

ITEM FOR ESTABLISHMENT SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 48 - GOVERNMENT LABORATORY Subhead 001 Salaries

Members are invited to recommend to Finance Committee the creation of the following permanent directorate post in the Government Laboratory to head the Drugs and Toxicology Group of the Forensic Science Division -

1 Chief Chemist
(D1) (\$98,250 - \$104,250)

PROBLEM

The Government Chemist (GC) needs dedicated input at the directorate level for the operational leadership, supervision, planning and co-ordination of the Drugs and Toxicology Group (D&TG) of the Forensic Science Division (FSD).

PROPOSAL

2. We propose to create one permanent post of Chief Chemist (CC) (D1) to head the D&TG¹ of the FSD.

/JUSTIFICATION

¹ The D&TG consists of five specialist sections, namely, Controlled Drugs A, B & C (CDS) and Forensic Toxicology A & B (FTS). The major functions of the Group are to perform statutory analysis of dangerous and other controlled drugs seized by law enforcement agencies, toxicological analyses on materials submitted by the police, forensic pathologist and the Hospital Authority for reporting to the Coroner, urinalysis services on samples submitted under the methadone maintenance scheme from Correctional Services Department and Social Welfare Department (young offenders) and the statutory analysis of samples submitted for suspected drink-driving offences.

JUSTIFICATION

3. The FSD of the Government Laboratory (GL) is headed by the Assistant Government Chemist/Forensic Science (AGC/FS) (D2). It comprises two distinct groups of services, namely, the D&TG and the Physical and Biochemical Evidence Group (P&BEG)². At present, the D&TG is under the direct supervision of AGC/FS while one of the Senior Chemists (SC) there is designated as SC in-charge (i/c), assisting him in overseeing the daily operation of the Group in addition to his own role as a section head. The P&BEG is supervised by a CC underpinning the AGC/FS. The current organisation chart of the FSD and job description of AGC/FS are at Enclosures 1 and 2 respectively.

4. Over the past few years, the increase in activity and complexity of work has resulted in considerable pressure on the FSD. The scope of responsibility of the AGC/FS with respect to policy formulation, administration and management of the Division has been broadened, making direct supervision of the D&TG an increasingly difficult task for him to undertake effectively. At the same time, the continued reliance on the SC i/c is increasingly unacceptable, given the enhanced responsibilities of the Group SC and expanded duties required. There is a strong need to strengthen directorate support for the AGC/FS in order to cope with the present and future work environment, details of which are explained below.

Accreditation and technical checking

5. In 1996, the FSD was granted accreditation from the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB) which undertakes laboratory accreditation inspections involving all aspects of operation. Laboratory accreditation is an essential part of modern science and an important measure of the laboratory's standards and international standing. To comply with ASCLD/LAB's rules and protocols, GL must put in place a system whereby casework has to go through two levels of checking before leaving the laboratory. The first level is technical checking which involves a detailed review of the entire file for technical accuracy and content. The second level is administrative checking which aims to review the professional assessments and decisions such as accuracy of result, complications that might have affected the result, and in more complex cases, the need for further investigations to improve work quality before endorsing the reports for issuance to clients.

/6.

² The P&BEG likewise consists of five specialist sections namely, Biochemical Sciences A & B, Chemical Sciences, Physical Sciences and Questioned Documents. These sections provide presumptive, opinion-based evidence on DNA profiling, contact traces such as fibres, paint, plastic, etc., fire investigation, road traffic accident reconstruction, explosives and explosion, handwriting and various counterfeits and forgeries. Also attached to the P&BEG is the Scene of Crime Unit which attends crime scenes round the clock.

