

ORDINARY, PRINTED.

Pub DEPARTMENT.
G.O., DATED 9th Oct 1894
No. 751-2

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[Despatch Abstract.]

Chemical Examinations

Directing that the Govt
be addressed for this
regarding the necessity
for increasing the staff
of the — — — — —

6-1-06 ✓
16-9-07 ✓ 6-6-07 ✓
16-1-08 ✓
15-6-08 ✓
7-9-14 ✓

2-14
12-1-95

READ AGAIN ORDER OF GOVERNMENT, DATED
18 No.

FURTHER PAPER, No. 2

OF 189

ENCLOSURE.

CURRENT No.

STATEMENT WITH PHOTO.

ORDER, &c., OF GOVERNMENT—A.

PAPERS KEPT OUT OF FILE FOR DESPATCH IN ORIGINAL
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Order complete.	30.
Letter only.	45
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N.B.—

- A = Print in full.
- B = Not to be printed.
- P = Print abstract only.
- Q = Print heading only.
- R = Print, but not for monthly volume.

9TH OCTOBER 1894, No. 751, PUBLIC.

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

READ—again the following papers :—

G.O., dated 21st April 1894, No. 273, Public.

Read—the following paper :—

From the Surgeon-General, dated 9th April 1894, No. 311.

ABSTRACT.—Forwarding, with recommendation, a letter from the Chemical Examiner requesting the appointment of an additional assistant to cope with the increase of work.

Order—dated 21st April 1894, No. 273, Public.

The Government can pass no orders in the matter until definite proposals are submitted.

(True Extract.)

(Signed) J. F. PRICE,
Chief Secretary.

To the Surgeon-General.

G.O., dated 11th June 1894, Nos. 412, 413, Public.

Read—the following paper :—

From the Chemical Examiner, Madras, dated 22nd May 1894, No. 561.

ABSTRACT.—Comparing, in connection with his application for an extra Assistant, the strength of the establishments at Calcutta and Bombay with that at Madras; recommending that the proposed Assistant's pay be fixed at Rs. 125—200, the charge being partly met by reducing the pay of the present Assistant from Rs. 200—300 to Rs. 150—250 plus house-rent; that these Assistant appointments be given to men possessing medical qualifications besides a training in chemical work; urging, as an exceptional case, the claims of M. Goolab Roy, the present Acting Assistant, for one of the appointments; and requesting that a peon on Rs. 8 be added to the menial establishment.

Order—dated 11th June 1894, No. 412, Public.

The reduction of the salary attached to the existing appointment of Assistant Chemical Examiner requires the sanction of the Government of India, which will be applied for. Meanwhile orders on the other proposals will be held in abeyance.

(True Extract.)

(Signed) J. F. PRICE,
Chief Secretary.

To the Chemical Examiner.

* Letter—to the Secretary to the Government of India, Finance and Commerce Department, dated 11th June 1894, No. 413, Public.

G.O., dated 31st July 1894, No. 557, Public.

Read—the following paper:—

From the Chemical Examiner, Madras, dated 26th July 1894, No. 775.

ABSTRACT.—Requesting temporary sanction to the appointment of an extra Assistant pending final orders.

Order—dated 31st July 1894, No. 557, Public.

The following telegram will be despatched to the Government of India, Finance and Commerce Department:—

“369. Chemical Examiner represents impossible carry on work with present establishment. Arrears of medico-legal cases accumulating and under-trial prisoners consequently detained. Please wire as soon as possible if sanction accorded to request in my 413, eleventh June. See also paragraph 2 my 512, thirteenth July.”

(True Extract.)

(Signed) J. F. PRICE,
Chief Secretary.

Copy to the Chemical Examiner.

READ—also the following papers:—

From J. P. HEWETT, Esq., C.I.E., Officiating Secretary to the Government of India, Home Department (Medical), to the Chief Secretary to the Government of Madras, dated Simla, 16th August 1894, No. 492.

I am directed to acknowledge the receipt of the communications marginally noted, addressed to the Department of Finance and Commerce, regarding a proposal to reduce the pay of the existing appointment of Assistant Chemical Examiner, Madras, from Rs. 200—300 to Rs. 150—250 a month and to appoint a second Assistant to the Chemical Examiner.

2. In reply I am to invite attention to the following figures, which have been taken from the annual reports, comparing the work done by the Chemical Examiners in Bombay, the North-Western Provinces and Oudh and the Punjab with that done at Madras, during the years 1890, 1891, 1892 and 1893:—

Province.	Number of medico-legal cases.				Total number of cases investigated (including miscellaneous cases).			
	1890.	1891.	1892.	1893.	1890.	1891.	1892.	1893.
1	2	3	4	5	6	7	8	9
Madras	206	247	254	274	1,091	1,018	997	1,132
Bombay	353	321	320	317	1,755	2,320	1,893	2,207
North-Western Provinces and Oudh ..	313	410	368	336	437	506	450	577
Punjab	1,112	1,021	840	949	1,549	1,484	1,241	1,464

Province.	Number of articles examined for medico-legal cases.				Total number of articles examined (including miscellaneous).			
	1890.	1891.	1892.	1893.	1890.	1891.	1892.	1893.
	10	11	12	13	14	15	16	17
Madras	864	892	1,034	1,257	1,749	1,663	1,777	2,115
Bombay	1,431	1,307	1,308	1,350	2,833	3,306	2,881	3,240
North-Western Provinces and Oudh ..	781	764	541	765	905	860	623	1,006
Punjab	2,368	2,247	2,066	3,171	2,805	2,710	2,407	3,686

N.B.—The returns for Bengal are incomplete.

