Head 48 — GOVERNMENT LABORATORY

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

Estimate 2003–04	**$269.9m**
Establishment ceiling 2003–04 (notional annual mid-point salary value) representing an estimated 389 non-directorate posts as at 31 March 2003 reducing by two posts to 387 posts as at 31 March 2004	**$163.6m**
In addition there will be an estimated seven directorate posts as at 31 March 2003 and as at 31 March 2004.	
Capital Account commitment balance	**$9.8m**

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

	2001–02 (Actual)	2002–03 (Approved)	2002–03 (Revised)	**2003–04 (Estimate)**
Financial provision ($m)	71.4	76.9 (+7.7%)	84.4 (+9.8%)	**88.1 (+4.4%)**

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 2002 except in the testing of pharmaceuticals for registration purposes. The nature of pharmaceuticals submitted for registration testing had changed to a higher level of complexity, thereby requiring substantial amounts of research and development work in conducting product analysis. Together with the introduction of the new testing scope on bacterial endotoxins to assess their compliance with relevant pharmacopoeia standards, only 85% of the pharmaceutical samples were reported on target instead of the pledged target of 90%. The situation should improve next year with the experience gained. In another area of public health protection, the Laboratory continued its participation in the development of the Hong Kong Chinese Materia Medica Standards for selected Chinese medicinal herbs. In the area of consumer protection, the Laboratory met the great demand for the analysis of facial cream arising from the enforcement action taken by the Customs and Excise Department against products containing elevated amounts of mercury. The Laboratory continued to provide urgent analytical services for the detection of beta-agonists in food and extend its scope of services to facilitate the routine monitoring of seven prohibited chemicals and ten agricultural and veterinary chemicals for the first phase enforcement of the Public Health (Animals and Birds) (Chemical Residues) Regulations and the Harmful Substances in Food (Amendment) Regulations.

In addition to the provision of analytical services for the detection of genetically modified soya and/or maize ingredients in food products, the Laboratory also engaged in scientific research to extend its analytical capabilities to include the determination of ultra-trace levels of the twelve persistent organic pollutants as defined under the Stockholm Convention of Persistent Organic Pollutants.

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

Targets

	Target	2001 (Actual)	2002 (Actual)	**2003 (Plan)**
Testing of:				
samples relating to food poisoning within 1 working day (%)#	100	100	100	**100**
food samples for regulatory compliance purposes within target reporting time averaging 19 working days (%)#	95	98	96	**95**
pharmaceuticals (quality control) within target reporting time averaging 14 working days (%)#	92	97	94	**92**
pharmaceuticals (registration) within target reporting time averaging 30 working days (%)#	90	92	85	**90**
Chinese medicines within target reporting time averaging 30 working days (%)#	95	98	98	**95**
dangerous goods within target reporting time averaging 14 working days (%)#	90	96	97	**90**
dutiable and other commodities within target reporting time averaging 10 working days (%)#	90	91	92	**90**
toys and children's products within target reporting time averaging 15 working days (%)#	95	99	97	**95**
consumer goods within target reporting time averaging 35 working days (%)#	95	95	93	**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.

Indicators

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

	2001 (Actual)	2002 (Actual)	**2003 (Estimate)**
tests performed			
food samples for regulatory compliance purposes	76 845	80 201	**82 000**
pharmaceuticals (quality control)	25 752	23 003	**22 000**
pharmaceuticals (registration)	18 823	16 564	**16 000**
Chinese medicines	25 022	41 481	**48 200**
dangerous goods	6 222	6 021	**6 000**
dutiable and other commodities	30 406	31 926	**28 000**
cigarette samples	13 524	11 718	**13 000**
toys and children's products	11 063	10 099	**8 500**
consumer goods	17 467	16 633	**18 000**

Matters Requiring Special Attention in 2003–04

6 During 2003–04, the Laboratory will:

- continue to participate in the development of the Hong Kong Chinese Materia Medica Standards;
- strengthen analytical support to the analysis of animal tissues, feeds and food for the presence of 27 agricultural and veterinary chemicals for the second and subsequent phases enforcement of the Public Health (Animals and Birds)(Chemical Residues) Regulations and the Harmful Substances in Food (Amendment) Regulations; and
- continue to develop testing methods to cater for the implementation of the Dangerous Goods (Amendment) Ordinance 2000.