6. Normally the SCs carry out technical checking of casework completed by the Chemists, and then the SC i/c in D&TG and CC in P&BEG conduct administrative checking. For complicated casework, technical checking is carried out by the SC i/c in D&TG and the CC in P&BEG, while AGC/FS conducts the administrative checking. In the D&TG, the current arrangement is not entirely satisfactory as administrative checking should be carried out by an experienced and knowledgeable specialist with the expertise and authority beyond that of the senior professional level. Besides, since the SC i/c cannot administratively check the work of his own section which he has already technically checked as a section head, and owing to the high volume of such work, some of the administrative checking is passed to the other SCs in the group. This consequently impinges on their time. On the other hand, it would not be feasible for the AGC/FS to carry out all administrative checking as this would adversely affect his other work.

Encl. 3

7. The checking system has created a bottleneck in the D&TG at the SC and in particular the SC i/c levels, resulting in difficulties in meeting some performance targets in recent years (please refer to Enclosure 3).

Increased demand for interpretative presentation

8. The client departments of the D&TG, including the Judiciary, are now demanding services beyond the analytical level and have become increasingly reliant on interpretation of findings and inferences derived thereupon. In the CDS, professional staff are required to give interpretative presentations in courts on the effects, mode of consumption, and both normal and fatal dosage of illicit drugs, while in FTS, the professionals have to provide interpretation of drug effects and the toxic and fatal levels in relation to findings. Since 1998, officers of the D&TG have started to include interpretation of findings in their analytical reports in order to meet the needs of their clients.

9. To give full and updated expert opinions, the chemists cannot simply rely on their analytical results but have to adopt a multi-disciplinary approach in collaboration with other professionals such as medical doctors, pharmacologists and personnel from drug rehabilitation centres. It is necessary to vet, verify and interpret findings and decide on the need to conduct further investigations. For complicated issues, close liaison and research with counterparts locally or overseas is required. Given the serious legal consequences which might result from incorrect interpretations, a CC, with the required professional achievement and the vested authority, is needed to supervise and coordinate these activities to cope with the increased demand for interpretative evidence.

/Increased

Increased scope and complexity of work

10. The scope of work of the D&TG has continued to expand over the years. Periodic revisions of the Dangerous Drugs Ordinance and the Pharmacy and Poisons Ordinance since 1994 have resulted in the addition of more controlled drugs to the lists. Since the enactment of the legislation on drink driving in 1995, the FTS has to perform analyses of samples to support law enforcement and conduct research on alcohol pharmacokinetics of local people. Following the enactment of the Control of Chemicals Ordinance in 1996, the CDS has to perform analyses of and give advice on precursor chemicals used in the manufacture of controlled and dangerous drugs. Moreover, the emergence of new drugs and poisons in the fields of controlled drugs and toxicology has exerted great pressure on the D&TG. It is increasingly important to have a CC, with the required professionalism, to coordinate research and development of new analytical methods employing more sophisticated instruments, design operational strategies and monitor their implementation within the group.

11. The necessity for cross-section monitoring has also increased significantly with the emergence of new designer drugs in recent years. The prompt detection of new drug trend would be important to assist policy bureaux and law enforcement departments. With his present split duties as a group head and a section head, the SC i/c is unable to get adequately involved in timely evaluation of statistical figures and results to identify such trends. The absence of a dedicated and experienced group head at CC level is therefore hindering further enhancement of the quality of service to clients to meet new challenges.

International liaison and consultation

12. The GL participates actively in the United Nations Drugs Control Programme (UNDCP). It is a centre for training advanced UN fellows on drug analysis and a validating laboratory under the UNDCP proficiency test programme for the analysis of controlled drugs and drugs of abuse in biological samples. The analytical results produced by the GL are used as a reference standard for vetting results from other laboratories. In addition, the GL has recently been nominated as a reference centre in the Asia Pacific Region, and is responsible for collating information, solving technical problems and coordinating efforts in the control of drug abuse. This necessitates frequent liaison, discussion and cooperation with drug analysts and laboratory administrators from countries all over the world, particularly from the Asia Pacific Region. At present, the AGC/FS is playing a key role in these activities. The proposed CC of the D&TG will be able to provide him with the necessary support and share out the increased work on this front.

