

Head 48 — GOVERNMENT LABORATORY

Controlling officer: the Government Chemist will account for expenditure under this Head.

Estimate 2014–15 **\$435.8m**

Establishment ceiling 2014–15 (notional annual mid-point salary value) representing an estimated 452 non-directorate posts as at 31 March 2014 rising by 16 posts to 468 posts as at 31 March 2015..... **\$236.4m**

In addition, there will be an estimated seven directorate posts as at 31 March 2014 and as at 31 March 2015.

Commitment balance..... **\$88.6m**

Controlling Officer's Report

Programmes

- | | |
|--|---|
| Programme (1) Statutory Testing | This programme contributes to Policy Area 2: Agriculture, Fisheries and Food Safety (Secretary for Food and Health) and Policy Area 15: Health (Secretary for Food and Health). |
| Programme (2) Advisory and Investigative Services | This programme contributes to Policy Area 2: Agriculture, Fisheries and Food Safety (Secretary for Food and Health), Policy Area 9: Internal Security (Secretary for Security), Policy Area 23: Environmental Protection, Conservation, Power and Sustainable Development (Secretary for the Environment) and Policy Area 32: Environmental Hygiene (Secretary for Food and Health) |
| Programme (3) Forensic Science Services | This programme contributes to Policy Area 9: Internal Security (Secretary for Security). |

Detail

Programme (1): Statutory Testing

	2012–13 (Actual)	2013–14 (Original)	2013–14 (Revised)	2014–15 (Estimate)
Financial provision (\$m)	168.0	186.2	174.4 (–6.3%)	206.3 (+18.3%)
				(or +10.8% on 2013–14 Original)

Aim

- 2 The aim is to carry out statutory functions as referee analyst under a number of ordinances and regulations.

Brief Description

3 The Government Chemist discharges statutory functions as referee analyst under various ordinances and regulations. The work involves the analysis of food products for regulatory compliance; the examination of western and Chinese medicines for registration and quality control; the classification of dangerous goods for compliance with the Dangerous Goods Ordinance (Cap. 295); the testing of dutiable commodities for tariff classification; the assessment of toys, children's products and consumer articles for health and safety hazards; the determination of tar and nicotine yields in cigarettes; the assay of gold and platinum articles for fineness; the analysis of consumer goods in relation to the fitness with their trade descriptions; and the verification of products and equipment for compliance with the Weights and Measures Ordinance (Cap. 68). The Laboratory provides 24-hour on-call service to assist the Fire Services Department at scenes of accidents involving hazardous chemicals.

4 In 2013, the Laboratory continued outsourcing some of the routine food testing work to private testing laboratories. The resources released from outsourcing were deployed to take up test method development, new testing work arising from amendments of food legislation and activities related to outsourcing such as organisation of technical seminars as well as chemical metrology development. Testing support was also provided to the Centre for Food Safety to perform a survey on the nutritional composition of follow-up formula available in the local market. In another area of health concern, the Laboratory continued to provide full support for urgent samples and investigation into cases of adverse reaction arising from the consumption of proprietary Chinese medicines found containing western drug ingredients, and intoxication incidents related to substitution or contamination of herbs in Chinese herbal medicines. From 2014–15 onwards, the Laboratory will provide more support to the testing and certification industry through various measures, such as arrangement of proficiency tests for local laboratories and provision of reference materials.

Head 48 — GOVERNMENT LABORATORY

5 The key performance measures in respect of statutory testing are:

Targets

	Target	2012 (Actual)	2013 (Actual)	2014 (Plan)
<i>Testing of:</i>				
food complaint cases within 25 working days (%)	83	85	85	83
urgent samples relating to food incidents within two working days (%)	100	100	100	100
other food samples within reporting time averaging 19 working days (%)#	95	99	98	95
pharmaceuticals (quality control) within reporting time averaging 14 working days (%)#	95	99	99	95
pharmaceuticals (registration) within reporting time averaging 30 working days (%)#	90	98	94	90
Chinese medicines within reporting time averaging 30 working days (%)#	95	97	97	95
dangerous goods within reporting time averaging 14 working days (%)#	95	100	99	95
dutiable and other commodities within reporting time averaging ten working days (%)#	95	99	99	95
toys and children's products within reporting time averaging 15 working days (%)#	95	97	98	95
consumer goods within reporting time averaging 35 working days (%)#	95	97	99	95
non-pharmaceutical consumer goods (trade descriptions) within reporting time averaging 35 working days (%)#	90	97	96	90

