

Head 48 — GOVERNMENT LABORATORY

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

Estimate 2015–16 **\$445.8m**

Establishment ceiling 2015–16 (notional annual mid-point salary value) representing an estimated 467 non-directorate posts as at 31 March 2015 rising by ten posts to 477 posts as at 31 March 2016.... **\$254.8m**

In addition, there will be an estimated seven directorate posts as at 31 March 2015 and as at 31 March 2016.

Commitment balance..... **\$58.2m**

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

	2013–14 (Actual)	2014–15 (Original)	2014–15 (Revised)	2015–16 (Estimate)
Financial provision (\$m)	186.9	206.3	204.0 (–1.1%)	208.5 (+2.2%)
				(or +1.1% on 2014–15 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 2014–15, 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. In another area of health concern, the Laboratory continued to provide full support for (a) urgent investigatory analyses of substandard pharmaceuticals and Chinese medicines; (b) investigation into cases of adverse reaction arising from the consumption of proprietary Chinese medicines and/or health products found containing undeclared western drug ingredients; and (c) intoxication incidents related to substitution or contamination of herbs in Chinese herbal medicines. The Laboratory will continue to provide support to the testing and certification industry, for example, arrangement of proficiency tests for local laboratories and provision of reference materials.

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

Targets

	Target	2013 (Actual)	2014 (Actual)	2015 (Plan)
<i>Testing of:</i>				
food complaint cases within 25 working days (%).....	83	85	88	84
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	98	99	95
pharmaceuticals (quality control) within reporting time averaging 14 working days (%)#.....	95	99	98	95
pharmaceuticals (registration) within reporting time averaging 30 working days (%)#.....	90	94	90	92
Chinese medicines within reporting time averaging 30 working days (%)#.....	95	97	98	95
dangerous goods within reporting time averaging 14 working days (%)#.....	95	99	98	95
dutiable and other commodities within reporting time averaging ten working days (%)#.....	95	99	100	95
toys and children's products within reporting time averaging 15 working days (%)#.....	95	98	100	95
consumer goods within reporting time averaging 35 working days (%)#.....	95	99	99	95
non-pharmaceutical consumer goods (trade descriptions) within reporting time averaging 35 working days (%)#.....	90	96	97	92

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.

	2013 (Actual)	2014 (Actual)	2015 (Estimate)
<i>Tests performed</i>			
food complaint samples	17 111	12 778	18 000
urgent samples relating to food incidents	933	761	N.A. [^]
other food samples	193 840	194 986	182 000
pharmaceuticals (quality control).....	31 657	27 179	23 000Ω
pharmaceuticals (registration).....	24 969	30 513	28 000
Chinese medicines.....	86 479	85 719	80 000
dangerous goods.....	5 767	5 120	5 000
dutiable and other commodities	7 601	9 801	8 000
non-pharmaceutical consumer goods (trade descriptions)	6 121@	4 608@	5 000
cigarette samples	13 680	12 504	13 000
toys and children's products	18 015	18 756	18 500
consumer goods.....	15 162	14 274	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.

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- Ω The analytical requirement for pharmaceutical manufacturing work included under the category of pharmaceuticals (quality control) ceased from January 2015 due to closure of the Pharmaceutical Manufactory of the Department of Health. Hence, the number of testing requests in 2015 is estimated to decrease.
- @ The work relating to the analysis of unforeseen and litigation samples fluctuates from year to year. The relatively lower output in 2014 was due to less such samples received from the client department.