/Computerization

Computerization and efficiency measures

13. To improve efficiency, a feasibility study on computerisation in FSD will be carried out later this year to facilitate casework reporting, data management and auditing, case cross-referencing, workflow monitoring and statistics compilation. In the long run, the system can enable a secure interactive two-way exchange of data and casework information between the Division and its clients. The proposed CC will be instrumental in providing input in the feasibility study and development stages of the system from the D&TG angle, while the AGC/FS will coordinate overall system integration.

Broadened scope of the AGC/FS post

14. While recent changes in the D&TG have resulted in increased responsibilities at senior management level, interpretative complexity and a broader range of consultative and advisory duties also call for the presence of a group head in D&TG equivalent to the existing CC in P&BEG. The duties of the AGC/FS have also been broadened as a result of which he has less time to devote to the direct supervision of the Group.

15. AGC/FS takes overall charge of the FSD and is responsible for overseeing its operation, management and policy formulation, estimation of resource requirements and deployment, review of staff posting and development, and liaison with clients at a senior level. He steers the development of the forensic science service in response to new demands of the law enforcement agencies. Recently, for example, the AGC/FS has been actively involved in the preparation of new legislation on the taking of intimate and non-intimate samples and formulation of policies to support its implementation.

16. Since 1996, the AGC/FS has also supervised the Human Resource and Quality Management Section which provides centralized and comprehensive services in human resources and quality management to both the FSD and the Analytical and Advisory Services Division (A&ASD). With ISO certification for the A&ASD and accreditation for the FSD, the complexity of quality management within the GL increased enormously, and has continued to be so with the recent ISO 14001 environmental certification of part of the A&ASD.

/Operational

Operational experience of P&BEG

17. A Group Head needs to be directly involved in the daily operational management of his group and to be in a position to constantly review casework and operational demands in order to fine tune resources within the group. The appropriateness of a directorate officer heading a group has been well demonstrated in the P&BEG where a CC is in place. The constraints imposed by accreditation with respect to checking have had far less effect on the operation of the P&BEG due to the existence of the CC/P&BEG who undertakes all checking of casework for the group. This enables the SCs of the Group to undertake important cases, often of high public profile, themselves. Such technical leadership is very important in the operation of a section in that it draws on the right levels of experience and helps to broaden the skills and experience of more junior officers by actual demonstration. Since the CC/P&BEG is already heavily committed in the operation of his own Group, he has no spare capacity to help relieve the pressure in D&TG by taking up their administrative checking work.

Other improvement measures

18. Many measures have been taken internally in the D&TG to improve casework throughput, including critical reviews of casework procedures, increased staffing establishment at certain levels and revision to operational structure of the sections. For example, the establishment of professional/technical staff increased from 47 in 1993 to 56 in 1999, while the number of sections expanded from three to five correspondingly. On the other hand, continued efforts have been made to extend the use of computer systems, automation and advanced instruments in the D&TG to enhance efficiency in many areas including casework analysis. However, such efforts have only been partly fruitful since improvement in the overall efficiency of the Group is still impeded by increasing casework complexity and accreditation requirements.

19. To resolve the problem of a bottleneck at the senior professional level, we propose the creation of one permanent post of CC (D1) to head the D&TG, offset by the deletion of two Chemist posts. The proposed deletion of two Chemist posts will not affect the quantity and quality of service of the D&TG in the light of improved productivity at the working level and the steady workload in recent years. No staff redundancy would arise from the proposal.

Encl. 4 20. The job description of the proposed CC post is at Enclosure 4 and the
Encl. 5 revised job description of the AGC/FS is at Enclosure 5. The proposed organisation
Encl. 6 chart for the FSD is at Enclosure 6.

