

## Head 48 — GOVERNMENT LABORATORY

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

**Estimate 2022–23** ..... **\$579.2m**

**Establishment ceiling 2022–23** (notional annual mid-point salary value) representing an estimated 504 non-directorate posts as at 31 March 2022 rising by four posts to 508 posts as at 31 March 2023 ..... **\$330.6m**

In addition, there will be an estimated seven directorate posts as at 31 March 2022 and as at 31 March 2023.

### Controlling Officer's Report

#### Programmes

- |  |  |
|--|--|
| <b>Programme (1) Statutory Testing</b>                   | 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).  |
| <b>Programme (2) Advisory and Investigative Services</b> | 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). |
| <b>Programme (3) Forensic Science Services</b>           | This programme contributes to Policy Area 9: Internal Security (Secretary for Security).   |

#### Detail

##### Programme (1): Statutory Testing

	2020–21 (Actual)	2021–22 (Original)	2021–22 (Revised)	<b>2022–23 (Estimate)</b>
Financial provision (\$m)	275.8	279.8	278.3 (–0.5%)	<b>262.7</b> (–5.6%)
				(or –6.1% on 2021–22 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.

## Head 48 — GOVERNMENT LABORATORY

4 In 2021–22, 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. In addition, the Laboratory continued to provide analytical and advisory support to the Department of Health in the development of Hong Kong Chinese Materia Medica Standards. The Laboratory will continue to provide metrology-in-chemistry support for the development of testing and certification industry in Hong Kong, for example, arrangement of proficiency tests for local laboratories and provision of reference materials.

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

### *Targets#*

	Target	2020 (Actual)	2021 (Actual)	2022 (Plan)
<i>Testing of:</i>				
food complaint cases within 25 working days (%).....	90§	96	98	<b>90</b>
urgent samples relating to food incidents within two working days (%) .....	100	100	100	<b>100</b>
other food samples within reporting time averaging 19 working days (%).....	95	99	99	<b>95</b>
urgent samples relating to pharmaceutical incidents within two working days (%).....	95	100	100	<b>95</b>
other pharmaceutical samples within reporting time averaging 25 working days (%).....	95	98	99	<b>95</b>
urgent samples relating to Chinese medicine incidents within two working days (%).....	95	100	100	<b>95</b>
other Chinese medicine samples within reporting time averaging 30 working days (%).....	95	99	99	<b>95</b>
dangerous goods within reporting time averaging 14 working days (%).....	96	99	100	<b>96</b>
dutiable and other commodities within reporting time averaging ten working days (%).....	95	99	100	<b>95</b>
toys and children's products within reporting time averaging 15 working days (%).....	95	99	99	<b>95</b>
consumer goods within reporting time averaging 35 working days (%).....	95	98	100	<b>95</b>
non-pharmaceutical consumer goods (trade descriptions) within reporting time averaging 35 working days (%).....	92	97	98	<b>92</b>

# For targets where reporting time is mentioned, 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.

§ The target is revised from 88 per cent to 90 per cent as from 2022.

### *Indicators*

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

	2020 (Actual)	2021 (Actual)	2022 (Estimate)
<i>Tests performed</i>			
food complaint samples .....	4 523	5 727	<b>10 000</b>
urgent samples relating to food incidents .....	46	186	<b>N.A.‡</b>

## Head 48 — GOVERNMENT LABORATORY

	2020 (Actual)	2021 (Actual)	2022 (Estimate)
other food samples .....	197 193	196 941	<b>190 000</b>
urgent samples relating to pharmaceutical incidents .....	156	94	<b>N.A.‡</b>
other pharmaceutical samples .....	51 467	52 245	<b>51 000</b>
urgent samples relating to Chinese medicine incidents ..	981	1 188	<b>N.A.‡</b>
other Chinese medicine samples .....	80 415	80 688	<b>80 000</b>
dangerous goods.....	6 050	5 154	<b>5 000</b>
dutiable and other commodities .....	6 688	8 137	<b>6 000</b>
non-pharmaceutical consumer goods (trade descriptions) .....	5 722	4 709	<b>5 000</b>
cigarette samples .....	13 860	13 488	<b>13 000</b>
toys and children's products .....	21 465	21 929	<b>21 500</b>
consumer goods.....	12 150	12 600	<b>12 000</b>

‡ As the testing requirements for urgent samples relating to food, pharmaceuticals and Chinese medicine incidents respectively fluctuated in previous years, it is difficult to estimate the occurrence of the type of incidents or the number of tests required.