In Bombay the Chemical Examiner has two Assistants. In the Punjab there is one Assistant; whilst in the North-Western Provinces and Oudh there is none.

3. I am to request, with reference to the above figures, that the Government of India may be favoured with further explanation of the reasons for an increased staff for the Chemical Examiner, Madras, before they proceed to consider further the proposal made in your letter under reply.

4. With reference to your telegram of the 31st July, stating that owing to the accumulation of arrears of medico-legal cases under-trial prisoners are being detained in jail, I am to suggest that such arrears might be disposed of by holding back temporarily other analyses with which the Chemical Examiner has to deal.

From the Chemical Examiner, Madras, dated 13th September 1894, No. 915.

ORDER—dated 9th October 1894, No. 751, Public.

The following reply will be addressed to the Government of India:—

[Here enter No. 752, dated 9th October 1894.]

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Chemical Examiner.

Govt. of {1894} Madras.
PUBLIC.

Issued

Recd.

Encl.

G.O., 9th October 1894, No. 751.

OCTOBER.

Chemical Examiner.

Directing that the Government of India be addressed further regarding the necessity for increasing the staff of the —, Madras.

9TH OCTOBER 1894, No. 752, PUBLIC.

PUBLIC DEPARTMENT.

LETTER—from

THE CHIEF SECRETARY TO THE GOVERNMENT OF
FORT ST. GEORGE,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
HOME DEPARTMENT (MEDICAL).

SIR,

I am directed to reply to your No. 492, dated 16th August 1892, in which further explanation is requested as to the reasons for increasing the staff of the Chemical Examiner, Madras, before the Government of India considers the proposal to reduce the pay of the Assistant Chemical Examiner from Rs. 200-300 to Rs. 150-200.

2. I am to preface the following remarks with the observation that had this Government not been fully convinced of the urgent necessity for the provision of additional assistance as economically as possible, it would not have supported the proposal to reduce the pay of the existing appointment. The additional Assistantship is within the powers of sanction of this Government, and the approval of the Government of India was requested to an economy being effected.

3. With reference to paragraph 2 of your letter under reply, it appears to this Government that a numerical comparison of the work done by the Chemical Examiners at Bombay, North-West Provinces and Oudh and Punjab with the work done at Madras does not necessarily an adequate or a just idea of the amount of the work which is performed, or of the relation of that work to the strength of the operating staff in each case. For instance, the total number of articles examined by the Punjab Chemical Examiner with only one Assistant in 1893 was 3,686, which exceeds the work done at Bombay with two Assistants numerically represented by 3,240. At Calcutta the figures, though incomplete, can be approximately computed as follows from information which has been supplied by the Examiner:—

In 1893—

Number of articles examined for blood and other stains	.. ..	259
" " " in miscellaneous cases	.. ..	921
Number of human cases 272 multiplied by 4 (which is a fair average number of articles to each case)	.. ..	1,088
Number of cattle cases 272 multiplied by 4 (which is a fair average number of articles to each case)	.. ..	1,088
Other miscellaneous articles	.. ..	1,844
Total	.. ..	5,200

The Calcutta Chemical Examiner is assisted by an additional Chemical Examiner and by three Assistant Chemical Examiners. A comparison of these numbers would lead to the inference that either in the Punjab the Chemical Examiner is very much under-assisted or that at Calcutta and Bombay the analysers have more than their fair share of assistance. This Government is informed that the Chemical Examiner, North

West Provinces and Oudh, who is stated in paragraph 2 of your letter to have no Assistant, has had one since July 1893. With one Assistant, his total work is numerically represented by 1,006 or less than half of the figures for Madras (2,115), also with one Assistant.

4. The explanation of these discrepancies may be found (1) in want of uniformity in the manner of registration by different Chemical Examiners of articles which are received for examination, and (2) in differences in the extent of the analytical processes which are required from different Examiners or which seem to them to be called for in the different circumstances under which articles are sent to them.

5. In explanation of the first probable cause the Chemical Examiner, Madras, mentions the following circumstance:—Six packets numbered from I to VI in a medico-legal case are received by him. These are registered in the books as six articles. On proceeding to their examination it not infrequently happens that packet No. VI contains other small packets “(found in the accused’s house)”, perhaps as many as twelve, and marked *a, b, c, &c.*; the contents of each one of these packets has then to be separately examined and identified, involving in reality separate examination and certification regarding seventeen instead of six different articles. The examination of such suspected miscellaneous articles is reported to be often much more difficult and tedious than the examination of *viscera* for poison, and it is possible that under such circumstances one Chemical Examiner would correctly enough register seventeen as the number of articles examined, while in Madras, and it may be elsewhere also, the number of articles is registered as six. Similarly, several pieces of cloth separately examined for seminal and other stains, for instance, are entered as one because they are sent under one cover. The Chemical Examiner reports that on examining the working note books for 1893, he finds that, by registering in this way the actual number of articles separately examined, over 200 would have to be added to the number of articles shown in the Madras report for 1893 under “Articles examined for medico-legal cases” alone. These circumstances are quoted as a possible cause of the explanation between such numerical differences as 3,686 in the Punjab and 1,006 in the North-West Provinces and Oudh, each with only one Assistant—otherwise it is difficult to understand how so much work can be got through in the Punjab, all other conditions being equal.