Programme (2): Advisory and Investigative Services

	2001–02 (Actual)	2002–03 (Approved)	2002–03 (Revised)	**2003–04 (Estimate)**
Financial provision ($m)	64.3	66.6 (+3.6%)	64.1 (–3.8%)	**60.5 (–5.6%)**

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 2002. It continued to render analytical support and professional advice to the Government in improving the quality of the environment of Hong Kong as well as engaging 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 wastewater under the Water Pollution Control Ordinance.

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

Targets

	Target	2001 (Actual)	2002 (Actual)	**2003 (Plan)**
Testing of:				
air monitoring samples within target reporting time averaging 20 working days (%)#	95	100	100	**95**
other field investigation samples within target reporting time averaging 12 working days (%)#	95	100	100	**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	96	95	**95**
waste monitoring samples within target reporting time averaging 27 working days (%)#	95	98	96	**95**
waste samples for litigation purposes within target reporting time averaging 12 working days (%)#	95	99	97	**95**
radioactivity monitoring samples within target reporting time averaging 12 working days (%)#	95	97	99	**95**
pesticides formulation samples within target reporting time averaging 38 working days (%)#	85	—	80	**85**
seepage and swimming pool water samples within target reporting time averaging 10 working days (%)#	95	95	95	**95**
other samples within target reporting time averaging 25 working days (%)#	90	93	94	**90**

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.

Indicators

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

	2001 (Actual)	2002 (Actual)	**2003 (Estimate)**
tests performed			
air monitoring samples	134 963	125 279	**106 500**
air samples for litigation purposes	676	1 010	**600**
field investigation samples	5 406	4 856	**2 500**
water samples	126 110	130 215	**128 000**
waste monitoring samples	25 946	24 765	**25 000**
waste samples for litigation purposes	1 093	874	**1 200**
pesticides formulation samples	—	788	**1 000**
seepage and swimming pool water samples	21 885	25 984	**22 000**
miscellaneous			
radioactivity monitoring samples	4 733	4 363	**4 700**
other samples	16 195	11 035	**10 000**

Matters Requiring Special Attention in 2003–04

11 During 2003–04, 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;
- strengthen the analytical and advisory services to the analysis of pesticides formulation; and
- continue to provide analytical and advisory services to government departments in support of the implementation of the Chemical Weapons Convention in Hong Kong.

Programme (3): Forensic Science Service

	2001–02 (Actual)	2002–03 (Approved)	2002–03 (Revised)	**2003–04 (Estimate)**
Financial provision ($m)	106.3	120.0 (+12.9%)	112.9 (–5.9%)	**121.3 (+7.4%)**

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.

14 The services are grouped into two main work areas: i) criminalistics and quality management, and ii) 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 Although targets were not met in some work areas owing to sustained demands in 2002, the Laboratory's performance in many of these areas improved over 2001. The inauguration of the database of DNA profiles of persons convicted of serious crimes has produced rapid developments in the application of DNA analytical techniques and affected the performance in biochemical grouping. The Laboratory is addressing and containing these problems, and the overall performance is expected to improve further in 2003.

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 Wkg Days Per Case	2001 (Actual)	2002 (Actual)	**2003 (Plan)**
biochemical grouping (DNA profiling)	88	119	139	**95**
DNA database (DNA profiling).....	22	22	22	**22**
parentage testing (DNA profiling)#	22	22	21	**22**
trace evidence	66	115	112	**88**
accident reconstruction	66	75	90	**75**
routine illicit drug seizures.....	11	13	11	**11**
major drug seizures and manufacturing	44	77	58	**55**
analytical toxicology.....	33	47	41	**42**
drug urinalysis (methadone clinics)	11	11	11	**11**
drug urinalysis (judicial-screening).....	11	11	14	**11**
drug urinalysis (judicial-confirmation)	22	17	22	**20**
drink-driving.....	11	8	8	**8**
handwriting examination.....	66	109	86	**80**
counterfeiting/forgery	33	39	29	**30**
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.