### *Matters Requiring Special Attention in 2022–23*

- 6 During 2022–23, the Laboratory will continue to provide:
- professional advisory and analytical services to support the enforcement of various food safety ordinances and regulations. The services will cover analysis on different food samples on both routine and ad hoc bases;
  - analytical and advisory support to the Department of Health for the formulation and development of Hong Kong Chinese Materia Medica Standards for Chinese herbal medicines commonly used in Hong Kong; and
  - 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**

	2020–21 (Actual)	2021–22 (Original)	2021–22 (Revised)	2022–23 (Estimate)
Financial provision (\$m)	93.6	93.3	93.2 (–0.1%)	<b>101.1</b> (+8.5%)
				(or +8.4% on 2021–22 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 hazardous chemical substances into the environment involve the Laboratory in on-site investigations and advisory services. 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, the analysis of samples related to evaluation of exposure to occupational hazards for the Labour Department, the testing of government supplies for conformity to tender specifications and the identification of products made from endangered species.

## Head 48 — GOVERNMENT LABORATORY

9 In 2021–22, 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, fountain solutions and printing machine cleaning agents, 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 2021, the Laboratory also provided over 300 pieces of professional advice relating to over 1 130 items for the classification under the Dangerous Goods Ordinance and over 600 pieces of advice relating to over 690 items supporting the implementation of the Chemical Weapons (Convention) Ordinance (Cap. 578) and the control of strategic commodities.

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

### *Targets#*

	Target	2020 (Actual)	2021 (Actual)	2022 (Plan)
<i>Testing of:</i>				
air pollution monitoring samples within reporting time averaging 20 working days (%).....	95	97	100	<b>95</b>
field investigation (air pollution) samples within reporting time averaging 12 working days (%).....	96	100	100	<b>96</b>
air pollution samples for litigation purposes within reporting time averaging 18 working days (%).....	97	100	100	<b>97</b>
water quality monitoring samples within reporting time averaging 20 working days (%).....	96	98	99	<b>96</b>
environmental waste monitoring samples within reporting time averaging 27 working days (%).....	95	97	99	<b>95</b>
environmental waste samples for litigation purposes within reporting time averaging 12 working days (%).....	97	100	100	<b>97</b>
radioactivity monitoring samples within reporting time averaging 12 working days (%).....	95	99	99	<b>95</b>
pesticides formulation samples within reporting time averaging 36 working days (%).....	93	100	100	<b>93</b>
seepage and swimming pool water samples within ten working days (%).....	96	100	100	<b>96</b>
other samples within reporting time averaging 25 working days (%).....	90	100	99	<b>90</b>

# For targets where reporting time is mentioned, 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.

	2020 (Actual)	2021 (Actual)	2022 (Estimate)
<i>Tests performed</i>			
air pollution monitoring samples .....	60 406	61 818	<b>63 000</b>
air pollution samples for litigation purposes.....	2 170	2 602	<b>3 400</b>
field investigation (air pollution) samples .....	429	460	<b>440</b>
water quality monitoring samples .....	99 055	106 221	<b>126 000</b>

## Head 48 — GOVERNMENT LABORATORY

	2020 (Actual)	2021 (Actual)	2022 (Estimate)
environmental waste monitoring samples .....	11 213	12 243	<b>11 000</b>
environmental waste samples for litigation purposes .....	122	351	<b>320</b>
pesticides formulation samples .....	330	300	<b>310</b>
seepage and swimming pool water samples .....	44 665	59 814	<b>40 000</b>
miscellaneous			
radioactivity monitoring samples .....	4 930	5 060	<b>4 700</b>
other samples .....	8 667	9 897	<b>12 900</b>

### *Matters Requiring Special Attention in 2022–23*

**11** During 2022–23, the Laboratory will continue to provide:

- analytical services in support of the implementation of the Air Pollution Control (Fuel for Vessels) Regulation (Cap. 311AB); and
- 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**