6. In explanation of the second cause mentioned, Surgeon-Major VanGeyzel points out that the miscellaneous work at Calcutta and at Bombay, as represented chiefly by water, petroleum and explosives, is what swells the number of articles examined, and that the examination of a very large number of such articles is possible with fewer Assistants than are necessary to overtake the complete chemico-legal examination of one-third the number of other articles in the same period. For instance, in Madras (in 1890) with only one extra special Assistant, 1,136 samples of spirits were examined for obscured strength in addition to the 1,749 articles shown in the statement in your letter—almost doubling the work numerically, with only one extra Assistant. These, as also similar figures for 1891, were excluded from the annual totals in the Madras reports as they were abnormal, and the work was under the Chemical Examiner’s care only during its initial and tentative stages. This is mentioned as an instance in point to show that a statement of work represented simply by “1,136 articles examined” gives no idea of the actual amount of work involved.

7. Further, the nature of the work and the extent to which it is carried are also important elements and cannot be overlooked in a comparison of the work done by the different Chemical Examiners. As an instance in point, Dr. VanGeyzel reports that the Bombay analyser is not required to do more than certify to the presence or absence of poison in cases of suspected poisoning and that he is specially exempted from undertaking the quantitative estimation of poison found in such cases except when he receives early intimation that he should. The Calcutta Chemical Examiner specially reports in his last annual review the particulars of *three cases* in which quantitative estimation of poison was made. From this circumstance it would appear that he also is not obliged to estimate the amount of poison found in each case. Under

these circumstances the chemical examination in cases of suspected poisoning involves far less work than is necessary for the more tedious quantitative analytical process. In Madras, on the other hand, the Chemical Examiner is not so exempted and it has become an established rule of practice for the past twenty years at least that the Chemical Examiner is expected to estimate the quantity of poison found in *every* case. The Calcutta and Bombay Chemical Examiners would in accordance with their orders be required to certify only to the presence or absence of poison in the case of miscellaneous articles, other than *viscera*, which are submitted for chemico-legal examination; in Madras, on the other hand, the Chemical Examiner is required, not only to certify to the presence or otherwise of poison in such articles, but also to identify the articles themselves. The analytical work involved under the two different circumstances does not bear any comparison.

8. The Chemical Examiner’s duties are prescribed in such terms that medico-legal analyses are his first duties to which every other kind of analysis must give way, and therefore the analytical work in medico-legal cases is carried out as thoroughly as possible; this being the case the amount of work performed is not to be measured by a numerical expression. Dr. VanGeyzel takes, for example, a case of poisoning by compounds of both arsenic and mercury. An Examiner who was only required to certify whether poison is present or not could perform all the work required for his purpose in the case in three or four hours. The detection of arsenic and mercury is easily made by a single test and the examination of the case is then complete. On the other hand, in Madras the analysis is carried beyond this stage and the more difficult and tedious portion of the work begins here. The two metals have to be separated from the *viscera*, they then have to be separated from each other and their quantities weighed in the several articles *separately*—work which cannot possibly be performed under five days at the very least, and that only provided no other work is allowed to interrupt the Examiner.

9. The Chemical Examiner further points out that the measure of the work done is proportionate to the number of cases in which poison is found to be present. The larger the number of real poisoning cases, the larger the amount of work to be performed in connection with them. The percentage of detections to (human) cases examined was —

							1893.	1892.	1891.
In Bengal	..	..	..	..	..	..	45.9	45.6	43.4
„ Bombay	..	..	..	..	..	..	45.6	45.0	49.6

In Madras the detections have been 66, 65, 52, 59 and 65 per cent. in human cases, and 70, 83, 77, 85 and 84 per cent. in cattle cases, during the five years 1889 to 1893 inclusive.

10. While, therefore, the nature of the medico-legal duties in Madras requires more extended analytical work and takes up more time and attention, the number of articles examined in these cases has also risen during the past four years from 864, 892, 1,034 to 1,257; whilst the number of such articles in Bombay, North-West Provinces and Oudh and in the Punjab has, through the same period, remained more or less stationary and in two cases out of the three has decreased.

11. The result of the excess of work at the Madras Laboratory is that the staff can never take a public holiday of any kind, and are obliged to work through the recognised Easter, Christmas and other holidays and sometimes on Sundays—in order to keep down arrears. This state of tension, which has existed for the past four years, is not conducive to the efficient discharge of the work, which requires very serious attention and is by no means healthy occupation.

12. With reference to the suggestion in paragraph 4 of your letter, I am to point out that the remedy would not meet the case, as the difficulty is of a permanent nature. Even were the staff employed solely on medico-legal cases it would prove insufficient to keep the work current.

13. I am to express the hope of this Government that, in the circumstances now brought to notice, very early sanction may be accorded to the proposed reduction in the salary of the Assistant Chemical Examiner, Madras. I am to request the favour of a telegraphic reply to this communication.

I have the honour to be,

Sir,

Your most obedient servant,

OOTACAMUND,
9th October 1894.

Chief Secretary.

Regr. No.

HOME 1894 DEPT.

[]

From the Government of
Fort St. George.

Issued

Recd.

Encl

Letter, 9th October 1894, No. 752.

OCTOBER.

Chemical Examiner.

Explaining further the reasons for increasing
the staff of the — Madras.

Pres. also Hefery

No. 492

From

J. P. Hewett, Esq., C. I. E.,

Offg. Secretary to the Government of India.

To

The Chief Secretary to the Government of Madras.

Home Department.

(Medical)

Sir,

I am directed to acknowledge the receipt of the communications marginally noted, addressed to the Department

1. Letter from the Govt. of Madras No. 413, Public dated the 11th June 1894.
2. Telegram from the Govt. of Madras No. 369 dated 31st July 1894.

of Finance and Commerce, regarding a proposal to reduce the pay of the existing appointment of

Assistant Chemical Examiner, Madras, from Rs. 200-300 to Rs. 150-250 a month and to appoint a second Assistant to the Chemical Examiner.

