

Head 48 — GOVERNMENT LABORATORY

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

Estimate 2005–06	\$234.7m
Establishment ceiling 2005–06 (notional annual mid-point salary value) representing an estimated 354 non-directorate posts as at 31 March 2005 and as at 31 March 2006	\$137.7m
In addition, there will be an estimated seven directorate posts as at 31 March 2005 and as at 31 March 2006.	
Commitment balance	\$6.4m

Controlling Officer's Report

Programmes

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

Detail

Programme (1): Statutory Testing

	2003–04 (Actual)	2004–05 (Original)	2004–05 (Revised)	2005–06 (Estimate)
Financial provision (\$m)	82.1	76.8	76.2 (–0.8%)	71.0 (–6.8%)
				(or –7.6% on 2004–05 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 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 and the verification of products and equipment for compliance with the Weights and Measures Ordinance. The Government Laboratory provides 24-hour on-call service to assist the Fire Services Department and Labour Department at scenes of accidents involving hazardous chemicals.

4 The Laboratory achieved all its performance targets in 2004. It continued to provide full support in the investigation of increased cases on adverse reaction or intoxication incidents related to Chinese medicines, such as the testing for the aristolochic acid and ephedrine alkaloids. In another area of health concern, the Laboratory provided full analytical support for the final phase enforcement of the Public Health (Animals and Birds) (Chemical Residues) Regulation and the Harmful Substances in Food (Amendment) Regulation. To address the widespread concerns on food safety, the Laboratory provided urgent analytical services on a number of ad-hoc issues and the subsequent monitoring programmes including pre-packaged foods, suspected colouring matters, etc. Starting from October 2004, the Laboratory provided additional analytical support to the Food and Environmental Hygiene Department on a stepped up food surveillance programme that would last for 18 months. During the year, the Laboratory conducted a large number of testing on counterfeit Chinese wine and fake goods including instant bird's nest under the Trade Descriptions Ordinance. Examination of festive toys for safety compliance had become a regular service of the Laboratory.

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Construction of the cleanroom was completed and the facility was put into operation in early 2004. It provided a clean environment for ultra-trace analysis and the preparation of samples for quality assurance purposes.

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

Targets

	Target	2003 (Actual)	2004 (Actual)	2005 (Plan)
<i>Testing of:</i>				
samples relating to food poisoning within one working day (%)#.....	100	100	100	100
food samples for regulatory compliance purposes within target reporting time averaging 19 working days (%)#.....	95	96	97	95
pharmaceuticals (quality control) within target reporting time averaging 14 working days (%)#.....	92	95	98	93
pharmaceuticals (registration) within target reporting time averaging 30 working days (%)#.....	90	93	90	90
Chinese medicines within target reporting time averaging 30 working days (%)#....	95	97	98	95
dangerous goods within target reporting time averaging 14 working days (%)#....	95Ω	98	96	95
dutiable and other commodities within target reporting time averaging ten working days (%)#.....	90	95	95	90
toys and children's products within target reporting time averaging 15 working days (%)#.....	95	97	98	95
consumer goods within target reporting time averaging 35 working days (%)#....	95	95	98	95

Different samples require different analytical procedures, thus different target reporting time applies. The quoted number of working days required represents an average of target reporting time for the different samples within the category.

Ω The target has been revised from 90% to 95% with effect from 2005.

Indicators

The key indicators for statutory testing are the numbers of tests performed on the various samples submitted.

	2003 (Actual)	2004 (Actual)	2005 (Estimate)
<i>Tests performed</i>			
food samples for regulatory compliance purposes.....	92 052	115 473	120 000
pharmaceuticals (quality control).....	23 520	23 471	23 000
pharmaceuticals (registration).....	16 609	18 361	16 000
Chinese medicines.....	58 268	65 748	51 000
dangerous goods.....	6 488	7 129	6 000
dutiable and other commodities.....	27 709	27 361	28 000
cigarette samples.....	12 000	11 976	12 000
toys and children's products.....	8 020	8 491	8 500
consumer goods.....	13 864	15 460	16 000

Matters Requiring Special Attention in 2005–06

6 During 2005–06, the Laboratory will continue to:

- participate in the development of the Hong Kong Chinese Materia Medica Standards;
- provide additional analytical support to the Food and Environmental Hygiene Department to further enhance food surveillance and facilitate the stepped up food surveillance programme, which would be completed by the end of March 2006;
- provide professional support to the legislative revision of the Toys and Children's Products Safety Ordinance; and
- develop testing methods to cater for the implementation of the Dangerous Goods (Amendment) Ordinance 2002.