	2001 (Actual)	2002 (Actual)	**2003 (Estimate)**
Criminalistics and Quality Management Group			
samples tested			
DNA database	792	3 543	**5 000**
cases investigated			
biochemical sciences	1 020	2 011	**2 750**
parentage testing.....	75	542	**3 000**
chemical sciences	2 208	1 708	**1 500**
physical sciences#	412	3 948	**2 800**
Total	3 715	8 209	**10 050**
Drugs, Toxicology and Documents Group			
cases investigated			
controlled drugs.....	10 477	8 806	**9 000**
analytical toxicology	2 998	3 008	**3 000**
drink-driving.....	157	167	**170**
questioned documents	2 824	2 799	**3 000**
Total	16 456	14 780	**15 170**
samples submitted (no. of tests)§			
drug urinalysis (methadone clinics).....	21 265	25 744	**26 000**
	(21 265)	(25 744)	**(26 000)**
drug urinalysis (judicial-screening)	11 256	6 216	**4 400**
	(33 524)	(21 926)	**(23 500)**
drug urinalysis (judicial-confirmation).....	18 998	22 584	**15 400**
	(48 810)	(60 350)	**(60 500)**
Total	51 519	54 544	**45 800**
	(103 599)	(108 020)	**(110 000)**
Forensic Science Division			
statutory certificates issued.....	10 788	9 149	**9 500**
technical reports/statements.....	10 847	17 301	**16 000**
crime scenes attended.....	783	815	**830**

Sharp increase in workload in physical sciences is due to re-alignment of work between the Chemical Sciences Section and the Physical Sciences Section.

§ Owing to changes in drug abuse trends, only one urine sample for urinalysis instead of two is now needed. The indicator for urinalysis services is more accurately represented by the number of tests instead of sample numbers.

Matters Requiring Special Attention in 2003–04

17 During 2003–04, the Laboratory will:

- maintain the efficiency in DNA profiling services in the detection and investigation of crime, management of the DNA databank and genetic parentage testing;
- maintain the efficiency in the examination of suspected forged identity cards and travel documents in express cases, and improve the turnover of non-express cases; and
- endeavour to improve efficiency by refining methodology and administration.

ANALYSIS OF FINANCIAL PROVISION

Programme	2001–02 (Actual) ($m)	2002–03 (Approved) ($m)	2002–03 (Revised) ($m)	**2003–04 (Estimate) ($m)**
(1) Statutory Testing	71.4	76.9	84.4	**88.1**
(2) Advisory and Investigative Services	64.3	66.6	64.1	**60.5**
(3) Forensic Science Service	106.3	120.0	112.9	**121.3**
	242.0	263.5 (+8.9%)	261.4 (–0.8%)	**269.9 (+3.3%)**

Analysis of Financial and Staffing Provision

Programme (1)

Provision for 2003–04 is $3.7 million (4.4%) higher than the revised estimate for 2002–03. This is mainly due to salary increments for staff and procurement of specialist stores and services to strengthen the analytical capabilities of existing services, partly offset by reduced requirement for procurement of capital equipment and deletion of one post for efficiency savings.