	2020–21 (Actual)	2021–22 (Original)	2021–22 (Revised)	2022–23 (Estimate)
Financial provision (\$m)	193.1	199.9	199.7 (–0.1%)	<b>215.4</b> (+7.9%)
				(or +7.8% on 2021–22 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	2020 (Actual)	2021 (Actual)	2022 (Plan)
<i>Cases for:</i>				
biochemical grouping (DNA profiling) - non-complicated cases completed within 60 working days (%) .....	90	83	91	<b>90</b>
complicated cases completed within 130 working days (%) .....	90	76	80	<b>90</b>
DNA database (DNA profiling) completed within 22 working days (%) .....	90	58	81	<b>90</b>
parentage testing (DNA profiling) completed within 22 working days (%)Δ .....	90	82	100	<b>90</b>

## Head 48 — GOVERNMENT LABORATORY

	Target	2020 (Actual)	2021 (Actual)	2022 (Plan)
trace evidence completed within 66 working days (%)Ψ.....	90	84	87	90
accident reconstruction completed within 66 working days (%)Ψ.....	90	78	77	90
video/image analysis completed within 88 working days (%)Ω.....	90	N.A.	58	90
illicit drug seizures completed within 11 working days (%).....	90	81	88	90
major illicit drug seizures and manufacturing completed within 44 working days (%).....	90	74	64	90
other illegal drug activities completed within 120 working days (%).....	90	84	75	90
analytical toxicology completed within 33 working days (%).....	85	89	87	85
drug urinalysis - methadone clinics completed within 11 working days (%).....	90	92	91	90
judicial-confirmation (routine) completed within 22 working days (%).....	85	83	90	85
judicial-confirmation (enhanced probation) completed within six working days (%).....	100	99	100	100
drug-driving completed within 33 working days (%).....	85	96	98	85
drink-driving completed within 11 working days (%).....	90	96	98	90
handwriting examination completed within 66 working days (%).....	85	92	91	85
counterfeiting/forgery completed within 30 working days (%).....	90	94	95	90
express counterfeiting/forgery service completed within one working day (%).....	99	100	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.

Ψ The performance has been affected by the growing demand on video/image analysis, a category of work that the Laboratory introduced since 2019.

Ω New target as from 2021.

### *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.

	2020 (Actual)	2021 (Actual)	2022 (Estimate)
<i>Criminalistics and Quality Management Group</i>			
cases investigated			
DNA database .....	2 055	3 290	3 000
biochemical sciences -			
non-complicated.....	816	936	1 000
complicated .....	1 215	1 219	1 300
parentage testing .....	833	685	800
chemical sciences.....	687	675	700
physical sciences.....	725	755	800

**Head 48 — GOVERNMENT LABORATORY**

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	2020 (Actual)	2021 (Actual)	2022 (Estimate)
<i>Drugs, Toxicology and Documents Group</i>			
cases investigated			
controlled drugs.....	3 815	5 167	<b>5 200</b>
analytical toxicology .....	2 275	2 325	<b>2 400</b>
drug urinalysis -			
methadone clinics.....	4 934	4 243	<b>4 100</b>
judicial-confirmation (routine).....	10 934	13 212	<b>13 000</b>
judicial-confirmation (enhanced probation).....	749	1 448	<b>1 400</b>
drug-driving .....	25	110	<b>100</b>
drink-driving .....	51	58	<b>50</b>
questioned documents .....	274	246	<b>250</b>
<i>Forensic Science Division</i>			
statutory certificates issued .....	3 998	5 492	<b>5 550</b>
technical reports/statements .....	10 327	11 494	<b>12 000</b>
crime scenes attended.....	320	439	<b>420</b>

***Matters Requiring Special Attention in 2022–23***

**16** During 2022–23, the Laboratory will continue to provide impartial forensic science support to government departments to combat crime and drug abuse.