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Programme (2): Advisory and Investigative Services

	2003-04 (Actual)	2004-05 (Original)	2004-05 (Revised)	2005-06 (Estimate)
Financial provision (\$m)	59.0	57.0	56.5 (-0.9%)	56.1 (-0.7%)
				(or -1.6% on 2004-05 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 also involve the Laboratory in on-site investigations. Analytical support is also 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, evaluation of workplace exposure of occupational hazards for the Labour Department, testing of government supplies for conformity to tender specifications and identifying products made from endangered species.

9 The Laboratory achieved all work targets set for 2004. 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 extend 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 spent oil samples and the "Unpolluted Water" study for the control of discharge of waste water under the Water Pollution Control Ordinance.

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

Targets

	Target	2003 (Actual)	2004 (Actual)	2005 (Plan)
<i>Testing of:</i>				
air monitoring samples within target reporting time averaging 20 working days (%)#.....	95	99	100	96
other field investigation samples within target reporting time averaging 12 working days (%)#.....	95	100	99	95
air samples for litigation purposes within target reporting time averaging 20 working days (%)#.....	97	100	100	97@
water monitoring samples within target reporting time averaging 20 working days (%)#.....	95	98	98	95
waste monitoring samples within target reporting time averaging 27 working days (%)#.....	95	98	99	95
waste samples for litigation purposes within target reporting time averaging 12 working days (%)#.....	95	98	100	97
radioactivity monitoring samples within target reporting time averaging 12 working days (%)#.....	95	99	99	95
pesticides formulation samples within target reporting time averaging 38 working days (%)#.....	90§	100	90	90
seepage and swimming pool water samples within target reporting time averaging ten working days (%)#.....	95	91	96	95
other samples within target reporting time averaging 25 working days (%)#.....	90	95	97	90

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- # Different samples require different analytical procedures, thus different target reporting time applies. The quoted number of working days required represents an average of target reporting time for the different samples within the category.
- @ The target reporting time has been revised from averaging 20 working days to averaging 18 working days with effect from 2005.
- § The target has been revised from 85% to 90% with effect from 2005.

Indicators

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

	2003 (Actual)	2004 (Actual)	2005 (Estimate)
<i>Tests performed</i>			
air monitoring samples.....	119 551	91 419	58 000
air samples for litigation purposes	663	592	600
field investigation samples.....	2 458	1 858	1 900
water samples.....	127 623	125 703	125 000
waste monitoring samples.....	23 334	20 327	23 000
waste samples for litigation purposes	555	580	550
pesticides formulation samples	920	418	500
seepage and swimming pool water samples.....	35 504	37 144	35 000
miscellaneous			
radioactivity monitoring samples.....	4 916	4 358	4 700
other samples	7 521	8 171	8 000

Matters Requiring Special Attention in 2005–06

11 During 2005–06, the Laboratory will:

- continue to develop sensitive and advanced analytical techniques to cater for the measurement of ultra-trace levels of environmental pollutants;
- continue to provide analytical services according to international protocols in support of the implementation of new fuel specifications as stipulated in Air Pollution Control (Motor Vehicle Fuel) Regulations;
- undertake preparative work for providing analytical services in the determination of volatile organic compound contents in specified products;
- continue to provide analytical support for preparing the HKSAR to participate in the National Marine Environmental Monitoring Network;
- strengthen the analytical and advisory services to the analysis of pesticides formulation; and
- provide analytical and advisory services to government departments in support of the implementation of the Chemical Weapons (Convention) Ordinance in Hong Kong.

Programme (3): Forensic Science Service

	2003–04 (Actual)	2004–05 (Original)	2004–05 (Revised)	2005–06 (Estimate)
Financial provision (\$m)	116.7	110.9	107.8 (–2.8%)	107.6 (–0.2%)
				(or –3.0% on 2004–05 Original)

Aim

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

Brief Description

13 The Laboratory provides comprehensive forensic science services to law enforcement departments, which include mainly the Hong Kong Police Force, the Customs & Excise Department, the Immigration Department and the Independent Commission Against Corruption. Additionally, urinalysis monitoring is conducted for the Department of Health (Methadone Maintenance Scheme), the Social Welfare Department, the Correctional Services Department and other organisations requiring this service.