Matters Requiring Special Attention in 2015–16

- 6 During 2015–16, the Laboratory will:
- provide analytical services in support of the implementation of the Food and Drugs (Composition and Labelling) (Amendment) (No. 2) Regulation 2014;
 - continue to provide professional advisory and analytical services to support the implementation of the Pesticide Residues in Food Regulation (Cap. 132CM);
 - continue to 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;
 - continue to provide support to expedite the setting of standards for Chinese herbal medicines commonly used in Hong Kong;
 - continue to 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

	2013–14 (Actual)	2014–15 (Original)	2014–15 (Revised)	2015–16 (Estimate)
Financial provision (\$m)	72.4	79.9	82.3 (+3.0%)	85.9 (+4.4%)
				(or +7.5% on 2014–15 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 2014–15, 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, vessel paints and pleasure craft 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 started to provide analytical services in support of the implementation of the Air Pollution Control (Marine Light Diesel) Regulation (Cap. 311Y). In 2014, the Laboratory also provided over 290 pieces of professional advice relating to over 840 items for classification under the Dangerous Goods Ordinance and over 370 pieces of advice relating to over 850 items supporting implementation of the Chemical Weapons (Convention) Ordinance (Cap. 578) and control of strategic commodities.

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

Targets

	Target	2013 (Actual)	2014 (Actual)	2015 (Plan)
<i>Testing of:</i>				
air pollution monitoring samples within reporting time averaging 20 working days (%)#.....	95	98	99	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	98	96
environmental waste monitoring samples within reporting time averaging 27 working days (%)#.....	95	99	97	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	99	95
pesticides formulation samples within reporting time averaging 36 working days (%)#.....	93	96	100	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.

	2013 (Actual)	2014 (Actual)	2015 (Estimate)
<i>Tests performed</i>			
air pollution monitoring samples	69 724	64 157	63 000
air pollution samples for litigation purposes.....	3 674	3 691	3 700
field investigation (air pollution) samples	416	463	450
water quality monitoring samples	121 775	127 242	122 000
environmental waste monitoring samples.....	10 865	11 017	11 400
environmental waste samples for litigation purposes	425	127	130
pesticides formulation samples	160	408	300
seepage and swimming pool water samples	40 068	30 393	40 000
miscellaneous			
radioactivity monitoring samples.....	5 190	5 011	4 700
other samples.....	6 676	9 000	8 150

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Matters Requiring Special Attention in 2015–16

11 During 2015–16, the Laboratory will:

- continue to provide analytical services in support of the implementation of the Air Pollution Control (Marine Light Diesel) Regulation, 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

	2013–14 (Actual)	2014–15 (Original)	2014–15 (Revised)	2015–16 (Estimate)
Financial provision (\$m)	150.2	149.6	147.3 (–1.5%)	151.4 (+2.8%)
				(or +1.2% on 2014–15 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	2013 (Actual)	2014 (Actual)	2015 (Plan)
<i>Cases for:</i>				
biochemical grouping (DNA profiling) - non-complicated cases completed within 66 working days (%)	90	98	95	90
complicated cases completed within 130 working days (%)	90	95	93	90
DNA database (DNA profiling) completed within 22 working days (%)	90	99	99	90
parentage testing (DNA profiling) completed within 22 working days (%)Δ	90	96	97	90
trace evidence completed within 66 working days (%)	90	94	98	90
accident reconstruction completed within 66 working days (%)	90	92	90	90
illicit drug seizures completed within 11 working days (%)	90	94	94	90
major illicit drug seizures and manufacturing completed within 44 working days (%)	90	90	93	90
other illegal drug activities completed within 120 working days (%)	90	94	96	90

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	Target	2013 (Actual)	2014 (Actual)	2015 (Plan)
analytical toxicology completed within 33 working days (%).....	85	92	88	85
drug urinalysis - methadone clinics completed within 11 working days (%)	90	91	92	90
judicial-confirmation (routine) completed within 22 working days (%)	85	98	100	85
judicial-confirmation (enhanced probation) completed within five working days (%)	100	100	100	100
drug-driving completed within 33 working days (%).....	85	93	94	85
drink-driving completed within 11 working days (%).....	90	96	98	90
handwriting examination completed within 66 working days (%).....	85	95	95	85
counterfeiting/forgery completed within 33 working days (%).....	90	96	95	90
express counterfeiting/forgery service completed within one working day (%)	99	99	100	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.