2. In reply I am to invite attention to the following figures, which have been taken from the annual reports, comparing the work done by the Chemical Examiners in Bombay, the North-Western Provinces and Oudh and the Punjab with that done at Madras, during the years 1890, 1891, 1892 and 1893:-

Province.	No. of medico-legal cases.				Total No. of cases investigated (including miscellaneous cases)				No. of articles examined for medico-legal cases.				Total No. of articles examined (including miscellaneous)			
	1890	1891	1892	1893	1890	1891	1892	1893	1890	1891	1892	1893	1890	1891	1892	1893
Madras.	206	247	254	274	1091	1018	997	1132	864	898	1004	1257	1749	1663	1777	2,115
Bombay.	353	321	320	317	1755	2320	1893	2207	1431	1307	1308	1350	2833	3306	2881	3240
N.W.P.&Oudh.	343	410	368	336	437	506	450	577	781	764	521	765	905	860	623	1,006
Punjab.	1112	1021	840	949	1549	1484	1241	1464	2368	2247	2006	3171	2,805	2710	2407	3,686

N.B. The returns for Bengal are incomplete.

In

In Bombay the Chemical Examiner has two Assistants. In the Punjab there is one Assistant; whilst in the North-Western Provinces and Oudh there is none.

3. I am to request, with reference to the above figures, that the Government of India may be favoured with further explanation of the reasons for an increased staff for the Chemical Examiner, Madras, before they proceed to consider further the proposal made in your letter under reply.

4. With reference to your telegram of the 31st July stating that, owing to the accumulation of arrears of medico-legal cases, under-trial prisoners are being detained in Jail, I am to suggest that such arrears might be disposed of by holding back temporarily other analyses with which the Chemical Examiner has to deal.

I have the honour to be,

Sir,

Your most obedient Servant.

J. P. Hewitt

Offg. Secretary to the Government of India.

(cl)

From the Chemical Exr 913-9-94
No 915.

Public Dept

The Govt of India
Home Dept. (Medical)
Simla

No 492

Dated 16/8 }
Recd 23/8 } 1894

Subject

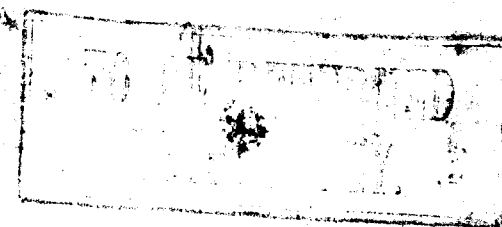
Requesting to be favoured with further explanation of the reasons for an increased staff for the Chemical Examiner, Madras.

Pub 90557 of 81-7-94
511-12418-7-94 S.C.
412-13 of 11-6-94
DD: 22407-6-94
Reg. No. 2738 21-4-94
Encl: 1702

Forwarded to the
Chemical Examiner
for early report.

Obtained by Mr. D. S. S. S.
24/8/94
Chief Secretary

30/8
24/8



No. 915

Madras, 13th September 1894.

From Surgeon Major J. L. Vailly, M.B.C.M. F.C.S. F.D.C.
CHEMICAL EXAMINER,
Madras,

To
THE Chief Secretary
to the Government of Madras
Public Department.
SIR,

* herewith
returned

With reference to your Endorsement
No. 1702 dated 24th August/94 upon Government
of India's No. 492* (Home Department,
Medical) dated 16th August/94, I have
the honor to submit the following report:-

2. A numerical comparison of the
work done by the Chemical Examiners
at Bombay, North West Provinces and Oudh,
and Punjab with the work done here
cannot afford an adequate or a just
idea of the amount of the work which
is performed, or of the relation of that
work to the strength of the operating
staff in each case. For instance, the
total number of articles examined by the
Punjab Chemical Examiner with only
one

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one Assistant-Chemical Examiner in 1893
was 3686 which exceeds the work
numerically represented at Bombay by
3240 with two Assistant-Chemical Examiners.
At Calcutta the figures though incomplete
can be approximately computed as follows
from figures kindly supplied me by the
Examiner:—

In 1893. number of articles examined for blood & other stains —	259
— do — do — do — in Miscellaneous Cases —	921
number of Human Cases 272 multiplied by 4 (which is a fair average number of articles to each case)	1088
number of Cattle Cases 272 — do — do — do —	1088
Other Miscellaneous Articles —	1844
<u>Total —</u>	<u>5200;</u>

the Calcutta Chemical Examiner being
assisted by an additional Chemical
Examiner and three Assistant-Chemical
Examiners. A comparison of these numbers
would lead to the inference that either
at Punjab the Chemical Examiner is very
much under-assisted, or that at Calcutta
and at Bombay the Analysts have more
than their fair share of assistance. The
Chemical Examiner, North West Provinces and
Aude who is stated (in para 2 of the
India Government's letter above referred to)

to

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to have no Assistant at all has now got an Assistant Chemical Examiner, who was trained at Bombay and who is referred to in the Bombay Analyst's last report as having been sanctioned since July 1893. With one Assistant his total work is numerically represented by 1006, i.e. less than half of the figures for Madras (2115) also with one Assistant.

3. The explanation of these discrepancies may be found (1) in want of uniformity in the manner of registration by different Chemical Examiners of articles which are received for examination, and (2) in differences in the extent of the analytical processes which are required from different Examiners or which seem to them to be called for in the different circumstances under which articles are sent to them.