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14 The services are grouped into two main work areas: a) criminalistics and quality management, and b) drugs, toxicology and documents. A 24-hour service is also provided for the scientific examination of crime scenes. It covers general crime scenes and scenes requiring specialist knowledge, such as fire investigation, traffic accident reconstruction, blood pattern analysis and illicit drug manufacturing.

15 The Laboratory's performance in many areas in 2004 improved over 2003. The application of the database of DNA profiles of persons convicted of serious crimes for investigating unsolved criminal cases has continued to produce rapid developments in the application of DNA analytical techniques and affected the performance in biochemical grouping. On areas where targets were not met owing to sustained demands in 2004, the Laboratory is striving to enhance efficiency to improve the situation.

16 The key performance measures in respect of the forensic science services are:

Targets

Targets are defined as the number of working days required to complete 80% of cases in each category to accommodate the wide variations experienced in forensic casework.

	Target Working Days Per Case	2003 (Actual)	2004 (Actual)	2005 (Plan)
biochemical grouping (DNA profiling).....	88	215	155	154
DNA database (DNA profiling).....	22	22	22	22
parentage testing (DNA profiling)#.....	22	25	26	22
trace evidence.....	66	90	71	75
accident reconstruction.....	66	89	103	80
routine illicit drug seizures.....	11	10	10	11
major drug seizures and manufacturing.....	44	50	48	44
analytical toxicology.....	33	37	47	33
drug urinalysis (methadone clinics).....	11	9	9	9
drug urinalysis (judicial-screening).....	11	10	12	11
drug urinalysis (judicial-confirmation).....	22	20	23	22
drink-driving.....	11	8	8	9
handwriting examination.....	66	77	79	78
counterfeiting/forgery.....	33	28	34	33
express counterfeiting/forgery service.....	1	1	1	1

"22 days" represents the time 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, urinalysis samples tested, statutory certificates or technical reports/witness statements issued and crime scenes attended.

	2003 (Actual)	2004 (Actual)	2005 (Estimate)
<i>Criminalistics and Quality Management Group</i>			
samples tested			
DNA database.....	3 506	5 407	5 800
cases investigated			
biochemical sciences.....	4 214	4 846	6 000
parentage testing.....	2 800	3 381	3 000
chemical sciences.....	900	953	1 000
physical sciences§.....	1 580	970	1 000
Total.....	9 494	10 150	11 000
<i>Drugs, Toxicology and Documents Group</i>			
cases investigated			
controlled drugs.....	7 600	7 773	8 400
analytical toxicology.....	2 952	2 812	3 000
drink-driving.....	171	140	160
questioned documents.....	2 640	2 712	2 800
Total.....	13 363	13 437	14 360
test conducted			
drug urinalysis (methadone clinics).....	21 331	18 944	20 000
drug urinalysis (judicial-screening).....	14 733	13 729	15 000
drug urinalysis (judicial-confirmation).....	65 366	68 081	70 000
Total.....	101 430	100 754	105 000

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	2003 (Actual)	2004 (Actual)	2005 (Estimate)
<i>Forensic Science Division</i>			
statutory certificates issued	7 904	7 998	8 500
technical reports/statements	19 613	19 084	22 000
crime scenes attended	702	628	650

§ The decrease in the number of cases investigated by the Physical Sciences Section was caused by further decrease in the submission of counterfeit HK\$10 coins.

Matters Requiring Special Attention in 2005–06

17 During 2005–06, the Laboratory will:

- make further efforts to enhance the efficiency in DNA profiling services in the detection and investigation of crime, management of the DNA database and genetic parentage testing;
- endeavour to improve the overall efficiency by refining methodology and administration; and
- organise the 17th Meeting of the International Association of Forensic Sciences.