Different samples require different analytical procedures, hence different reporting time. The quoted number of working days required represents an average of reporting time for the different types of samples and test requests within the category, while the target (in percentage) is the total compliance rate of the concerned samples and test requests within a particular category against their respective targets.

Indicators

The key indicators for statutory testing are the numbers of tests performed on the various categories of services.

	2012 (Actual)	2013 (Actual)	2014 (Estimate)
<i>Tests performed</i>			
food complaint samples	17 051	17 111	18 000
urgent samples relating to food incidents	762	933	N.A.[^]
other food samples	185 557	193 840	180 000
pharmaceuticals (quality control)	35 244	31 657	31 000
pharmaceuticals (registration)	20 792	24 969	20 000
Chinese medicines	77 784	86 479	80 000
dangerous goods	4 705	5 767	5 000
dutiable and other commodities	7 775	7 601	8 000
non-pharmaceutical consumer goods (trade descriptions)	6 396 [@]	6 121 [@]	5 000
cigarette samples	13 536	13 680	13 000
toys and children's products	18 532	18 015	18 500
consumer goods	15 004	15 162	15 000

[^] As the testing requirement for urgent food samples relating to food incidents fluctuated in previous years, it is difficult to estimate either the occurrence of this type of food incidents or the number of tests required.

[@] The higher work output in 2012 and 2013 was due to unforeseen and urgent litigation samples. Such contingency work fluctuates from year to year.

Head 48 — GOVERNMENT LABORATORY

Matters Requiring Special Attention in 2014–15

- 6 During 2014–15, the Laboratory will:
- provide professional advisory and analytical services to support the implementation of the Pesticide Residues in Food Regulation (Cap. 132CM) in August 2014;
 - provide professional advice and develop testing methods to prepare for legislation to regulate formula products and foods for infants and young children;
 - outsource some of the routine food testing work to the private sector to better utilise the Laboratory’s resources in developing and performing new tests regarding legislative amendments;
 - provide support to expedite the setting of standards for Chinese herbal medicines commonly used in Hong Kong;
 - provide metrology-in-chemistry support for the development of testing and certification industry in Hong Kong; and
 - continue to provide professional advisory and analytical services to support the enforcement of the various orders and regulations under the Trade Descriptions Ordinance (Cap. 362). The services will cover analysis and authenticity tests on consumer goods, in particular those related to valuable goods such as jewellery, seafood products and Chinese medicinal products where their authenticity is of public concern.

Programme (2): Advisory and Investigative Services

	2012–13 (Actual)	2013–14 (Original)	2013–14 (Revised)	2014–15 (Estimate)
Financial provision (\$m)	68.5	75.2	71.5 (–4.9%)	79.9 (+11.7%)
				(or +6.3% on 2013–14 Original)

Aim

7 The aim is to provide a wide range of primarily chemical testing and advisory services to other government departments and public institutions.

Brief Description

8 The Laboratory provides comprehensive analytical and advisory services to the Government in the management and monitoring of the environment and in the enforcement of various pollution control measures. Chemical testing of air, water and waste samples for a variety of pollution indicators constitutes the main activity under this programme. Specific incidents of emission or leakage of gaseous substances into the environment involve the Laboratory in on-site investigations. Analytical support is provided to the Hong Kong Observatory’s Environmental Radiation Monitoring Programme as well as the Daya Bay Contingency Plan. Other activities include the examination of seepage and swimming pool water samples for the Food and Environmental Hygiene Department, analysis of samples related to evaluation of exposure to occupational hazards for the Labour Department, testing of government supplies for conformity to tender specifications and identifying products made from endangered species.