4. In explanation of the 1st probable cause I would mention one circumstance. Six packets numbered from I to VI are received in a medico-legal case, these are registered in the books here as 6 articles. On proceeding to their examination it not infrequently happens that packet-N^o. VI contains 12 other small packets ("found in the accused's house") and marked, a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

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48.; the contents of each one of these packets has then to be separately examined, and identified, involving in reality separate examination and certification regarding 17 instead of 6 different articles. The examination of such suspected miscellaneous articles is often much more difficult and tedious than examination of viscera for poison, and it is possible that under such circumstances, our Chemical Examiner would correctly enough register 17 as the number of articles examined, while here and it may be elsewhere also the number of articles is registered as 6. Similarly, several pieces of cloth separately examined for seminal and other stains for instance are entered as 1 because they are sent under one cover 48. 48. On examining the working note books 48. for 1893, I find that by registering in this way the actual number of articles, separately examined, over 200 would have to be added to the number of articles shown in the Madras report for 1893 under "articles examined for medico-legal cases", alone. I quote these circumstances as a possible, even a probable, cause of the explanation between

such vast numerical differences for instance as between 3686 at Punjab and 1006 in the North West Provinces & Oudh. each with only one Assistant — otherwise it is difficult to understand how so much work can be got through in the Punjab, all other conditions being equal.

5. In explanation of the 2nd mentioned cause, I beg to point out that the miscellaneous work at Calcutta and at Bombay as represented chiefly by Water, Petroleum and Explosives, is what swells the number of articles examined — the examination of a very large number of which is possible with fewer Assistants than are necessary to undertake the complete chemico-legal examination of one third the number of articles in the same period. For instance, in Madras (in 1890) with only one extra Special Assistant, 1136 samples of spirits were examined for obscured strength in addition to the 1749 articles shown in the Government of India's Table of work performed, — almost doubling the

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the work numerically, with only one extra Assistant. These, as also similar figures for 1891, were excluded from the Annual Totals in my reports as they were abnormal, and the work was under my care only during its initial and tentative stages. I mention this as an instance in point to exemplify that a statement of work as represented simply by so large a number as "1,136 articles examined" gives no idea of the amount of work involved: apparently it is much larger than it really is in this case. While the Chemical Examiners at Calcutta and Bombay have a sufficient staff in proportion to the work performed the amount of work to be overcome in Madras is greatly in excess of the strength of the working staff.

b. Further, the nature of the work and the extent to which it is carried are also important elements and cannot be overlooked in a comparison of the work done by the different Chemical Examiners. As an instance in point, the Bombay Analyst is not required to do more than certify to the presence or absence of poison in cases of suspected poisoning; by a
Government

Government Resolution he is specially exempted from undertaking quantitative estimation of poison found in such cases except he receives early intimation. I understand that such cases are not many. The Calcutta Chemical Examiner specially reports (in his last annual Report) the particulars of three cases in which quantitative estimation of poison was made; from which circumstance it would appear that there also it is not the rule to estimate the amount of the poison found. Under these circumstances the chemical examination in cases of suspected poisoning involves far less work than is necessary for the more tedious quantitative analytical process. In Madras on the other hand, the Chemical Examiner is under no such exemption - though I cannot trace any positive orders on the subject, it has become an established rule of practice for twenty years at least and the Chemical Examiner is expected to estimate the quantity of poison found in every case and this is invariably attempted and complied with to the best

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best of his ability. Further the Calcutta
and Bombay Chemical Examiners would
in accordance with their orders be required
to certify only to the presence or absence
of poison in the case of miscellaneous
articles, other than viscera, which are
submitted for chemico-legal examination:-
in Madras on the other hand the Chemical
Examiner is required not only to certify
to the presence or otherwise of poison in
such articles, but also to identify the
articles themselves. The analytical work
involved under the two sets of circumstances
do not bear any comparison. My experience
of toxicological work in England which is
based upon such work performed by me
in assisting Professor Ogston of Aberdeen
and upon my personal knowledge of
the work performed in the laboratory of
one of the first medico-legal Chemists,
who works for the Home Office in London
is in complete accord with the practice
which has been in vogue here and
which

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which I have continued with such alterations and improvements, as my experience suggested. To confine the work to mere detection of poisons would transgress all the traditions and practice in these cases here, would be a most retrograde step, and in my humble opinion would detract considerably from the value of the expert evidence in poisoning cases.

7. The Chemical Examiner's duties are prescribed in such terms that Medico-legal analyses are his first duties to which every other kind of analyses must give way, and therefore the analytical work in Medico-legal cases is carried out as thoroughly as possible; that being the case the amount of work performed is not to be measured by a numerical expression. Take for example a case of poisoning by compounds of both Arsenic and Mercury. An Examiner who is only required to certify whether poison is present or not, could perform all the work required for his purpose in the above

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alone case in three or four hours: the detection of Arsenic, and Mercury is easily made by a single test, and the examination of the case is then complete. On the other hand, in Madras the analysis is carried beyond this stage, and the more difficult and tedious portion of the work begins here. The two metals have to be separated from the viscera, they then have to be separated from each other, and their quantities weighed in the several articles separately — work which cannot possibly be performed under five days, at the very least, and that provided no other work is allowed to interrupt the Examiner.

8. With only one Assistant, and so many as 18 Medico-legal cases as I have recently had on hand at the same time, involving the separate examination of nearly 100 different articles, only a limited number of these can be proceeding in their examination at the same time — in addition to all this, there is current miscellaneous work, correspondence involving the expression of opinions upon various matters, and urgent examination of

of

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of condemned foods, articles for the Customs house &c. &c. for all of which the Examiner has to be ready at a moment's notice and much of which he cannot possibly decline under any circumstances.

9. I beg to further add that the measure of the work done is also proportionate to the number of cases in which poison is found to be present - the larger the number of real poisoning cases, the larger the amount of work to be performed on them. The percentage of detections to (human) cases examined in -

	1893	1892	1891
Bengal was	45.9	45.6	43.4
Bombay -	45.6	45.0	49.6

In Madras the detections have been 66, 68, 52, 59, and 65 per cent in human cases and 70, 83, 77, 85 and 84 per cent in Cattle cases during the five years beginning from 1889 to 1893.