	2013 (Actual)	2014 (Actual)	2015 (Estimate)
<i>Criminalistics and Quality Management Group</i>			
cases investigated			
DNA database	3 382	3 065	3 300
biochemical sciences - non-complicated.....	652	557	620
complicated	1 217	1 207	1 300
parentage testing	2 790	2 834	2 800
chemical sciences	773	621	700
physical sciences	770	800	770
<i>Drugs, Toxicology and Documents Group</i>			
cases investigated			
controlled drugs.....	5 628	5 152	5 600
analytical toxicology	2 953	2 537	2 800
drug urinalysis - methadone clinics.....	12 668	10 097	11 000
judicial-confirmation (routine).....	28 466	25 810	26 500
judicial-confirmation (enhanced probation).....	1 024	1 161	1 100
drug-driving	47	35	35
drink-driving	56	54	60
questioned documents	677	509	530
<i>Forensic Science Division</i>			
statutory certificates issued	5 856	5 343	5 800
technical reports/statements	12 896	12 177	13 000
crime scenes attended.....	474	422	450

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Matters Requiring Special Attention in 2015–16

16 During 2015–16, 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.

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ANALYSIS OF FINANCIAL PROVISION

	2013-14 (Actual) (\$m)	2014-15 (Original) (\$m)	2014-15 (Revised) (\$m)	2015-16 (Estimate) (\$m)
Programme				
(1) Statutory Testing	186.9	206.3	204.0	208.5
(2) Advisory and Investigative Services	72.4	79.9	82.3	85.9
(3) Forensic Science Services	150.2	149.6	147.3	151.4
	409.5	435.8	433.6 (-0.5%)	445.8 (+2.8%)
				(or +2.3% on 2014-15 Original)

Analysis of Financial and Staffing Provision

Programme (1)

Provision for 2015-16 is \$4.5 million (2.2%) higher than the revised estimate for 2014-15. This is mainly due to the increased requirement for procurement of equipment and specialist supplies, increased provision for personal emoluments, and other operating expenses. There will be a net increase of ten posts.

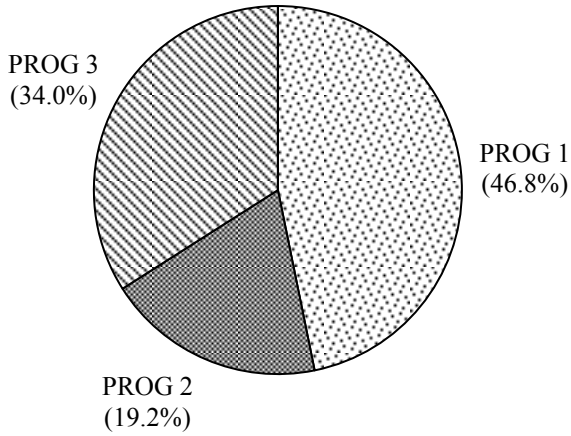
Programme (2)

Provision for 2015-16 is \$3.6 million (4.4%) higher than the revised estimate for 2014-15. This is mainly due to increased requirement for procurement of equipment and specialist supplies, and other operating expenses.

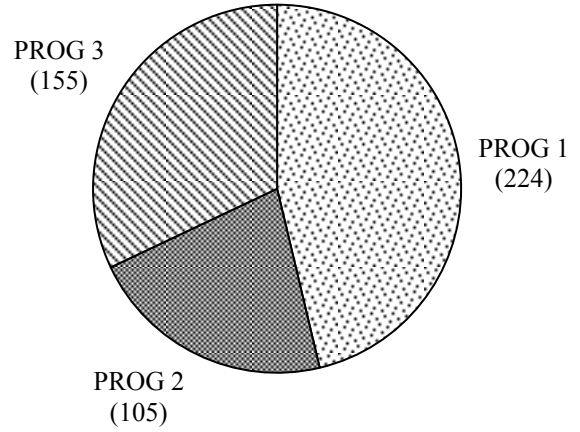
Programme (3)

Provision for 2015-16 is \$4.1 million (2.8%) higher than the revised estimate for 2014-15. This is mainly due to increased requirement for procurement of equipment and specialist supplies, and other operating expenses.