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ANALYSIS OF FINANCIAL PROVISION

Programme	2003–04 (Actual) (\$m)	2004–05 (Original) (\$m)	2004–05 (Revised) (\$m)	2005–06 (Estimate) (\$m)
(1) Statutory Testing	82.1	76.8	76.2	71.0
(2) Advisory and Investigative Services	59.0	57.0	56.5	56.1
(3) Forensic Science Service.....	116.7	110.9	107.8	107.6
	257.8	244.7	240.5 (-1.7%)	234.7 (-2.4%)
				(or -4.1% on 2004–05 Original)

Analysis of Financial and Staffing Provision

Programme (1)

Provision for 2005–06 is \$5.2 million (6.8%) lower than the revised estimate for 2004–05. This is mainly due to the effect of the 2005 civil service pay cut, full-year effect of the deletion of six posts for efficiency savings, and reduced requirements for operating expenses and procurement of capital equipment.

Programme (2)

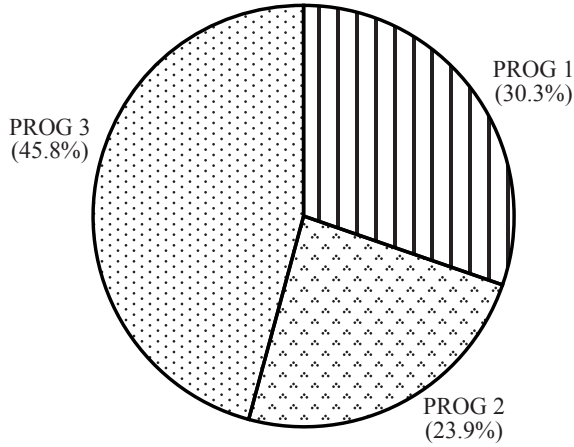
Provision for 2005–06 is \$0.4 million (0.7%) lower than the revised estimate for 2004–05. This is mainly due to the effect of the 2005 civil service pay cut, full-year effect of the deletion of three posts for efficiency savings and reduced requirement for operating expenses, partly offset by procurement of replacement capital equipment.

Programme (3)

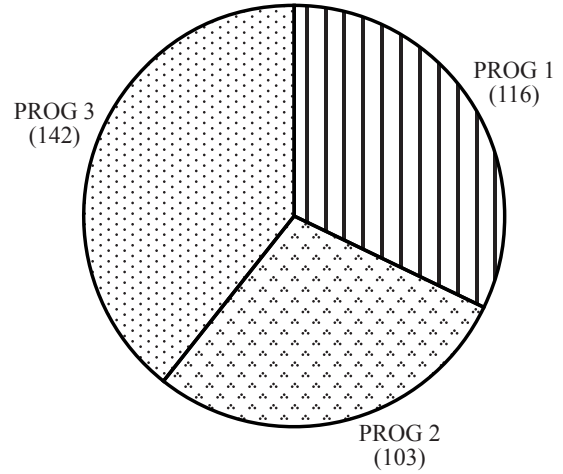
Provision for 2005–06 is \$0.2 million (0.2%) lower than the revised estimate for 2004–05. This is mainly due to the effect of the 2005 civil service pay cut, full-year effect of the deletion of 14 posts for efficiency savings and reduced requirement for operating expenses, partly offset by procurement of new capital equipment to strengthen the analytical capabilities of existing services.

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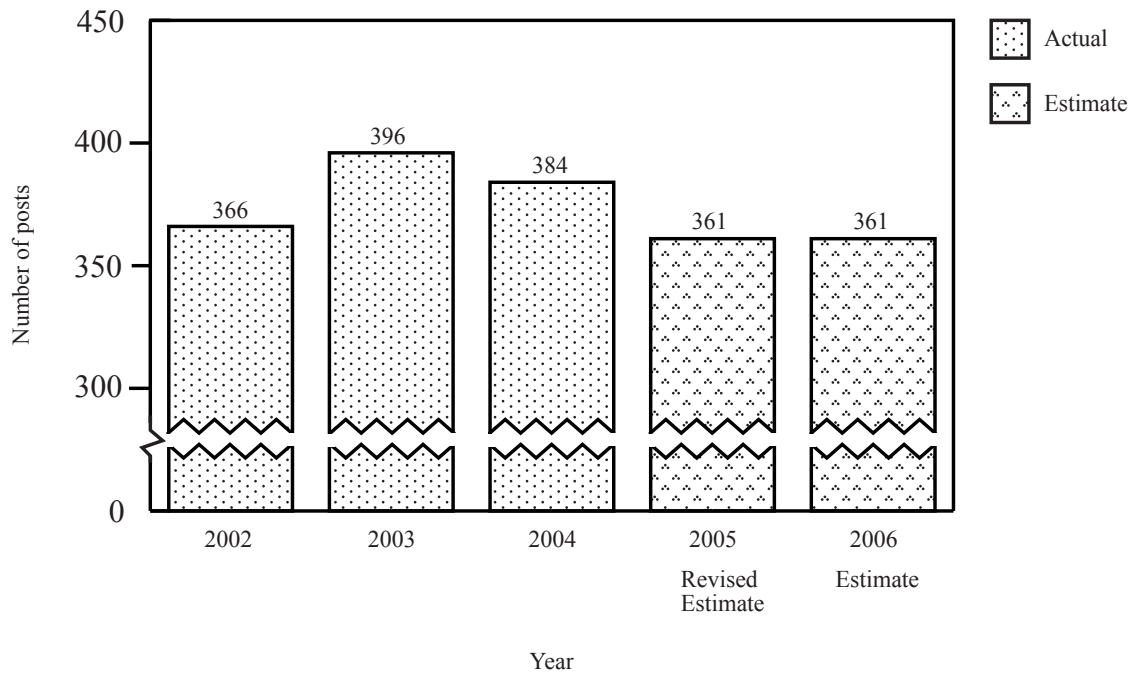
*Allocation of provision
to programmes
(2005-06)*