9 In 2013, the Laboratory continued to render analytical support and professional advice to the Government in improving the quality of the environment of Hong Kong and engage in scientific research to further enhance its analytical capabilities in environmental analysis. In addition to its routine commitments, the Laboratory was actively involved in various environmental impact studies and ad-hoc projects including the analysis of environmental samples for organic and inorganic pollutants under the Toxic Substances Monitoring Programme. To support the implementation of the Air Pollution Control (Volatile Organic Compounds) Regulation (Cap. 311W), the Laboratory continued to provide analytical services for determining the content of volatile organic compounds in regulated products including architectural paints/coatings, marine vessel paints, printing inks, adhesives and sealants, vehicle refinishing paints and consumer products. Method development and validation work for the analysis of new persistent organic pollutants was continued. In addition, the Laboratory continued to provide analytical service for biodiesel in support of the implementation of the motor vehicle biodiesel specifications in the Air Pollution Control (Motor Vehicle Fuel) Regulation (Cap. 311L). The Laboratory also provided over 300 pieces of professional advice relating to over 1 400 items for classification under the Dangerous Goods Ordinance and over 900 pieces of advice relating to over 1 400 items supporting implementation of the Chemical Weapons (Convention) Ordinance (Cap. 578) and control of strategic commodities.

Head 48 — GOVERNMENT LABORATORY

10 The key performance measures in respect of advisory and investigative services are:

Targets

	Target	2012 (Actual)	2013 (Actual)	2014 (Plan)
<i>Testing of:</i>				
air pollution monitoring samples within reporting time averaging 20 working days (%)#	95	100	98	95
field investigation (air pollution) samples within reporting time averaging 12 working days (%)#	96	100	100	96
air pollution samples for litigation purposes within reporting time averaging 18 working days (%)#	97	100	100	97
water quality monitoring samples within reporting time averaging 20 working days (%)#	96	99	99	96
environmental waste monitoring samples within reporting time averaging 27 working days (%)#	95	97	99	95
environmental waste samples for litigation purposes within reporting time averaging 12 working days (%)#	97	100	100	97
radioactivity monitoring samples within reporting time averaging 12 working days (%)#	95	100	100	95
pesticides formulation samples within reporting time averaging 36 working days (%)#	93	100	96	93
seepage and swimming pool water samples within ten working days (%)	96	97	97	96
other samples within reporting time averaging 25 working days (%)#	90	99	99	90

Different samples require different analytical procedures, hence different reporting time. The quoted number of working days required represents an average of reporting time for the different types of samples and test requests within the category, while the target (in percentage) is the total compliance rate of the concerned samples and test requests within a particular category against their respective targets.

Indicators

The key indicators for advisory and investigative services are the numbers of tests performed on the various categories of services.

	2012 (Actual)	2013 (Actual)	2014 (Estimate)
<i>Tests performed</i>			
air pollution monitoring samples	72 871	69 724	68 000
air pollution samples for litigation purposes	2 961	3 674	3 000
field investigation (air pollution) samples	502	416	450
water quality monitoring samples	123 168	121 775	122 700
environmental waste monitoring samples	12 150	10 865	11 200
environmental waste samples for litigation purposes	300	425	400
pesticides formulation samples	240	160	300
seepage and swimming pool water samples	38 771	40 068	40 000
miscellaneous			
radioactivity monitoring samples	4 594	5 190	4 700
other samples	9 956	6 676	7 500

Head 48 — GOVERNMENT LABORATORY

Matters Requiring Special Attention in 2014–15

11 During 2014–15, the Laboratory will:

- continue to provide analytical services in support of the implementation of the Air Pollution Control (Motor Vehicle Fuel) Regulation, including the analysis of biodiesel; and
- continue to provide support to government departments in relation to the implementation of the Stockholm Convention on Persistent Organic Pollutants and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

Programme (3): Forensic Science Services

	2012–13 (Actual)	2013–14 (Original)	2013–14 (Revised)	2014–15 (Estimate)
Financial provision (\$m)	143.6	149.8	143.1 (–4.5%)	149.6 (+4.5%)
				(or –0.1% on 2013–14 Original)