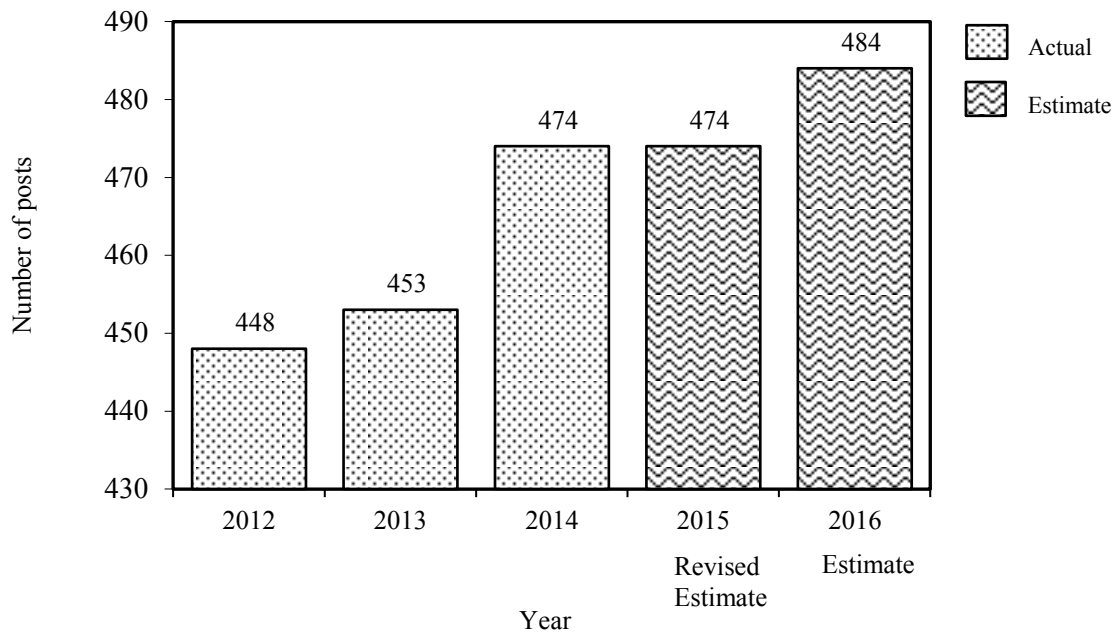
Allocation of provision to programmes (2015-16)



Staff by programme (as at 31 March 2016)



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



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Sub-head (Code)	Actual expenditure 2013-14	Approved estimate 2014-15	Revised estimate 2014-15	Estimate 2015-16	
	\$'000	\$'000	\$'000	\$'000	
Operating Account					
Recurrent					
000	Operational expenses	343,816	354,911	361,395	375,009
	Total, Recurrent	343,816	354,911	361,395	375,009
	Total, Operating Account	343,816	354,911	361,395	375,009
Capital Account					
Plant, Equipment and Works					
603	Plant, vehicles and equipment.....	54,355	66,454	57,806	56,396
661	Minor plant, vehicles and equipment (block vote).....	11,360	14,394	14,394	14,394
	Total, Plant, Equipment and Works.....	65,715	80,848	72,200	70,790
	Total, Capital Account.....	65,715	80,848	72,200	70,790
	Total Expenditure	409,531	435,759	433,595	445,799

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Details of Expenditure by Subhead

The estimate of the amount required in 2015–16 for the salaries and expenses of the Government Laboratory is \$445,799,000. This represents an increase of \$12,204,000 over the revised estimate for 2014–15 and of \$36,268,000 over the actual expenditure in 2013–14.

