

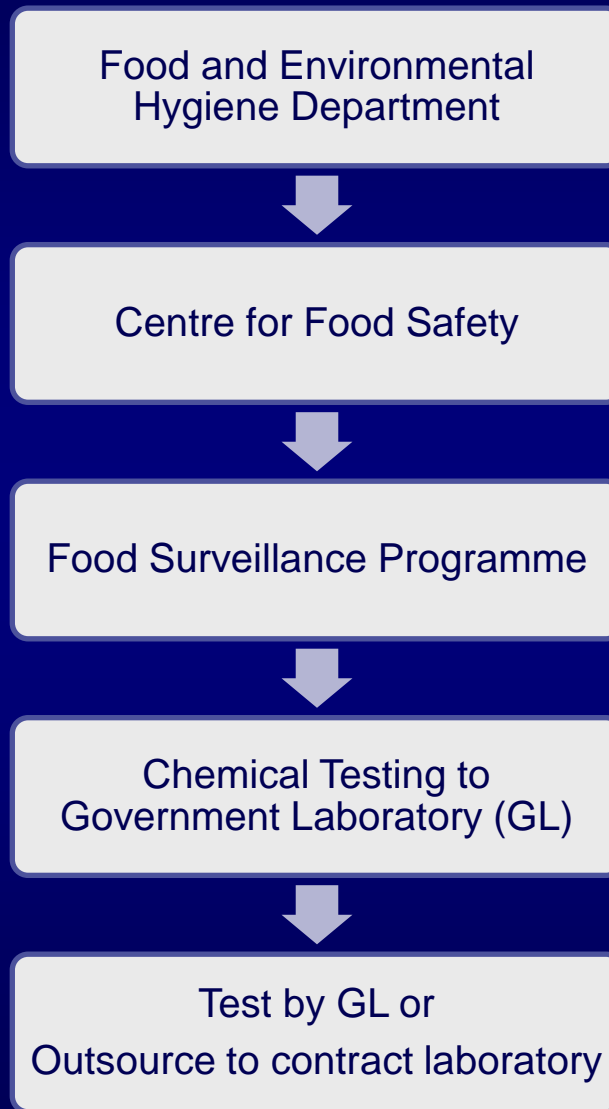


Briefing Session on
Outsourcing of
Food Tests:
Review and Way Forward

Government Laboratory
October 2017

Review of Outsourcing Contracts in 2017-18

Food Monitoring

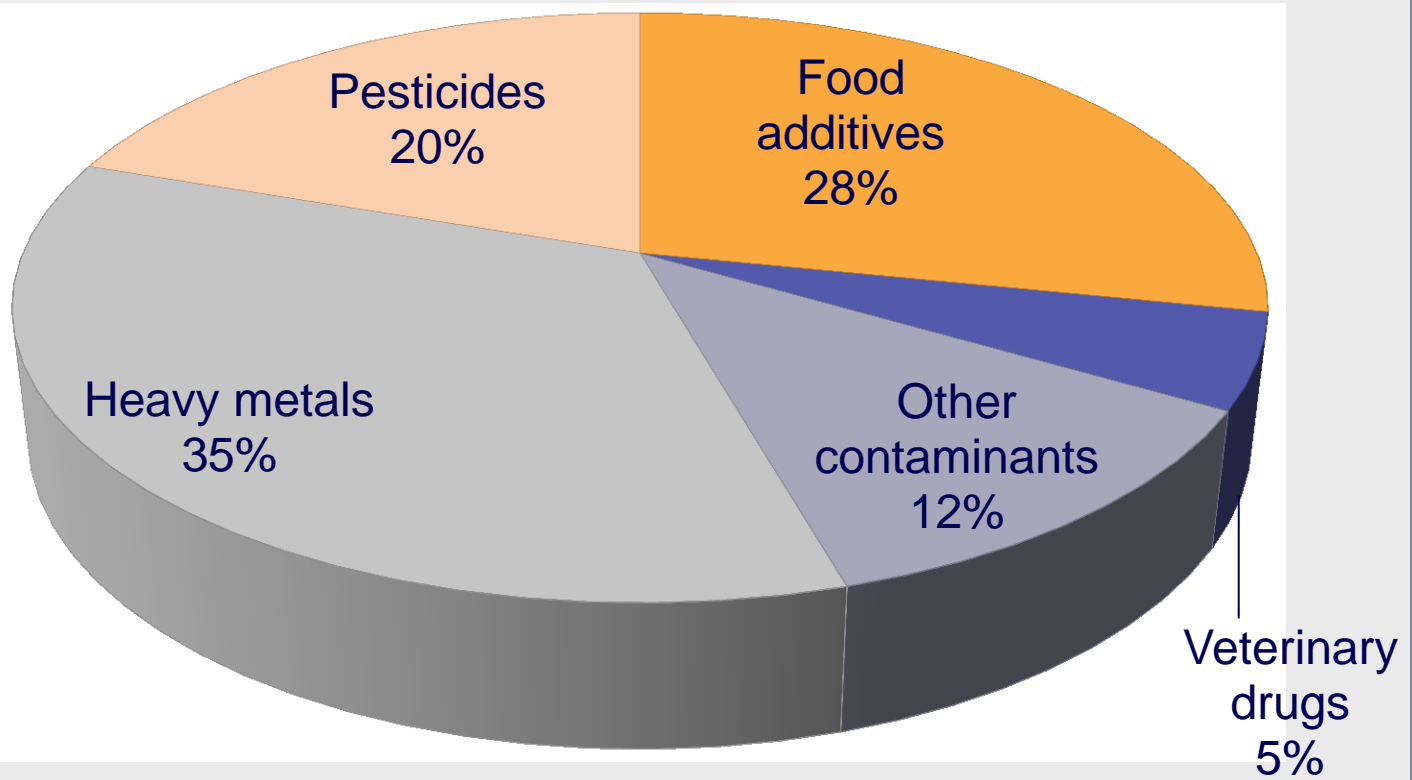




Outsourcing in 2017-18

- ★ 19 contracts issued by Oct 2017
 - ★ total about 100,000 tests
 - ★ contract period: 4 months to 1 year
 - ★ exercise ends in March 2018
- ★ Invitations to quotation sent in 6 phases
 - ★ Phase I , early March 2017 (6)
 - ★ Phase II, mid-March 2017 (5)
 - ★ Phase III, June 2017 (3)
 - ★ Phase IV, July 2017 (1)
 - ★ Phase V, September 2017 (2)
 - ★ Phase VI, October 2017 (2)

Sample Distribution in 2017-18



CAP 132 Public Health and Municipal Services Ordinance

- ✱ CAP 132H 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 (i.e. scope and reporting limit) from application to the end of contract period
- ✦ Test parameters in specified matrices
- ✦ Specified reporting limits or better
- ✦ Delivery time of results
 - ✦ 3 – 15 days
- ✦ Testing capacity
 - ✦ 30 – 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 foodstuffs