Aim

12 The aim is to provide comprehensive and unbiased forensic science services to the criminal justice system.

Brief Description

13 The Laboratory provides comprehensive and impartial forensic science services to the law enforcement departments, which include mainly the Hong Kong Police Force, the Customs and Excise Department, the Immigration Department and the Fire Services Department. The services include crime scene investigation, traffic accident reconstruction, fire investigation, DNA profiling, drugs of abuse examination, toxicology analysis and questioned documents examination. A 24-hour and express service is also provided for these scientific examinations to fulfil the immediate client's need.

14 Additionally, the screening and monitoring, through urine testing (urinalysis), of the drug-abuse behaviour of persons under imprisonment, rehabilitation or probation is conducted for the Department of Health (Methadone Maintenance Scheme), the Social Welfare Department, the Correctional Services Department, the Hong Kong Police Force and other organisations requiring this service

15 The targets are defined to be the percentage of completed cases whose individual case-completion time does not exceed a specified number of working day(s). The key performance measures in respect of the forensic science services are:

Targets

	Target	2012 (Actual)	2013 (Actual)	2014 (Plan)
<i>Cases for:</i>				
biochemical grouping (DNA profiling) - non-complicated cases completed within 66 working days (%).....	90	93	98	90
complicated cases completed within 130 working days (%).....	90	92	95	90
DNA database (DNA profiling) completed within 22 working days (%).....	90	93	99	90
parentage testing (DNA profiling) completed within 22 working days (%)Δ	90	95	96	90
trace evidence completed within 66 working days (%)	90	90	94	90
accident reconstruction completed within 66 working days (%)	90	91	92	90
illicit drug seizures completed within 11 working days (%)	90	91	94	90
major illicit drug seizures and manufacturing completed within 44 working days (%)	90	89	90	90
other illegal drug activities completed within 120 working days (%).....	90	99	94	90

Head 48 — GOVERNMENT LABORATORY

	Target	2012 (Actual)	2013 (Actual)	2014 (Plan)
analytical toxicology completed within 33 working days (%).....	85	86	92	85
drug urinalysis - methadone clinics completed within 11 working days (%).....	90	91	91	90
judicial-confirmation (routine) completed within 22 working days (%).....	85	93	98	85
judicial-confirmation (enhanced probation) completed within five working days (%).....	100	100	100	100
drug-driving completed within 33 working days (%).....	85	89	93	85
drink-driving completed within 11 working days (%).....	90	98	96	90
handwriting examination completed within 66 working days (%).....	85	94	95	85
counterfeiting/forgery completed within 33 working days (%).....	90	95	96	90
express counterfeiting/forgery service completed within one working day (%).....	99	100	99	99

Δ The figures represent the number of working days lapsed between the reception by the Laboratory of samples for genetic testing and the issuing of genetic data after completion of DNA analysis of these samples within the Laboratory.

Indicators

Key indicators for the forensic science services are the number of cases investigated in each category, statutory certificates or technical reports and witness statements issued and crime scenes attended.

	2012 (Actual)	2013 (Actual)	2014 (Estimate)
<i>Criminalistics and Quality Management Group</i>			
cases investigated			
DNA database	3 295	3 382	3 300
biochemical sciences - non-complicated.....	479	652	650
complicated	1 338	1 217	1 300
parentage testing	2 195	2 790	2 400
chemical sciences.....	716	773	750
physical sciences.....	772	770	770
<i>Drugs, Toxicology and Documents Group</i>			
cases investigated			
controlled drugs.....	5 418	5 628	5 400
analytical toxicology	2 688	2 953	2 800
drug urinalysis - methadone clinics.....	13 856	12 668	13 000
judicial-confirmation (routine).....	27 711	28 466	29 000
judicial-confirmation (enhanced probation).....	2 317	1 024	6 000
drug-driving	44	47	50
drink-driving	58	56	60
questioned documents	700	677	700
<i>Forensic Science Division</i>			
statutory certificates issued.....	5 590	5 856	5 600
technical reports/statements	11 782	12 896	13 000
crime scenes attended.....	413	474	480

Head 48 — GOVERNMENT LABORATORY

Matters Requiring Special Attention in 2014–15

16 During 2014–15, the Laboratory will continue to provide analytical support to government departments in urinalysis service for measures combating the youth drug abuse problem, such as enhanced probation scheme at all seven magistracies in Hong Kong.