10. While therefore the nature of the medico-legal duties in Madras requires more extended analytical work, and takes up more time and attention, the number of

12

of articles examined in these cases have also risen as the figures in the Government of India Table shows from 864, 892, 1034 to 1257; whilst the number of such articles at Bombay, North West Provinces and Oudh and in the Punjab have through the same period remained practically stationary - in reality they have decreased.

11. The Laboratory Staff here never can take a public holiday of any kind, and are obliged to work through the recognised Easter and Xmas and other holidays and sometimes on Sundays - simply to work off arrears. They have done so most willingly for the past four years. This state of tension is not conducive to efficiency in the work which by its nature requires very serious attention, and is by no means healthy occupation.

12. The remedy suggested by the Government of India in their para 4 to temporarily suspend miscellaneous analyses does not touch the case at all; if

if miscellaneous analyses are to be declined they will have to be declined almost constantly, as medico-legal work does not decrease and the difficulty is of a permanent nature.

13. These are, as fully as I can give them, the circumstances under which an Ultra Assistant who should be jointly responsible for medico-legal work is now necessary at Madras, and I beg that Government may be pleased to recommend the adoption of my proposals submitted in my letter No. 561 dated 22nd May/94.

I have the honor to be

Sir

Your most Obedient Servant

W. B. C. & F. C. & F. C.

Surgeon-Major

Chemical Examiner

1894 2610
Public Dept

From

The Chemical Examiner
Madras

To

The Chief Secretary
to the Government of Madras
Public Department
Colacamund.

No 915

Dated - 13th } September 194
Received 14th }
Rej 15/9

Enclosure Pub. C. No.
2392 returned
CHIEF SECRETARY
GOVERNMENT OF MADRAS

Subject

Submitting further explanation
of the reasons for an
increased staff for the
Chemical Examiner, Madras.

9

TH OCTOBER 1894, No. 51, PUBLIC.
GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

Read—again the following papers:—

G.O., dated 21st April 1894, No. 273, Public.

Read—the following paper:—

From the Surgeon-General, dated 9th April 1894, No. 311.

ABSTRACT.—Forwarding, with recommendation, a letter from the Chemical Examiner requesting the appointment of an additional assistant to cope with the increase of work.

Order—dated 21st April 1894, No. 273, Public.

The Government can pass no orders in the matter until definite proposals are submitted.

(True Extract.)

(Signed) J. F. PRICE,
Chief Secretary.

To the Surgeon-General.

G.O., dated 11th June 1894, Nos. 412, 413, Public.

Read—the following paper:—

From the Chemical Examiner, Madras dated 22nd May 1894, No. 561.

ABSTRACT.—Comparing, in connection with his application for an extra Assistant, the strength of the establishments at Calcutta and Bombay with that at Madras; recommending that the proposed Assistant's pay be fixed at Rs. 125—200, the charge being partly met by reducing the pay of the present Assistant from Rs. 200—300 to Rs. 150—250 plus house-rent; that these Assistant appointments be given to men possessing medical qualifications besides a training in chemical work; urging, as an exceptional case, the claims of Mr. Golab Ray, the present Acting Assistant, for one of the appointments; and requesting that a peon on Rs. 8 be added to the menial establishment.

Order—dated 11th June 1894, No. 412, Public.

The reduction of the salary attached to the existing appointment of Assistant Chemical Examiner requires the sanction of the Government of India, which will be applied for. Meanwhile orders on the other proposals will be held in abeyance.

(True Extract.)

(Signed) J. F. PRICE,
Chief Secretary.

To the Chemical Examiner.

Letter—to the Secretary to the Government of India, Finance and Commerce Department, dated 11th June 1894, No. 413, Public.

G.O., dated 31st July 1894, No. 557, Public.

Read—the following paper:—

From the Chemical Examiner, Madras, dated 26th July 1894, No. 775.

ABSTRACT.—Requesting temporary sanction to the appointment of an extra Assistant pending final orders.

Order—dated 31st July 1894, No. 557, Public.

The following telegram will be despatched to the Government of India, Finance and Commerce Department:—

“369. Chemical Examiner represents impossible carry on work with present establishment. Arrears of medico-legal cases accumulating and under-trial prisoners consequently detained. Please wire as soon as possible if sanction accorded to request in my 413, eleventh June. See also paragraph 2 my 512, thirteenth July.”

(True Extract.)

(Signed) J. F. PRICE,
Chief Secretary.

Copy to the Chemical Examiner.

READ—also the following papers:—

From J. P. HEWETT, Esq., C.I.E., Officiating Secretary to the Government of India, Home Department (Medical), to the Chief Secretary to the Government of Madras, dated Simla, 16th August 1894, No. 492.

I am directed to acknowledge the receipt of the communications marginally noted, addressed to the Department of

1. Letter from the Government of Madras, No. 413, Public, dated the 11th June 1894.
2. Telegram from the Government of Madras, No. 369, dated 31st July 1894.
- Finance and Commerce, regarding a proposal to reduce the pay of the existing appointment of Assistant Chemical Examiner, Madras, from Rs. 200—300 to Rs. 150—250 a month and to appoint

a second Assistant to the Chemical Examiner.