- ★ SO₂ alone (1 year)
- ★ SO₂ + 3 acids (benzoic acid, sorbic acid, salicylic acid) + 3 parabens (1 year)
- ★ SO₂ + 2 acids (benzoic acid, sorbic acid) + 3 parabens (6 months)
- ★ Total about 3,250 samples
- ★ reporting limits: 8 mg/kg for SO₂, 30 mg/kg for parabens and 50 mg/kg for acids

Issued Contracts (Food Additives) (2)

★ Nitrate/Nitrite

- ★ 1 contract (6 months) on meat, meat products and dairy products
- ★ about 430 samples
- ★ reporting limits: 5 mg/kg for nitrite (as NaNO_2) and 30 mg/kg for nitrate (as NaNO_3)

★ Propionic acid

- ★ 1 contract (6 months) on flour confectionery
- ★ about 210 samples
- ★ reporting limit: 50 mg/kg

Issued Contracts (Veterinary Drug Residues)

★ Chloramphenicol

- ★ 1 contract (1 year) for meat and aquatic products
- ★ about 510 samples
- ★ reporting limit: 0.3 $\mu\text{g}/\text{kg}$

★ Malachite Green

- ★ 2 contracts (4 months & 8 months) for aquatic products
- ★ Malachite Green and Leucomalachite Green
- ★ Total about 210 samples
- ★ reporting limit: MG and LMG: 0.5 $\mu\text{g}/\text{kg}$ each