Head 48 — GOVERNMENT LABORATORY

ANALYSIS OF FINANCIAL PROVISION

	2012-13 (Actual) (\$m)	2013-14 (Original) (\$m)	2013-14 (Revised) (\$m)	2014-15 (Estimate) (\$m)
Programme				
(1) Statutory Testing	168.0	186.2	174.4	206.3
(2) Advisory and Investigative Services	68.5	75.2	71.5	79.9
(3) Forensic Science Services	143.6	149.8	143.1	149.6
	380.1	411.2	389.0 (-5.4%)	435.8 (+12.0%)
				(or +6.0% on 2013-14 Original)

Analysis of Financial and Staffing Provision

Programme (1)

Provision for 2014-15 is \$31.9 million (18.3%) higher than the revised estimate for 2013-14. This is mainly due to an increase of 13 posts, increased requirement for procurement of equipment and specialist supplies, and other operating expenses.

Programme (2)

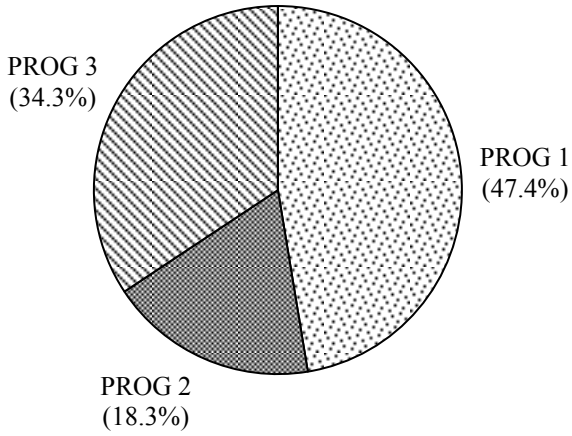
Provision for 2014-15 is \$8.4 million (11.7%) higher than the revised estimate for 2013-14. This is mainly due to increased requirement for procurement of equipment and specialist supplies, and other operating expenses. In addition, there will be an increase of three posts.

Programme (3)

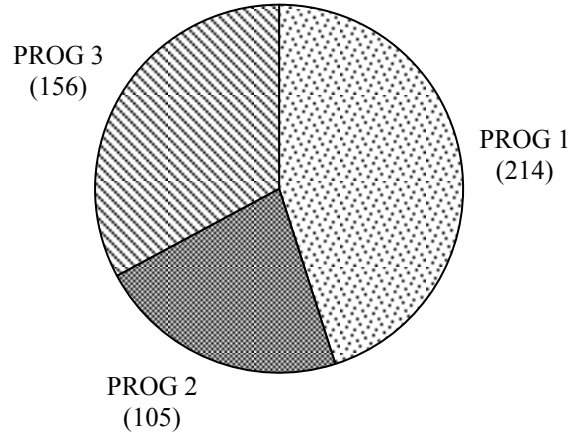
Provision for 2014-15 is \$6.5 million (4.5%) higher than the revised estimate for 2013-14. This is mainly due to increased requirement for procurement of equipment and specialist supplies, and other operating expenses.