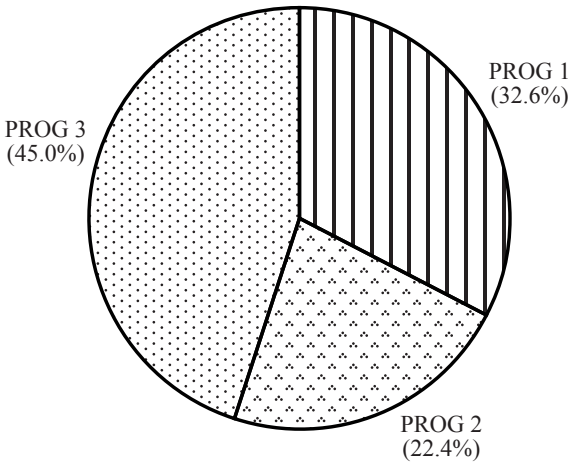
Programme (2)

Provision for 2003–04 is $3.6 million (5.6%) lower than the revised estimate for 2002–03. This is mainly due to reduced requirement for capital equipment and deletion of one post for efficiency savings, partly offset by salary increments for staff and the creation of two posts for improving the control of pesticides formulation.

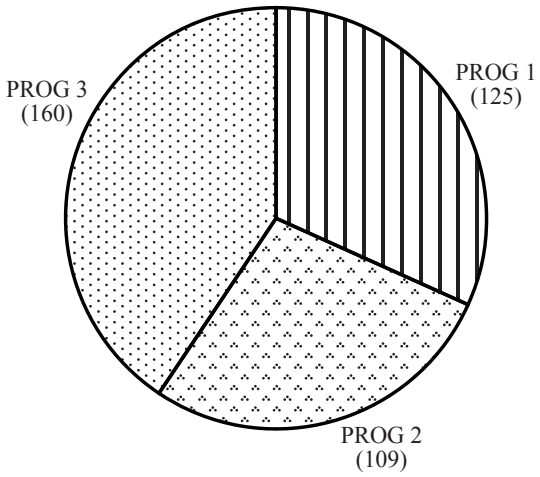
Programme (3)

Provision for 2003–04 is $8.4 million (7.4%) higher than the revised estimate for 2002–03. This is mainly due to salary increments for staff and procurement of specialist stores and services to strengthen the analytical capabilities of existing services, partly offset by deletion of two posts for efficiency savings.

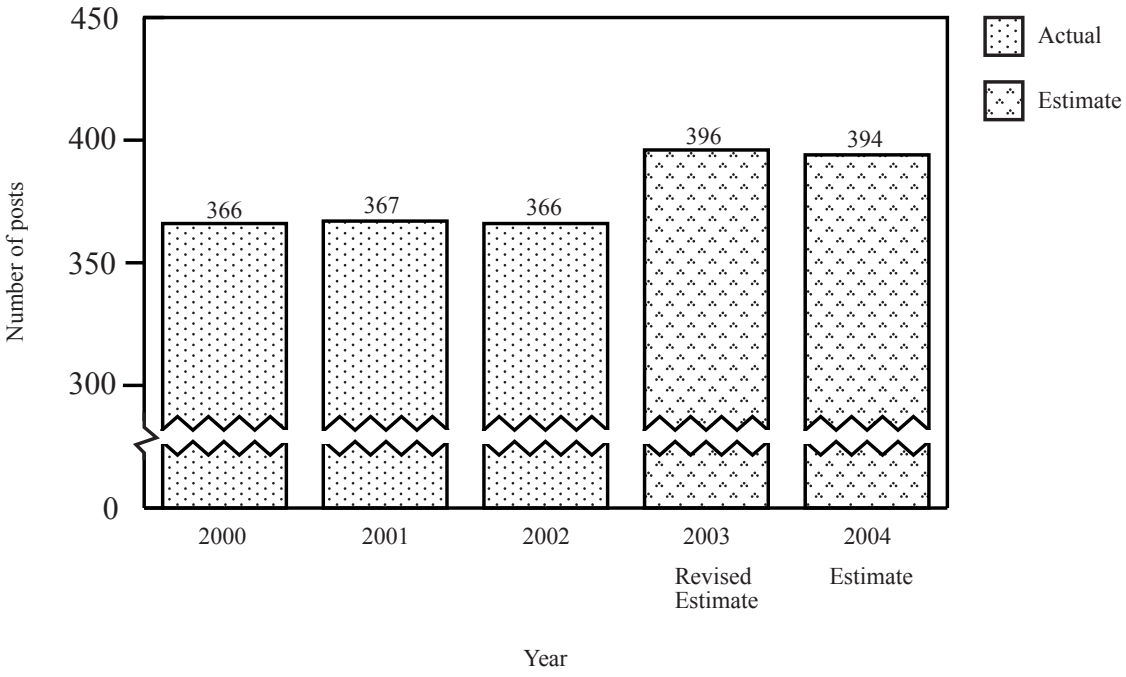
Allocation of provision to programmes (2003-04)