## Head 48 — GOVERNMENT LABORATORY

### ANALYSIS OF FINANCIAL PROVISION

	2020–21 (Actual) (\$m)	2021–22 (Original) (\$m)	2021–22 (Revised) (\$m)	2022–23 (Estimate) (\$m)
<b>Programme</b>				
(1) Statutory Testing .....	275.8	279.8	278.3	<b>262.7</b>
(2) Advisory and Investigative Services .....	93.6	93.3	93.2	<b>101.1</b>
(3) Forensic Science Services .....	193.1	199.9	199.7	<b>215.4</b>
	562.5	573.0	571.2 (–0.3%)	<b>579.2</b> <b>(+1.4%)</b>
				<b>(or +1.1% on 2021–22 Original)</b>

#### Analysis of Financial and Staffing Provision

##### Programme (1)

Provision for 2022–23 is \$15.6 million (5.6%) lower than the revised estimate for 2021–22. This is mainly due to reduced requirement for procurement of equipment and specialist supplies.

##### Programme (2)

Provision for 2022–23 is \$7.9 million (8.5%) higher than the revised estimate for 2021–22. This is mainly due to increased requirement for procurement of equipment and specialist supplies.

##### Programme (3)

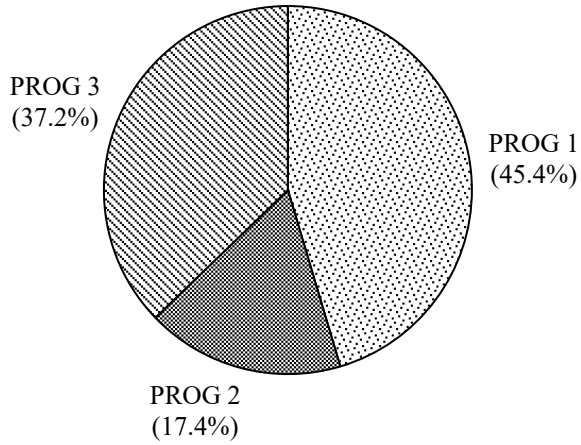
Provision for 2022–23 is \$15.7 million (7.9%) higher than the revised estimate for 2021–22. This is mainly due to increased requirement for procurement of equipment and specialist supplies, and other operating expenses. There will be an increase of four posts.