Head 48 — GOVERNMENT LABORATORY

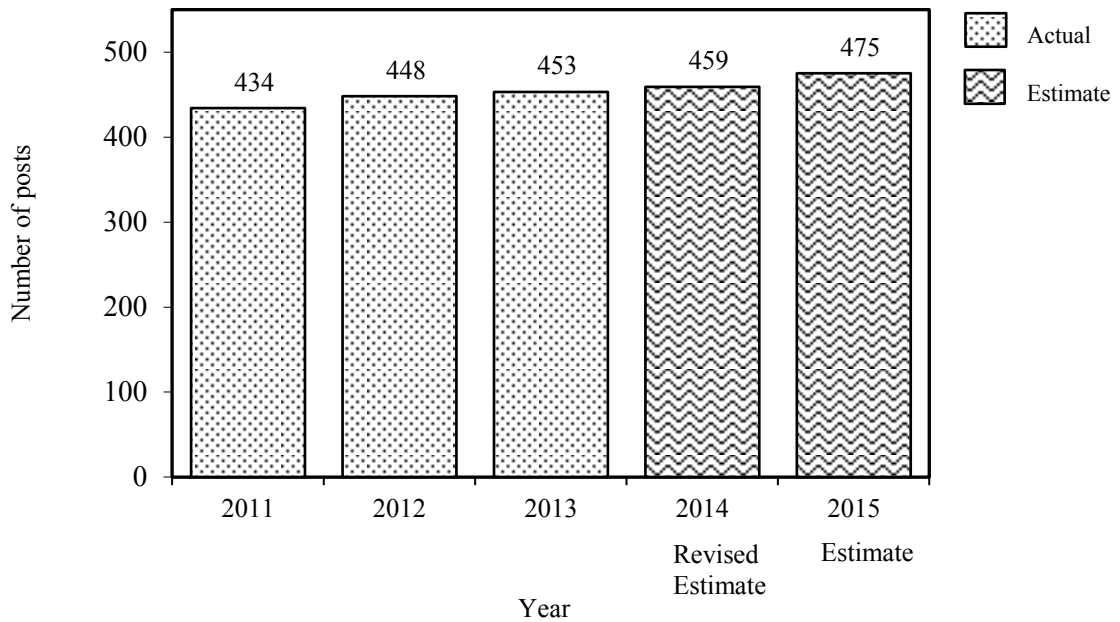
Allocation of provision to programmes (2014-15)



Staff by programme (as at 31 March 2015)



Changes in the size of the establishment (as at 31 March)



Head 48 — GOVERNMENT LABORATORY

Sub-head (Code)	Actual expenditure 2012-13	Approved estimate 2013-14	Revised estimate 2013-14	Estimate 2014-15	
	\$'000	\$'000	\$'000	\$'000	
Operating Account					
Recurrent					
000	Operational expenses	333,447	340,992	343,841	354,911
	Total, Recurrent	333,447	340,992	343,841	354,911
	Total, Operating Account	333,447	340,992	343,841	354,911
Capital Account					
Plant, Equipment and Works					
603	Plant, vehicles and equipment.....	32,274	57,695	32,587	66,454
661	Minor plant, vehicles and equipment (block vote).....	14,395	12,553	12,553	14,394
	Total, Plant, Equipment and Works.....	46,669	70,248	45,140	80,848
	Total, Capital Account.....	46,669	70,248	45,140	80,848
	Total Expenditure	380,116	411,240	388,981	435,759

Head 48 — GOVERNMENT LABORATORY

Details of Expenditure by Subhead

The estimate of the amount required in 2014–15 for the salaries and expenses of the Government Laboratory is \$435,759,000. This represents an increase of \$46,778,000 over the revised estimate for 2013–14 and of \$55,643,000 over actual expenditure in 2012–13.

Operating Account

Recurrent

2 Provision of \$354,911,000 under *Subhead 000 Operational expenses* is for the salaries, allowances and other operating expenses of the Government Laboratory.

3 The establishment as at 31 March 2014 will be 459 permanent posts. It is expected that there will be a net increase of 16 posts in 2014–15. Subject to certain conditions, the controlling officer may under delegated power create or delete non-directorate posts during 2014–15, but the notional annual mid-point salary value of all such posts must not exceed \$236,415,000.

