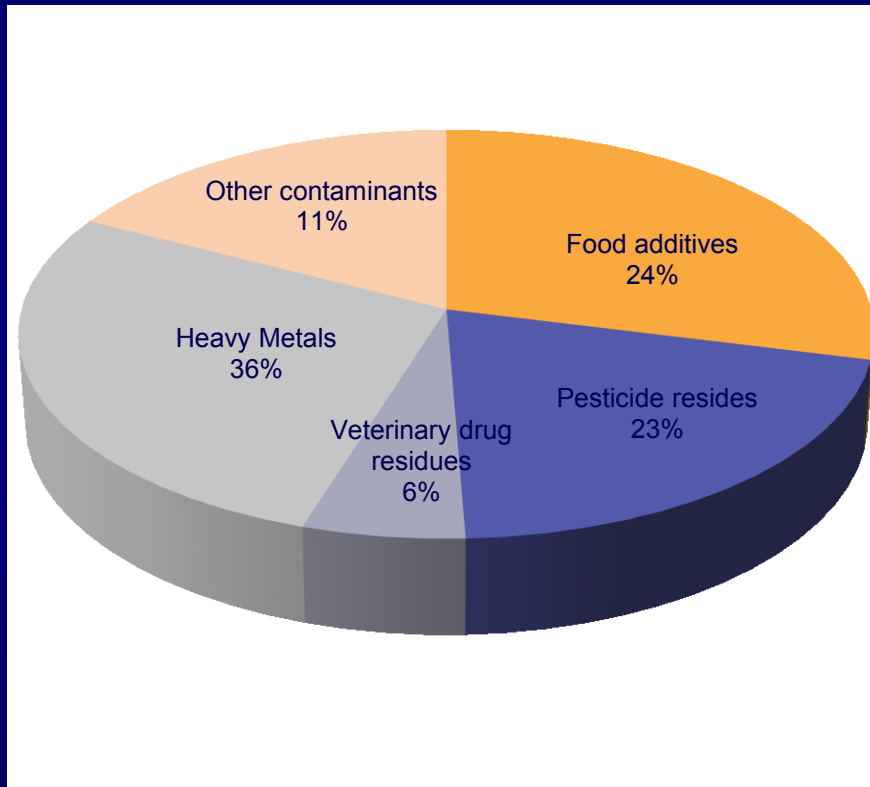




Outsourcing in 2015-16

- ✦ 18 contracts issued by end of Oct 2015
 - ✦ total about 121,945 tests
 - ✦ contract period: 5 months to 1 year
 - ✦ exercise ends in March 2016
- ✦ Invitations to quotation sent in 5 phases
 - ✦ February (6)
 - ✦ March (5)
 - ✦ April (4)
 - ✦ June (2)
 - ✦ September (1)

Sample Distribution in 2015-16



- Food additives
- Pesticide residues
- Veterinary drug residues
- Heavy Metals
- Other contaminants

CAP 132 Public Health and Municipal Services Ordinance

- ✱ CAP 133H Colouring Matter in Food Regulations
- ✱ CAP 132V Food Adulteration (Metallic Contamination) Regulations
- ✱ CAP 132AF Harmful Substances in Food Regulations
- ✱ CAP 132BD Preservatives in Food Regulation
- ✱ CAP 132CM Pesticide Residues in Food Regulation

Salient Points (1)

- ✦ Accredited in corresponding tests
 - ✦ maintaining accreditation status throughout contract period
- ✦ Test parameters in specified matrices
- ✦ Specified reporting limits or better
- ✦ Delivery time of results
 - ✦ 3 – 15 days
- ✦ Testing capacity
 - ✦ 20 – 140 samples per week

Salient Points (2)

- ✦ Test sample collection
 - ✦ within specified time after notice
 - ✦ GL Headquarters at Homantin
- ✦ Retention of remaining test samples
- ✦ Past performance will be taken into account when future quotations are evaluated

Issued Contracts (Food Additives) (1)

★ Sulphur dioxide and other preservatives

- ★ 3 contracts on general food and specific foods
- ★ SO₂ alone
- ★ SO₂ + 3 acids (benzoic acid, sorbic acid, salicylic acid) + 3 parabens
- ★ SO₂ + 2 acids (benzoic acid, sorbic acid) + 3 parabens
- ★ about 3,090 samples total
- ★ reporting limits: 8 mg/kg for SO₂, 30 mg/kg for parabens and 50 mg/kg for others

Issued Contracts (Food Additives) (2)

★ Nitrate/Nitrite

- ★ 1 half year contract on meat, meat products and dairy products
- ★ about 440 samples
- ★ reporting limits: 5 mg/kg for nitrite (as NaNO_2) and 30 mg/kg for nitrate (as NaNO_3)

★ Propionic acid

- ★ 1 half year contract on flour confectionery
- ★ about 210 samples
- ★ reporting limit: 50 mg/kg