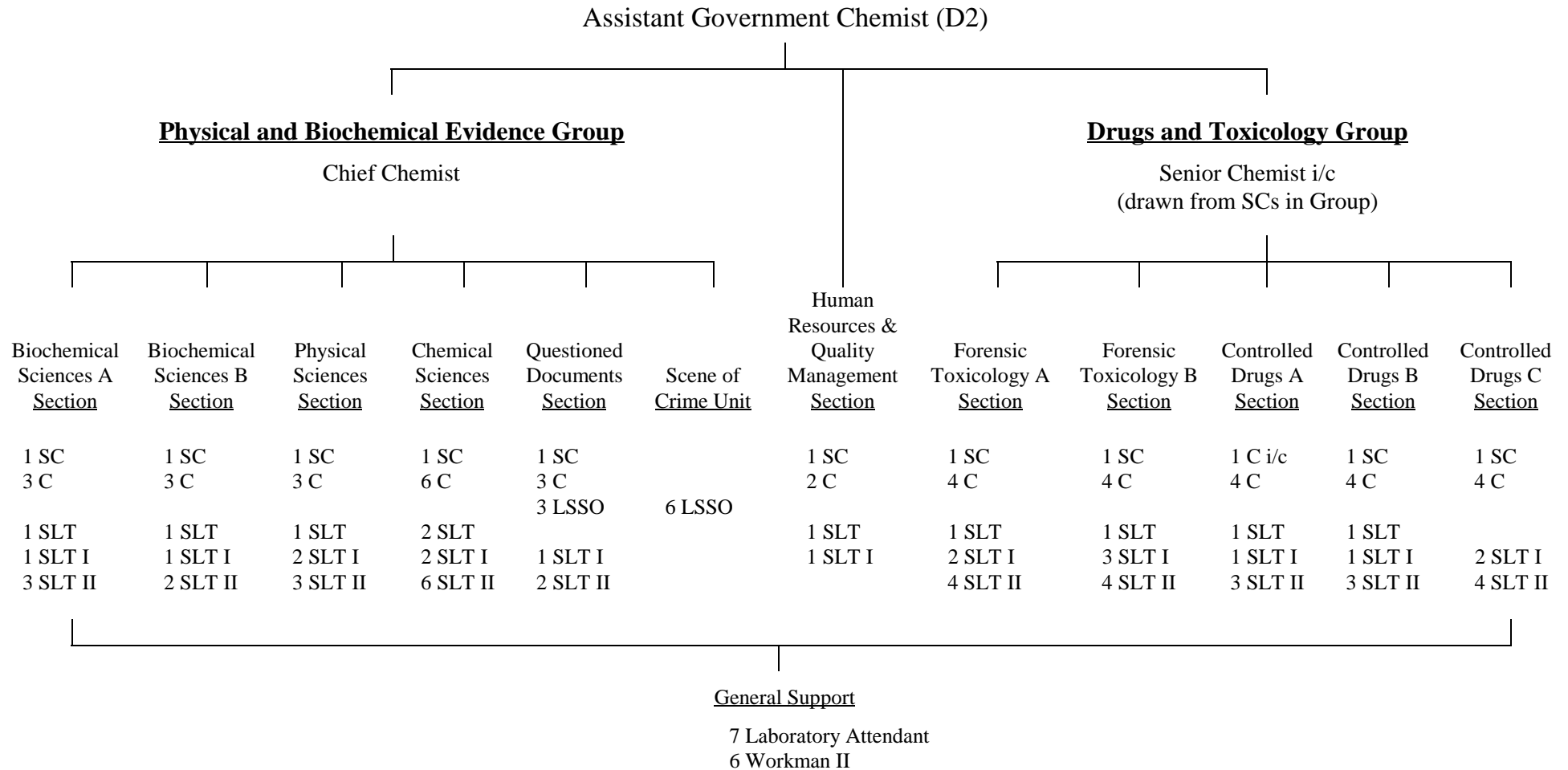
/FINANCIAL

**ADVICE OF THE STANDING COMMITTEE ON DIRECTORATE
SALARIES AND CONDITIONS OF SERVICE**

25. The Standing Committee on Directorate Salaries and Conditions of Service has advised that the grading proposed for the post would be appropriate if the post were to be created.