Staff by programme (as at 31 March 2004)



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



Head 48 — GOVERNMENT LABORATORY

Sub-head (Code)		Actual expenditure 2001–02	Approved estimate 2002–03	Revised estimate 2002–03	**Estimate 2003–04**
		$'000	$'000	$'000	**$'000**
	Recurrent Account				
000	Operational expenses	—	—	—	**244,706**
	Salaries	173,261	187,802	179,833	**—**
	Allowances	1,582	1,611	1,611	**—**
	Job-related allowances	163	171	156	**—**
	General departmental expenses	44,307	51,922	49,500	**—**
	Total, Recurrent Account	219,313	241,506	231,100	**244,706**
	Capital Account				
	I — Plant, Equipment and Works				
603	Plant, vehicles and equipment	7,753	6,442	14,695	**9,770**
661	Minor plant, vehicles and equipment (block vote)	14,967	15,600	15,600	**15,404**
	Total, Plant, Equipment and Works	22,720	22,042	30,295	**25,174**
	Total, Capital Account	22,720	22,042	30,295	**25,174**
	Total Expenditure	242,033	263,548	261,395	**269,880**

Details of Expenditure by Subhead

The estimate of the amount required in 2003–04 for the salaries and expenses of the Government Laboratory is $269,880,000. This represents an increase of $8,485,000 over the revised estimate for 2002–03 and of $27,847,000 over actual expenditure in 2001–02.

Recurrent Account

2 Provision of $244,706,000 under *Subhead 000 Operational expenses* is for the salaries and allowances of staff of the Government Laboratory and its other operating expenses. The increase of $13,606,000 (5.9%) over the revised estimate for 2002–03 is mainly due to salary increments for staff, provisions for improving the control of pesticides formulation and procurement of specialist stores and services to strengthen the analytical capabilities of existing services.

3 The establishment as at 31 March 2003 will be 396 permanent posts. It is expected that a net two non-directorate posts will be deleted in 2003–04. Subject to certain conditions, the controlling officer may under delegated powers create or delete non-directorate posts during 2003–04, but the notional annual mid-point salary value of all such posts must not exceed $163,644,000, which will be reduced to $162,066,000 by the end of 2003–04, upon the net deletion of two non-directorate posts.

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

	2001–02 (Actual) ($'000)	2002–03 (Original Estimate) ($'000)	2002–03 (Revised Estimate) ($'000)	**2003–04 (Estimate) ($'000)**
Personal Emoluments				
- Salaries	173,261	187,802	179,833	**182,150**
- Allowances	1,582	1,611	1,611	**1,740**
- Job-related allowances	163	171	156	**101**
Personnel Related Expenses				
- Mandatory Provident Fund contribution	—	—	—	**434**
Departmental Expenses				
- General departmental expenses	44,307	51,922	49,500	**60,281**
	219,313	241,506	231,100	**244,706**

Capital Account

Commitments

Sub-head (Code)	Item (Code)	Ambit	Approved commitment	Accumulated expenditure to 31.3.2002	Revised estimated expenditure for 2002–03	Balance
			$'000	$'000	$'000	$'000
603		*Plant, vehicles and equipment*				
	323	Setting up a DNA database laboratory ...	9,209	2,752	1,654	4,803
	326	Acquisition of an integrated liquid chromatograph-tandem mass spectrometer with automated sample preparation system	4,200	—	—	4,200
	327	Acquisition of equipment for DNA analysis on samples collected from crime scenes	2,500	—	1,733	767
		Total	15,909	2,752	3,387	9,770