*Staff by programme
(as at 31 March 2006)*



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



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Sub-head (Code)	Actual expenditure 2003-04	Approved estimate 2004-05	Revised estimate 2004-05	Estimate 2005-06	
	\$'000	\$'000	\$'000	\$'000	
Operating Account					
Recurrent					
000	Operational expenses	239,331	231,288	229,521	218,615
	Total, Recurrent	239,331	231,288	229,521	218,615
	Total, Operating Account	239,331	231,288	229,521	218,615
Capital Account					
Plant, Equipment and Works					
603	Plant, vehicles and equipment	3,292	7,826	5,383	6,402
661	Minor plant, vehicles and equipment (block vote)	15,209	5,604	5,604	9,687
	Total, Plant, Equipment and Works	18,501	13,430	10,987	16,089
	Total, Capital Account	18,501	13,430	10,987	16,089
	 Total Expenditure	 257,832	 244,718	 240,508	 234,704

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Details of Expenditure by Subhead

The estimate of the amount required in 2005–06 for the salaries and expenses of the Government Laboratory is \$234,704,000. This represents a decrease of \$5,804,000 against the revised estimate for 2004–05 and of \$23,128,000 against actual expenditure in 2003–04.

Operating Account

Recurrent

2 Provision of \$218,615,000 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 2005 will be 361 permanent posts. No change in establishment is expected in 2005–06. Subject to certain conditions, the controlling officer may under delegated power create or delete non-directorate posts during 2005–06, but the notional annual mid-point salary value of all such posts must not exceed \$137,660,000.

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

	2003–04 (Actual) (\$'000)	2004–05 (Original) (\$'000)	2004–05 (Revised) (\$'000)	2005–06 (Estimate) (\$'000)
Personal Emoluments				
- Salaries	178,301	168,847	167,500	158,073
- Allowances	961	1,291	921	895
Personnel Related Expenses				
- Mandatory Provident Fund contribution	510	560	510	510
Departmental Expenses				
- General departmental expenses	59,559	60,590	60,590	59,137
	239,331	231,288	229,521	218,615

Capital Account

Plant, Equipment and Works

5 Provision of \$9,687,000 under *Subhead 661 Minor plant, vehicles and equipment (block vote)* represents an increase of \$4,083,000 (72.9%) over the revised estimate for 2004–05. This is mainly due to more new items required in 2005–06.

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Commitments

Sub-head (Code)	Item (Code)	Ambit	Approved commitment	Accumulated expenditure to 31.3.2004	Revised estimated expenditure for 2004–05	Balance
			\$'000	\$'000	\$'000	\$'000
Capital Account						
603		<i>Plant, vehicles and equipment</i>				
	323	Setting up a DNA database laboratory...	9,209	6,047	1,130	2,032
	327	Acquisition of equipment for DNA analysis on samples collected from crime scenes	2,500	2,028	102	370
	448	Acquisition of a liquid chromatograph - mass spectrometer	4,000	—	—	4,000
		Total	<u>15,709</u>	<u>8,075</u>	<u>1,232</u>	<u>6,402</u>