Security Bureau
February 2000

Organisation Chart of Forensic Science Division



Legend:

SC - Senior Chemist

C - Chemist

LSSO - Laboratory Specialist Services Officer

SLT - Science Laboratory Technologist

SLT I - Science Laboratory Technician I

SLT II - Science Laboratory Technician II

i/c - in-charge

Job Description of Assistant Government Chemist/Forensic Science

Responsible to the Government Chemist for the day-to-day administration and assurance of output quality of all activities undertaken by staff and sections of the Forensic Science Division as well as the Human Resources and Quality Management Section.

Specified Duties and Responsibilities

1. Assist Government Chemist in formulation of general and specific policy objectives, priority management and future plans for the Forensic Science Division in particular, and overall development of the Government Laboratory in general, with the goal of achieving a comprehensive forensic investigative and analytical service which is unbiased, accurate and efficient.
2. Responsible for administrative management of the Forensic Science Division in terms of personnel and resources -
 - (a) responsibility for coordination of work, staff deployment, information systems, assessment of accommodation needs, staff and equipment requirements of all activities conducted by the Division; and
 - (b) allocation and monitoring of divisional resource funding (staff, capital equipment, recurrent expenditure) according to defined objectives, priorities and operational policies, and taking responsibility for such allocations producing value for money.
3. Take overall policy role for the assurance of a quality service by all specialist activities of the Government Laboratory through the Human Resources and Quality Management Section, distancing this vital function from routine operational management.
4. Take overall responsibility for all specialist services of the Division and be spokesman for those activities when public interest demands or in response to enquiries from other Government departments.
5. To supervise the work of the Chief Chemist (Physical and Biochemical Evidence Group) to ensure efficient operation of the Group.
6. To take responsibility for the day-to-day operational management of the Drugs and Toxicology Group.

7. To be the final arbiter of technical reports issued by the Division; to be responsible for final (administrative) checking of casework reports of Senior Chemists of the Division.
8. To plan long term training strategies and career paths for professional and technical staff to ensure proficiency as analytical chemists and expert witnesses.
9. Assist in framing legal schedules in relation to activities of the Division and to initiate review when indicated by laboratory statistics or intelligence.
10. Represent the Government Chemist on committees or at meetings pertaining to forensic science matters, and participate on intra-laboratory promotion/ professional recruitment boards.
11. Liaise with Government departments, private sector, and international agencies for consultative and advisory purposes on forensic matters, to raise the standards and promote the reputation and practice of forensic science in Hong Kong.
12. Act for Government Chemist when required.

Major Areas of Work of the Drugs and Toxicology Group

	1993	1994	1995	1996	1997	1998	1999
Forensic Toxicology Section							
Total Establishment	19	19	19	23#	24	25##	25
<u>Analytical Toxicology</u>							
No of cases	2 083	2 256	2 410	2 690	2 721	2 943	2 767
Achievement (in working days) <i>Target = 80% cases completed within 33 working days</i>	51	55	72*	80	88	59	40
<u>Drink Driving</u>							
No of cases	N/A	N/A	11	129	164	175	142
Achievement (in working days) <i>Target = 80% cases completed within 11 working days</i>	N/A	N/A	N/A	9	9	9	7
Controlled Drugs Section							
Total Establishment	28	30	30	31	32	31	31
<u>Routine Drug Analysis</u>							
No of cases	9 119	13 215	13 598	14 161	11 212	9 436	7 757
Achievement (in working days) <i>Target = 80% cases completed within 11 working days</i>	11	10	21*	32	25	19	13
<u>Complex Drug Analysis</u>							
No of major seizure/'factory' cases	127	169	144	204	138	136	155
Achievement (in working days) <i>Target = 80% cases completed within 44 working days</i>	69	50	68*	75	76	66	44

Note:

* ICAC recommendations for working practice (i.e. requirement to have two officers working side by side during physical examinations of dangerous drugs) and ASCLD rules were introduced in July 1995.

includes two staff for Drink Driving unit established in December 1995.

includes one SC transferred from CDS.