Issued Contracts (Veterinary Drug Residues)

★ Chloramphenicol

- ★ 1 full year contract for meat and aquatic products
- ★ about 550 samples
- ★ reporting limit: 0.3 $\mu\text{g}/\text{kg}$

★ Malachite Green

- ★ 1 full year contract for aquatic products
- ★ Malachite Green and Leucomalachite Green
- ★ about 350 samples
- ★ reporting limit: Sum of MG and LMG: 2 $\mu\text{g}/\text{kg}$;

Issued Contracts (Heavy Metals / Toxic element)

★ 7 Heavy metals / Toxic element

- ★ 1 full year contract for Sb, As, Cd, Cr, Pb, Hg and Sn in miscellaneous foods
- ★ About 2,150 samples
- ★ reporting limits: 0.02 mg/kg – 10 mg/kg

★ 4 Heavy metals / Toxic element

- ★ 1 full year contract for any 4 heavy metals out of Sb, As, Cd, Cr, Pb, Hg, and Sn in general foodstuffs
- ★ About 1,600 samples
- ★ reporting limits: 0.02 mg/kg – 10 mg/kg



Issued Contracts (Heavy Metals / Toxic element) (Con't)

- ★ 1 Heavy metal / Toxic element
 - 1 full year contract for any 1 heavy metal out of Sb, As, Cd, Cr, Pb, Hg, and Sn in general foodstuffs
 - About 1,900 samples
 - reporting limits: 0.02 mg/kg – 10 mg/kg

Issued Contracts (Other Contaminants)

★ Sudan Dyes

- 1 full year contract on general foodstuffs
- Sudan I, II, III, IV, Sudan Orange G, Sudan Red 7B, Dimethyl Yellow
- about 1,180 samples
- reporting limits: 20 µg/kg each

★ Melamine

- 1 full year contract on general foodstuffs
- about 420 samples
- reporting limit: 1 mg/kg

Issued Contracts (Other Contaminants)

✦ Boric acid

- ✦ 1 half year contract on general foodstuffs
- ✦ about 95 samples
- ✦ reporting limit: 50 mg/kg

Issued Contracts (Pesticides) (1)

- ✦ Pesticide Residues in Food Regulation (Cap 132CM) came into operation on 1 Aug 2014
- ✦ April - October: 6 contracts
- ✦ Test parameters: selected from
 - ✦ Survey on pesticide residue testing in June 2013
- ✦ Matrices: unprocessed fruit and vegetables
- ✦ Total no. of samples: ~3,600

Issued Contracts (Pesticides) (2)

- ★ Pesticide residues (new regulation) in fruit and vegetables
 - cover residues definition
 - reporting limit: according to MRL
 - April to September 2015
 - 2 contracts selected from 61-pesticide list
 - List 15A in fruits ~ 350 samples
 - List 15B in vegetables ~ 400 samples
 - 1 contract on 50 pesticides
 - List 15C in fruit and vegetables ~ 1380 samples

Issued Contracts (Pesticides) (3)

★ Pesticide residues (new regulation) in fruit and vegetables

★ August 2015 to March 2016

- 1 contract on 22 pesticides
 - List 15D in fruit and vegetables ~ 500 samples
- 1 contract on 44 pesticides
 - List 15E in fruit and vegetables ~ 600 samples

★ November 2015 to March 2016

- 1 contract on 26 pesticides
 - List 15F in fruit and vegetables ~ 260 samples

Invitation to Quotation

- ✱ Keeping quotation documentation simple
- ✱ Single-envelope system
- ✱ Shorten evaluation time

Way Forward:
Outsourcing Contracts
in 2016-17

Outsourcing Contracts in 2016-17 (1)

- ✱ Around 123,000 tests
- ✱ Some contracts will start in April 2016
 - ✱ invitations to quotation will start in February 2016
- ✱ Contract period covers
 - ✱ 6 months to 1 year

Outsourcing Contracts in 2016-17 (2)

- ✓ Keeping quotation documentation simple
- ✓ Single-envelope

Outsourcing: Test Areas

- ✱ Food additives
- ✱ Pesticide residues
- ✱ Veterinary drug residues
- ✱ Heavy metals / toxic element
- ✱ Other contaminants

General Requirements

- ★ Accredited in the corresponding tests
 - ★ maintaining the accreditation status throughout the contract period
- ★ Test sample collection
 - ★ within specified time after notice
 - ★ at specified locations
- ★ Report results within specified period
- ★ Retention / return of remaining test samples

Contracts on Additives (1)

- ✦ Sulphur dioxide and other preservatives
 - ✦ About 3 contracts
 - ✦ Different combinations of :
 - SO₂
 - SO₂ + 2 or 3 acids (benzoic acid, sorbic acid, with or without salicylic acid) + 3 parabens
 - ✦ about 3,090 samples total
 - ✦ reporting limits: 8 mg/kg for SO₂, 30 mg/kg for parabens and 50 mg/kg for others