2. In reply I am to invite attention to the following figures, which have been taken from the annual reports, comparing the work done by the Chemical Examiners in Bombay, the North-Western Provinces and Oudh and the Punjab with that done at Madras, during the years 1890, 1891, 1892 and 1893:—

Province.	Number of medico-legal cases.				Total number of cases investigated (including miscellaneous cases).			
	1890.	1891.	1892.	1893.	1890.	1891.	1892.	1893.
1	2	3	4	5	6	7	8	9
Madras	206	247	254	274	1,091	1,018	997	1,132
Bombay	353	321	320	317	1,755	2,320	1,893	2,207
North-Western Provinces and Oudh ..	313	410	368	336	437	506	450	577
Punjab	1,112	1,021	840	949	1,549	1,484	1,241	1,464

Province.	Number of articles examined for medico-legal cases.				Total number of articles examined (including miscellaneous).			
	1890.	1891.	1892.	1893.	1890.	1891.	1892.	1893.
	10	11	12	13	14	15	16	17
Madras	864	892	1,034	1,257	1,749	1,663	1,777	2,115
Bombay	1,431	1,307	1,308	1,350	2,833	3,306	2,881	3,240
North-Western Provinces and Oudh ..	781	764	541	765	905	860	623	1,006
Punjab	2,368	2,247	2,006	3,171	2,805	2,710	2,407	3,536

N.B.—The returns for Bengal are incomplete.

In Bombay the Chemical Examiner has two Assistants. In the Punjab there is one Assistant; whilst in the North Western Provinces and Oudh there is none.

3. I am to request, with reference to the above figures, that the Government of India may be favoured with further explanation of the reasons for an increased staff for the Chemical Examiner, Madras, before they proceed to consider further the proposal made in your letter under reply.

4. With reference to your telegram of the 31st July, stating that owing to the accumulation of arrears of medico-legal cases under-trial prisoners are being detained in jail, I am to suggest that such arrears might be disposed of by holding back temporarily other analyses with which the Chemical Examiner has to deal.

From the Chemical Examiner, Madras, dated 13th September 1894, No. 915.

ORDER—dated 9th October 1894, No. 751, Public.

The following reply will be addressed to the Government of India:—

[Here enter No. 752, dated 9th October 1894.]

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Chemical Examiner. 6 Sept 7-1894.

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9 TH OCTOBER 1894, No. 752, PUBLIC.

PUBLIC DEPARTMENT.

Despatched 17-10-94
17-10-94
49th October 94 No 752

LETTER from

THE CHIEF SECRETARY TO THE GOVERNMENT OF
FORT ST. GEORGE,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
HOME DEPARTMENT (MEDICAL).

SIR,

I am directed to reply to your No. 492, dated 16th August 1892, in which further explanation is requested as to the reasons for increasing the staff of the Chemical Examiner, Madras, before the Government of India considers the proposal to reduce the pay of the Assistant Chemical Examiner from Rs. 200-300 to Rs. 150-200.

2. I am to preface the following remarks with the observation that had this Government not been fully convinced of the urgent necessity for the provision of additional assistance as economically as possible, it would not have supported the proposal to reduce the pay of the existing appointment. The additional Assistantship is within the powers of sanction of this Government, and the approval of the Government of India was requested to an economy being effected.

3. With reference to paragraph 2 of your letter under reply, it appears to this Government that a numerical comparison of the work done by the Chemical Examiners at Bombay, North-West Provinces and Oudh and Punjab with the work done at Madras ~~cannot afford~~ an adequate or a just idea of the amount of the work which is performed, or of the relation of that work to the strength of the operating staff in each case. For instance, the total number of articles examined by the Punjab Chemical Examiner with only one Assistant in 1893 was 3,686, which exceeds the work done at Bombay with two Assistants numerically represented 3,240. At Calcutta the figures, though incomplete, can be approximately computed as follows from information which has been supplied by the Examiner:—

In 1893—

Number of articles examined for blood and other stains	.. ..	259
" " " in miscellaneous cases	.. ..	921
Number of human cases 272 multiplied by 4 (which is a fair average number of articles to each case)	.. ..	1,088
Number of cattle cases 272 multiplied by 4 (which is a fair average number of articles to each case)	.. ..	1,088
Other miscellaneous articles	.. ..	1,844
Total	.. ..	5,200

The Calcutta Chemical Examiner is assisted by an additional Chemical Examiner and by three Assistant Chemical Examiners. A comparison of these numbers would lead to the inference that either in the Punjab the Chemical Examiner is very much under-assisted or that at Calcutta and Bombay the analysers have more than their fair share of assistance. This Government is informed that the Chemical Examiner, North

doesn't necessarily
Rm

by

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West Provinces and Oudh, ^{ph 2 of your letter to have no} Assistant, has had one since July. With one Assistant, his total work is numerically represented by 1,006 or ^{20/-} less than half of the figures for Madras (2,115) ^{1/-} also with one Assistant.

4. The explanation of these discrepancies may be found (1) in want of uniformity in the manner of registration by different Chemical Examiners of articles which are received for examination, and (2) in differences in the extent of the analytical processes which are required from different Examiners or which seem to them to be called for in the different circumstances under which articles are sent to them.

5. In explanation of the first probable cause the Chemical Examiner, Madras, mentions the following circumstance:—Six packets numbered from I to VI in a medico-legal case are received by him. These are registered in the books as six articles. On proceeding to their examination it not infrequently happens that packet No. VI contains ~~the~~ other small packets " (found in the accused's house) " and marked a, b, c, &c.; the contents of each one of these packets has then to be separately examined and identified, involving in reality separate examination and certification regarding ~~the~~ instead of six different articles. The examination of such suspected miscellaneous articles is reported to be often much more difficult and tedious than the examination of *viscera* for poison, and it is possible that under such circumstances one Chemical Examiner would correctly enough register ~~the~~ as the number of articles examined, while in Madras, and it may be elsewhere also, the number of articles is registered as six. Similarly, several pieces of cloth separately examined for seminal and other stains, for instance, are entered as one because they are sent under one cover. The Chemical Examiner reports that on examining the working note books for 1893, he finds that, by registering in this way the actual number of articles separately examined over 200 would have to be added to the number of articles shown in the Madras report for 1893 under "Articles examined for medico-legal cases" alone. These circumstances are quoted as a possible ~~cause~~ ^{deviation} ~~probable~~ cause of the explanation between such numerical differences as 3,686 in the Punjab and 1,006 in the North-West Provinces and Oudh, each with only one Assistant—otherwise it is difficult to understand how so much work can be got through in the Punjab, all other conditions being equal.