Proposed Job Description of Chief Chemist (Drugs and Toxicology Group)

Responsible to Assistant Government Chemist/Forensic Science for the day-to-day operations of the Drugs & Toxicology Group which comprises five specialist sections, namely, Controlled Drugs A,B & C and Forensic Toxicology A & B.

Specified Duties and Responsibilities

1. To be responsible for the direct supervision of four Senior Chemists and to ensure the provision and maintenance of efficient and effective laboratory services to clients by training, periodic inspection, introduction of improvements where necessary and continuous review of performance and adequacy in all activities of the Group.
2. To make recommendations to the Division Head, and advise and assist in the development and formulation of policies, objectives, and priorities in relation to those scientific disciplines that come within the ambit of the Group.
3. To be responsible for controlling the budget, planning operations, monitoring and controlling supplies within the Group.
4. To participate in the peer checking system for casework conducted in the Group according to the requirements of the Division's accrediting body (ASCLD/LAB). In particular, to perform all administrative level checking of reports issued by Chemists of the Group.
5. To conduct case conferences for major split cases (i.e. cases involving scientific analysis by two or more Sections) to ensure correct division of effort for maximum scientific value.
6. To co-ordinate instrumentation usage and other resources within all sections of the Group to ensure maximum efficiency of use, purpose and cost effectiveness.
7. To organise and lead the scientific research and development work of the Group and to plan and develop projects to meet client's special needs.
8. To represent the Assistant Government Chemist/Forensic Science as spokesman for activities undertaken by the Drugs and Toxicology Group.
9. To act for the Assistant Government Chemist/Forensic Science when required.

Revised Job Description of Assistant Government Chemist/Forensic Science

Responsible to the Government Chemist for the day-to-day administration and assurance of output quality of all activities undertaken by staff and sections of the Forensic Science Division as well as the Human Resources and Quality Management Section.