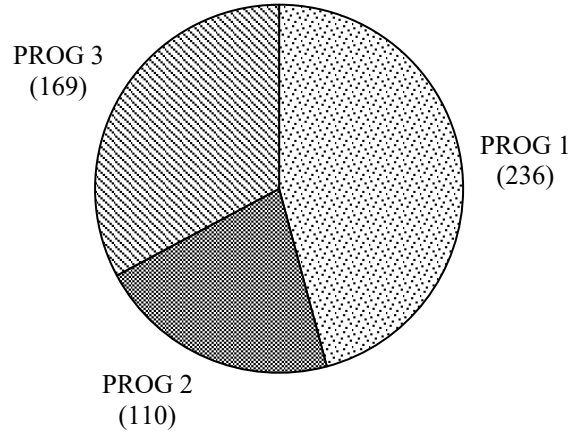
**Head 48 — GOVERNMENT LABORATORY**

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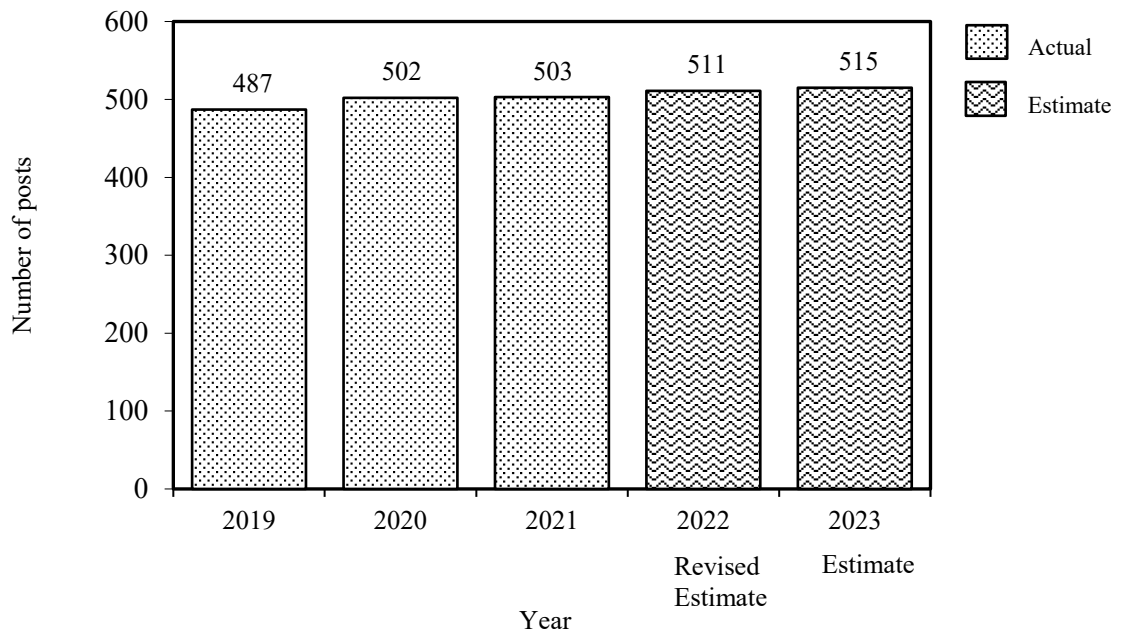
*Allocation of provision  
to programmes  
(2022-23)*



*Staff by programme  
(as at 31 March 2023)*



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



**Head 48 — GOVERNMENT LABORATORY**

Sub-head (Code)	Actual expenditure 2020-21	Approved estimate 2021-22	Revised estimate 2021-22	Estimate 2022-23	
	\$'000	\$'000	\$'000	\$'000	
<b>Operating Account</b>					
Recurrent					
000	Operational expenses .....	501,471	516,836	515,049	<b>516,582</b>
	Total, Recurrent.....	501,471	516,836	515,049	<b>516,582</b>
	Total, Operating Account .....	501,471	516,836	515,049	<b>516,582</b>
<b>Capital Account</b>					
Plant, Equipment and Works					
661	Minor plant, vehicles and equipment (block vote).....	61,003	56,199	56,199	<b>62,618</b>
	Total, Plant, Equipment and Works.....	61,003	56,199	56,199	<b>62,618</b>
	Total, Capital Account.....	61,003	56,199	56,199	<b>62,618</b>
	Total Expenditure .....	562,474	573,035	571,248	<b>579,200</b>

## Head 48 — GOVERNMENT LABORATORY

### Details of Expenditure by Subhead

The estimate of the amount required in 2022–23 for the salaries and expenses of the Government Laboratory is \$579,200,000. This represents an increase of \$7,952,000 over the revised estimate for 2021–22 and \$16,726,000 over the actual expenditure in 2020–21.

#### *Operating Account*

##### Recurrent

**2** Provision of \$516,582,000 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 2022 will be 511 posts. It is expected that there will be an increase of four posts in 2022–23. Subject to certain conditions, the controlling officer may under delegated power create or delete non-directorate posts during 2022–23, but the notional annual mid-point salary value of all such posts must not exceed \$330,641,000.

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

	2020–21 (Actual) (\$'000)	2021–22 (Original) (\$'000)	2021–22 (Revised) (\$'000)	2022–23 (Estimate) (\$'000)
Personal Emoluments				
- Salaries.....	357,178	370,216	369,219	<b>369,056</b>
- Allowances.....	1,357	2,160	2,160	<b>2,160</b>
Personnel Related Expenses				
- Mandatory Provident Fund contribution.....	768	1,154	1,122	<b>1,175</b>
- Civil Service Provident Fund contribution.....	25,194	27,859	27,101	<b>29,489</b>
Departmental Expenses				
- General departmental expenses .....	116,974	115,447	115,447	<b>114,702</b>
	501,471	516,836	515,049	<b>516,582</b>

#### *Capital Account*

##### Plant, Equipment and works

**5** Provision of \$62,618,000 under *Subhead 661 Minor plant, vehicles and equipment (block vote)* represents an increase of \$6,419,000 (11.4%) over the revised estimate for 2021–22. This is mainly due to increased requirement for procurement and replacement of minor plant and equipment in 2022–23.