Issued Contracts (Other Contaminants) (1)

★ Sudan Dyes

- 1 contract (1 year) on general foodstuffs
- Sudan I, II, III, IV, Sudan Orange G, Sudan Red 7B, Dimethyl Yellow
- about 1,164 samples
- reporting limits: 20 µg/kg each

★ Melamine

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

Issued Contracts (Other Contaminants) (2)

✦ Boric acid

- ✦ 1 contract (6 months) on general foodstuffs
- ✦ about 95 samples
- ✦ reporting limit: 50 mg/kg

Issued Contracts (Heavy Metals / Toxic element)

★ 7 Heavy metals / Toxic element

- ★ 1 year contract for Sb, As, Cd, Cr, Pb, Hg and Sn in miscellaneous foods
- ★ About 1,845 samples
- ★ reporting limits: 0.02 mg/kg – 10 mg/kg

★ 4 Heavy metals / Toxic element

- ★ 1 year contract for any 4 heavy metals out of Sb, As, Cd, Cr, Pb, Hg, and Sn in general foodstuffs
- ★ About 1,550 samples
- ★ reporting limits: 0.02 mg/kg – 10 mg/kg



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

- ✦ 1 Heavy metal / Toxic element
 - 1 year contract for any 1 heavy metal out of Sb, As, Cd, Cr, Pb, Hg, and Sn in general foodstuffs
 - About 1,390 samples
 - reporting limits: 0.02 mg/kg – 10 mg/kg

Issued Contracts (Pesticides) (1)

- ★ Pesticide Residues in Food Regulation (Cap 132CM) came into operation on 1 Aug 2014
- ★ April 2017 – March 2018: 5 contracts issued
(To be issued: 2)
- ★ Test parameters: selected from
 - ★ Survey on pesticide residue testing in October 2015
- ★ Matrices: unprocessed fruit , vegetables and cereal grain
- ★ Total no. of samples: ~3,400

Issued Contracts (Pesticides) (2)

- ✦ Pesticide residues in fruit and vegetables
 - ✦ cover residue definitions
 - ✦ reporting limit: according to extraneous maximum residue limit (EMRL)/maximum residue limit (MRL)/client's requirements
 - ✦ April 2017 to March 2018 (3 Contracts)
 - List 17A (40 pesticides) in fruit and vegetables ~ 600 samples
 - List 17B (30 pesticides) in fruit and vegetables ~ 800 samples
 - List 17C (39 pesticides) in fruit and vegetables ~ 700 samples

Issued Contracts (Pesticides) (3)

☀ Pesticide residues in cereal grain

- ☀ Oct 2017 to March 2018
 - 1 contract on 19 pesticides
 - List 17D in cereal grain ~ 250 samples

☀ Pesticide residues in vegetables

- ☀ Oct 2017 to March 2018
 - 1 contract on 38 pesticides
 - List 17E in vegetables ~ 100 samples

Way Forward:
Outsourcing Contracts
in 2018-19

Outsourcing Contracts in 2018-19 (1)

- ✦ Around 123,000 tests
- ✦ Some contracts begin in April 2018
 - ✦ invitations to quotation will start in February 2018
- ✦ Contract period covers
 - ✦ 4 months to 1 year

Outsourcing Contracts in 2018-19 (2)

- ✓ Keeping quotation documentation simple
- ✓ Submit all information according to the Checklist
- ✓ 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 (i.e. scope and reporting limit) from application to the end of contract period
- ★ Test sample collection
 - ★ within specified time after notice
 - ★ at specified locations
- ★ Report results within specified period
- ★ Retention / return of remaining test samples



Accreditation Status (1)

PART 5
TECHNICAL SPECIFICATIONS

2. Service Provider shall be accredited by Hong Kong Accreditation Service (HKAS) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) or by an accreditation body with which HOKLAS has concluded mutual recognition agreements/arrangements (MRA), before the Quotation Closing Date, with the Scope of Accreditation including the testing of residues of 19 pesticides in cereal grains

XX Accreditation body

Name of accreditation body

Note.
Please provide:

- (i) a copy of notification letter / accreditation certificate(s) pertaining to the test scope as in Clause 3 of Terms of Quotation,
- (ii) a summary of test methods accredited by the accreditation body for the provision of service, including the reporting limits and measurement uncertainties of all test parameters as given in the Services Specifications,
- (iii) contact information (e.g. email address) of the accreditation body, if other than HKAS,
- (iv) other relevant documents deemed necessary for quotation evaluation.