Contracts on Additives (2)

- ✦ Propionic acid in flour confectionary (~250 samples)
 - ✦ reporting limit: 50 mg/kg
- ✦ Nitrate / nitrite in meat, meat products and dairy products (~420 samples)
 - ✦ reporting limit: 30 mg/kg as NaNO_3 and 5 mg/kg as NaNO_2

Contracts on Veterinary Drug Residues

- ★ Chloramphenicol in meat and aquatic products (~550 samples)
 - ★ reporting limit: 0.3 $\mu\text{g}/\text{kg}$
- ★ Malachite green in aquatic products (~350 samples)
 - ★ reporting limit: 2 $\mu\text{g}/\text{kg}$ or 1 $\mu\text{g}/\text{kg}$ (0.5 $\mu\text{g}/\text{kg}$ for MG or LMG, to be confirmed) for sum of malachite green (MG) and leucomalachite green (LMG)

Contracts on Contaminants (1)

- ★ Heavy metals / Toxic element in general foodstuffs (~5,650 samples; 1 contract (7M) + 1 contract (4M + 1M))
- ★ 1 / 4 / 7 elements

Analyte	Reporting Limits
Antimony (Sb)	0.2 ppm
Arsenic (As)	0.1 ppm as As_2O_3
Cadmium (Cd)	0.02 ppm
Chromium (Cr)	0.2 ppm
Lead (Pb)	0.1 ppm
Mercury (Hg)	0.03 ppm
Tin (Sn)	10 ppm

Contracts on Contaminants (2)

- ★ Sudan dyes in general foodstuffs (~1,180 samples)
 - ★ Sudan I, II, III, IV, Sudan Orange G, Sudan Red 7B and Dimethyl Yellow
 - ★ reporting limit : 20 $\mu\text{g}/\text{kg}$ each
- ★ Melamine in general foodstuffs (~420 samples)
 - ★ reporting limit: 1 mg/kg
- ★ Boric acid in general foodstuffs (~95 samples)
 - ★ reporting limit: 50 mg/kg

Contracts on Pesticide Residues (1)

- Continue to expand the pesticide residue list
- Survey on pesticide residue testing in September 2015
 - Multi-residue test methods
- Cover residues definition (unless otherwise stated in service specifications)
- Reporting limit: according to MRL
- Depend on testing capability of service providers at time of launch

Contracts on Pesticide Residues (2)

★ Desirable test parameters:

- ★ Cadusafos
- ★ Carbendazim
- ★ Carfentrazone ethyl
- ★ Chlorpyrifos methyl
- ★ Dimethenamid-P
- ★ Fluvalinate
- ★ Terbufos

Contracts on Pesticide Residues (3)

★ Desirable test parameters:

★ Cadusafos

- Cadusafos
- Lower reporting limit: 0.005 mg/kg

★ Carbendazim

- Sum of benomyl, carbendazim and thiophanate-methyl, expressed as carbendazim
 - Benomyl
 - Carbendazim
 - Thiophanate-methyl
- Desirable reporting limit: 0.02 mg/kg

Contracts on Pesticide Residues (4)

☀ Desirable test parameters:

☀ Carfentrazone ethyl

- Sum of carfentrazone-ethyl and carfentrazone-chloropropionic acid (alpha, 2-dichloro-5-[-4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl]-4-fluorobenzenepropanoic acid)
 - Carfentrazone-ethyl
 - Carfentrazone-chloropropionic acid
- Desirable reporting limit: 0.1 mg/kg

Contracts on Pesticide Residues (5)

★ Desirable test parameters:

★ Chlorpyrifos methyl

- Chlorpyrifos methyl
- Lower reporting limit: 0.05 mg/kg

★ Dimethenamid-P

- Dimethenamid-P and its enantiomer
- ✗ Dimethenamid-P
- Desirable reporting limit: 0.01 mg/kg

Contracts on Pesticide Residues (6)

☀ Desirable test parameters:

☀ Fluvalinate

- Fluvalinate

- ✗ Tau-fluvalinate

- Desirable reporting limit: 0.5 mg/kg

Contracts on Pesticide Residues (7)

★ Desirable test parameters:

★ Terbufos

- Sum of terbufos, its oxygen analogue, and their sulphoxides and sulphones, expressed as terbufos
 - Terbufos
 - Terbufos sulphone
 - Terbufos sulphoxide
 - Terbufos oxon
 - Terbufos oxon sulphone
 - Terbufos oxon sulphoxide
- Desirable reporting limit: 0.01 mg/kg

GL's proficiency test (PT) programmes

★ PT programmes

- ★ Boric acid in food
- ★ Propionic acid in flour confectionery



Thank You