4 An analysis of the financial provision under *Subhead 000 Operational expenses* is as follows:

	2012–13 (Actual) (\$'000)	2013–14 (Original) (\$'000)	2013–14 (Revised) (\$'000)	2014–15 (Estimate) (\$'000)
Personal Emoluments				
- Salaries.....	234,850	239,529	242,330	252,479
- Allowances.....	1,022	1,468	1,516	1,620
Personnel Related Expenses				
- Mandatory Provident Fund contribution.....	510	594	613	604
- Civil Service Provident Fund contribution.....	7,976	8,661	8,948	10,294
Departmental Expenses				
- General departmental expenses	89,089	90,740	90,434	89,914
	333,447	340,992	343,841	354,911

Capital Account

Plant, Equipment and Works

5 Provision of \$14,394,000 under *Subhead 661 Minor plant, vehicles and equipment (block vote)* represents an increase of \$1,841,000 (14.7%) over the revised estimate for 2013–14. This is mainly due to increased requirement for procurement and replacement of minor plant and equipment in 2014–15.

Head 48 — GOVERNMENT LABORATORY

Commitments

Sub-head (Code)	Item (Code)	Ambit	Approved commitment	Accumulated expenditure to 31.3.2013	Revised estimated expenditure for 2013–14	Balance
			\$'000	\$'000	\$'000	\$'000
Capital Account						
603		<i>Plant, vehicles and equipment</i>				
	801	Acquisition of a set of equipment for preparation of proficiency testing programmes and reference material production	9,975	—	—	9,975
	802	Acquisition of a set of nuclear magnetic resonance spectroscopy system	9,975	—	—	9,975
	803	Acquisition of a set of equipment for nutrition analysis of infant formula, follow-up formula and infant and young children foods	9,600	—	—	9,600
	816	Acquisition of an equipment for handling speciation of toxic metals in food	5,845	1,236	4,440	169
	879	Replacement of an integrated liquid chromatographic system for the analysis of trace organic pollutants in environmental monitoring samples.....	4,938	—	—	4,938
	880	Replacement of an integrated high performance liquid chromatographic system with tandem mass spectrometric detection	4,600	—	—	4,600
	881	Replacement of a liquid chromatograph-mass spectrometer system.....	3,864	—	—	3,864
	882	Replacement of a scanning electron microscopy-energy dispersive x-ray spectrometer system.....	3,675	—	—	3,675
	884	Replacement of an integrated high performance liquid chromatograph with high resolution mass spectrometry system	4,883	—	—	4,883
	888	Replacement of an integrated gas chromatography system for analysis of trace organic pollutants in environmental monitoring samples.....	4,200	—	—	4,200
	889	Replacement of an integrated liquid chromatograph mass spectrometric system for analysis of pharmaceutical exhibits.....	4,000	—	—	4,000
	890	Replacement of an integrated liquid chromatograph mass spectrometric system for analysis of western pharmaceutical products	4,000	—	—	4,000
	891	Replacement of an inductively coupled plasma-mass spectrometer system for the enforcement of the Water Pollution Control Ordinance (Cap. 358).....	3,150	—	2,980	170

Head 48 — GOVERNMENT LABORATORY

Commitments—Cont'd.

Sub-head (Code)	Item (Code)	Ambit	Approved commitment	Accumulated expenditure to 31.3.2013	Revised estimated expenditure for 2013–14	Balance
			\$'000	\$'000	\$'000	\$'000
Capital Account—Cont'd.						
603		<i>Plant, vehicles and equipment—Cont'd.</i>				
892		Replacement of a benchtop liquid chromatograph mass spectrometer system with a triple stage quadruple mass spectrometer.....	2,940	—	—	2,940
893		Replacement of a liquid chromatograph mass spectrometer system.....	2,800	—	—	2,800
894		Acquisition of a set of equipment for testing of genetically modified organism in food and species identification.....	7,056	—	—	7,056
895		Acquisition of a set of equipment to support the new Pesticide Residues in Food Regulation.....	6,720	—	—	6,720
897		Replacement of a high performance liquid chromatograph system for the identification of drugs and poisons in biological specimens submitted for toxicological examination.....	5,040	—	—	5,040
		Total	<u>97,261</u>	<u>1,236</u>	<u>7,420</u>	<u>88,605</u>