Column 4	Column 5
Required Reporting Limit (mg/kg)	Service Provider's Reporting Limit (mg/kg)
0.05	0.01
0.1	0.1

No.	Pesticide	Residue definition	Column 4	Column 5	Compliance (tick as appropriate)	
			Required Reporting Limit (mg/kg)	Service Provider's Reporting Limit (mg/kg)	Yes	No
1	Atrazine	Atrazine	0.05			
2	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-fluorobenzenesulpropanoic acid)	0.1			



Accreditation Status (2)

2. Service Provider shall be accredited by Hong Kong Accreditation Service (HKAS) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) or by an accreditation body with which HOKLAS has concluded mutual recognition agreements/arrangements (MRA), before the Quotation Closing Date, with the Scope of Accreditation including the testing of residues of 19 pesticides in cereal grains.

Name of accreditation body: **XX Accreditation body**

Note
Please provide:

(i) a copy of notification letter / accreditation certificate(s) pertaining to the test scope as in Clause 3 of Terms of Quotation.

(ii) a summary of test methods accredited by the accreditation body for the provision of service, including the reporting limits and measurement uncertainties of all test parameters as given in the Services Specifications.

(iii) contact information (e.g. email address) of the accreditation body, if available.

a copy of notification letter / accreditation certificate(s) / extract of accreditation report(s) / confirmation from accreditation body pertaining to the test scope and the most updated accredited reporting limit(s) as in clause 3 of Terms of Quotation.

<<*<GL may verify the submitted information with relevant accreditation bodies>>

Appendix I of accreditation report

Page 1 of 1 Appendix I

Scope of Assessment:
Government Laboratory - Analytical and Advisory Services Division
政府化驗所 - 分析及諮詢服務部

Government Laboratory				Reporting Unit
TEST (中文)	ITEMS, MATERIALS OR PRODUCTS TESTED (測試項目 - 材料或產品)	SPECIFIC TESTS OR PROPERTIES MEASURED (特定測試或量度的特性)	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED (規範 - 標準方法或技術規格)	
Lead	鉛	Multi-element	Reference Method: ILO 72-94 (ICP-AES)	µg/kg
Chromium VI	六價鉻	Chromium VI	Reference Method: ILO 72-94 (ICP-AES)	µg/kg
...	Reference Method: ILO 72-94 (ICP-AES)	µg/kg

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 3,300 samples total
- ★ reporting limits: 8 mg/kg for SO₂, 30 mg/kg for parabens and 50 mg/kg for acids

Contracts on Additives (2)

- ✱ Propionic acid in flour confectionary (~220 samples)
 - ✱ reporting limit: 50 mg/kg
- ✱ Nitrate / nitrite in meat, meat products and dairy products (~440 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 (~600 samples)
 - ✦ reporting limit: 0.3 $\mu\text{g}/\text{kg}$
- ✦ Malachite green in aquatic products (~350 samples)
 - ✦ reporting limit: 0.5 $\mu\text{g}/\text{kg}$ for MG or LMG

Contracts on Other Contaminants

- ✦ Sudan dyes in general foodstuffs (~1,190 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 (~430 samples)
 - ✦ reporting limit: 1 mg/kg
- ✦ Boric acid in general foodstuffs (~95 samples)
 - ✦ reporting limit: 50 mg/kg

Contracts on Heavy Metal/Toxic element

- ☀ Heavy metals / Toxic element in general foodstuffs [~4,780 samples; 1 contract (7M) + 1 contract on itemized basis (4M (Item 1) + 1M (Item 2))]
- ☀ 1 / 4 / 7 elements

Analyte	Reporting Limits
Antimony (Sb)	0.2 ppm
Arsenic (As)	0.1 ppm (0.132 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 Pesticide Residues

- 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 EMRL/MRL/Client's requirements
- Depend on testing capability of service providers at time of launch

GL's proficiency test (PT) programmes

★ PT programmes

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



Thank You