Operating Account

Recurrent

2 Provision of \$375,009,000 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 2015 will be 474 permanent posts. It is expected that there will be a net increase of ten posts in 2015–16. Subject to certain conditions, the controlling officer may under delegated power create or delete non-directorate posts during 2015–16, but the notional annual mid-point salary value of all such posts must not exceed \$254,755,000.

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

	2013–14 (Actual) (\$'000)	2014–15 (Original) (\$'000)	2014–15 (Revised) (\$'000)	2015–16 (Estimate) (\$'000)
Personal Emoluments				
- Salaries.....	242,183	252,479	258,878	272,355
- Allowances.....	1,540	1,620	1,705	1,824
Personnel Related Expenses				
- Mandatory Provident Fund contribution.....	503	604	664	812
- Civil Service Provident Fund contribution.....	8,854	10,294	10,362	12,465
Departmental Expenses				
- General departmental expenses	90,736	89,914	89,786	87,553
	343,816	354,911	361,395	375,009

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Commitments

Sub-head (Code)	Item (Code)	Ambit	Approved commitment	Accumulated expenditure to 31.3.2014	Revised estimated expenditure for 2014–15	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	—	8,000	1,975
	802	Acquisition of a set of nuclear magnetic resonance spectroscopy system	9,975	—	8,000	1,975
	803	Acquisition of a set of equipment for nutrition analysis of infant formula, follow-up formula and infant and young children foods	9,600	—	9,425	175
	816	Acquisition of an equipment for handling speciation of toxic metals in food	5,845	4,326	1,350	169
	856	Replacement of a high performance liquid chromatograph with tandem mass spectrometer (set no. 2).....	4,515	—	—	4,515
	857	Replacement of a gas chromatographic mass spectrometer system with a gas chromatographic mass spectrometric system with various detectors	2,940	—	—	2,940
	858	Replacement of a gas chromatograph tandem mass spectrometer system for analysing of trace organic pollutants in environmental samples	2,903	—	—	2,903
	864	Replacement of an integrated gas chromatography with mass selective detector and electron capture detector with an integrated gas chromatographic system	2,903	—	—	2,903
	865	Replacement of a multi-residue screening system with a liquid chromatograph-mass spectrometer	2,800	—	—	2,800
	866	Replacement of a X-ray diffractometer system with a powder X-ray diffractometer system	2,205	—	—	2,205
	867	Replacement of a chromatography-mass spectrometry system for analysis of commonly abused drugs in urine specimens.....	2,205	—	—	2,205
	868	Replacement of a high performance liquid chromatograph system with a high performance liquid chromatograph with a high resolution mass spectrometric detector.....	5,500	—	—	5,500
	869	Replacement of a high performance liquid chromatograph with tandem mass spectrometer (set no. 1).....	5,040	—	—	5,040

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Commitments—Cont'd.

Sub-head (Code)	Item (Code)	Ambit	Approved commitment	Accumulated expenditure to 31.3.2014	Revised estimated expenditure for 2014–15	Balance
			\$'000	\$'000	\$'000	\$'000
Capital Account—Cont'd.						
603		<i>Plant, vehicles and equipment—Cont'd.</i>				
880		Replacement of an integrated high performance liquid chromatographic system with tandem mass spectrometric detection	4,600	—	4,370	230
881		Replacement of a liquid chromatograph-mass spectrometer system.....	3,864	—	3,484	380
895		Acquisition of a set of equipment to support the new Pesticide Residues in Food Regulation.....	6,720	—	4,358	2,362
898		Acquisition of an integrated high performance liquid chromatographic system with ultra-high resolution mass analyser	9,975	—	—	9,975
899		Acquisition of a set of equipment for toy and children's products safety testing.....	9,975	—	—	9,975
		Total	<u>101,540</u>	<u>4,326</u>	<u>38,987</u>	<u>58,227</u>