6. In explanation of the second cause mentioned, Surgeon-Major VanGeyzel points out that the miscellaneous work at Calcutta and at Bombay, as represented chiefly by water, petroleum and explosives, is what swells the number of articles examined, the examination of a very large number of ~~which~~ ^{and that} is possible with fewer Assistants ^{such articles} than are necessary to overtake the complete chemico-legal examination of one-third the number of articles in the same period. For instance, in Madras (in 1890) with only one extra special assistant, 1,136 samples of spirits were examined for obscured strength in addition to the 1,749 articles shown in the statement in your letter—almost doubling the work numerically with only ~~one~~ ¹ extra Assistant. These, as also similar figures for 1891, were excluded from the annual totals in the Madras reports as they were abnormal, and the work was under the Chemical Examiner's care only during its initial and tentative stages. This is mentioned as an instance in point to show that a statement of work represented simply by "1,136 articles examined" gives no idea of the actual amount of work involved.

7. Further, the nature of the work and the extent to which it is carried are also important elements and cannot be overlooked in a comparison of the work done by the different Chemical Examiners. As an instance in point, Dr. VanGeyzel reports that the Bombay analyser is not required to do more than certify to the presence or absence of poison in cases of suspected poisoning and that he is specially exempted from undertaking quantitative estimation of poison found in such cases except when he receives early intimation that he should. The Calcutta Chemical Examiner specially reports in his last annual review the particulars of *three cases* in which quantitative estimation of poison was made. From this circumstance it would appear that he also is not obliged to estimate the amount of the poison found in each case. Under

these circumstances the chemical examination in cases of suspected poisoning involves far less work than is necessary for the more tedious quantitative analytical process. In Madras, on the other hand, the Chemical Examiner is not so exempted and it has become an established rule of practice for the past 20 years at least that the Chemical Examiner is expected to estimate the quantity of poison found in every case. The Calcutta and Bombay Chemical Examiners would in accordance with their orders be required to certify only to the presence or absence of poison in the case of miscellaneous articles, other than viscera, which are submitted for chemico-legal examination; in Madras, on the other hand, the Chemical Examiner is required, not only to certify to the presence or otherwise of poison in such articles, but also to identify the articles themselves. The analytical work involved under the two different circumstances does not bear any comparison.

8. The Chemical Examiner's duties are prescribed in such terms that medico-legal analyses are his first duties to which every other kind of analyses must give way, and therefore the analytical work in medico-legal cases is carried out as thoroughly as possible; this being the case the amount of work performed is not to be measured by a numerical expression. Dr. VanGeyzel takes, for example, a case of poisoning by compounds of both arsenic and mercury. An Examiner who is only required to certify whether poison is present or not could perform all the work required for his purpose in the case in three or four hours. The detection of arsenic and mercury is easily made by a single test and the examination of the case is then complete. On the other hand, in Madras the analysis is carried beyond this stage and the more difficult and tedious portion of the work begins here. The two metals have to be separated from the viscera, they then have to be separated from each other and their quantities weighed in the several articles separately, work which cannot possibly be performed under five days at the very least, and that provided no other work is allowed to interrupt the Examiner.

9. The Chemical Examiner further points out that the measure of the work done is proportionate to the number of cases in which poison is found to be present. The larger the number of real poisoning cases, the larger the amount of work to be performed in connection with them. The percentage of detections to (human) cases examined was —

In Bengal	1893.	1892.	1891.
„ Bombay	45.9	45.6	43.4
	45.6	45.0	49.6

In Madras the detections have been 60, 65, 52, 59 and 65 per cent. in human cases, and 70, 83, 77, 85 and 84 per cent. in cattle cases, during the five years beginning from 1889 to 1893 inclusive.

10. While, therefore, the nature of the medico-legal duties in Madras requires more extended analytical work and takes up more time and attention, the number of articles examined in these cases has also risen during the past four years from 864, 892, 1,034 to 1,257; whilst the number of such articles in Bombay, North-West Provinces and Oudh and in the Punjab has, through the same period, remained practically stationary, in reality they have increased.

11. The result of the excess of work at the Madras Laboratory is that the staff can never take a public holiday of any kind, and are obliged to work through the recognised Easter, Christmas and other holidays and sometimes on Sundays — simply to be order to work off arrears. This state of tension, which has existed for the past four years, is not conducive to the efficient discharge of the work, which requires very serious attention and is by no means healthy occupation.

12. With reference to the suggestion in paragraph 4 of your letter, I am to point out that the remedy would not meet the case, as the difficulty is of a permanent nature. Even were the staff employed solely on medico-legal cases it would prove insufficient to keep the work current.

13. I am to express the hope of the Government that, in the circumstances now brought to notice, very early sanction may be accorded to the proposed reduction in the salary of the Assistant Chemical Examiner, Madras. I am to request the favour of a telegraphic reply to this communication.

I have the honour to be,

Sir,

Your most obedient servant,

OOTACAMUND,
13th October 1894.

hD Chief Secretary

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