Specified Duties and Responsibilities

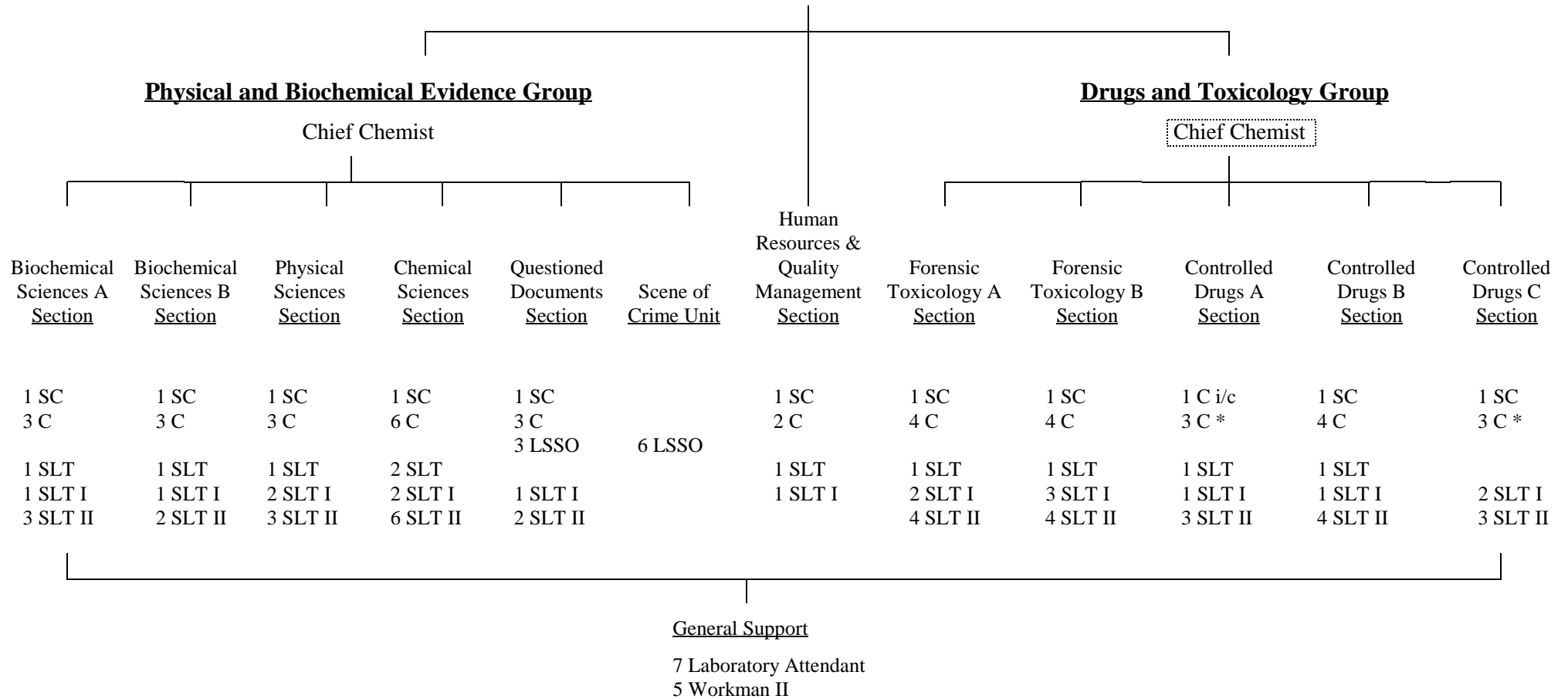
1. Assist Government Chemist in formulation of general and specific policy objectives, priority management and future plans for the Forensic Science Division in particular, and overall development of the Government Laboratory in general, with the goal of achieving a comprehensive forensic investigative and analytical service which is unbiased, accurate and efficient.
2. Responsible for administrative management of the Forensic Science Division in terms of personnel and resources -
 - (a) responsibility for coordination of work, staff deployment, information systems, assessment of accommodation needs, staff and equipment requirements of all activities conducted by the Division; and
 - (b) allocation and monitoring of divisional resource funding (staff, capital equipment, recurrent expenditure) according to defined objectives, priorities and operational policies, and taking responsibility for such allocations producing value for money.
3. Take overall policy role for the assurance of a quality service by all specialist activities of the Government Laboratory through the Human Resources and Quality Assurance Section, distancing this vital function from routine operational management.
4. Take overall responsibility for all specialist services of the Division and be spokesman for those activities when public interest demands or in response to enquiries from other Government departments.
5. To supervise the work of the Chief Chemist (Physical and Biochemical Evidence Group) to ensure efficient operation of the Group.
6. To supervise the work of the Chief Chemist (Drugs and Toxicology Group) to ensure efficient operation of the Group.

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7. To be the final arbiter of technical reports issued by the Division; to be responsible for final (administrative) checking of casework reports of Senior Chemists of the Division.
8. To plan long term training strategies and career paths for professional and technical staff to ensure proficiency as analytical chemists and expert witnesses.
9. Assist in framing legal schedules in relation to activities of the Division and to initiate review when laboratory statistics or intelligence information indicates review is necessary.
10. Represent the Government Chemist on committees or at meetings pertaining to forensic science matters, and participate on intra-laboratory promotion/ professional recruitment boards.
11. Liaise with Government departments, private sector, and international agencies for consultative and advisory purposes on forensic matters, to raise the standards and promote the reputation and practice of forensic science in Hong Kong.
12. Act for Government Chemist when required.

Proposed Organisation Chart of Forensic Science Division

Assistant Government Chemist (D2)



Legend:

- | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <p> Proposed new Chief Chemist post</p> <p>* One Chemist post deleted</p> <p>i/c in-charge</p> | <p>SC - Senior Chemist</p> <p>C - Chemist</p> <p>LSSO - Laboratory Specialist Services Officer</p> | <p>SLT - Science Laboratory Technologist</p> <p>SLT I - Science Laboratory Technician I</p> <p>SLT II - Science Laboratory Technician II</p> |
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