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report Reviewing the
— for 1891—
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~~of India Home Dept.~~

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READ AGAIN ORDER OF GOVERNMENT, DATED
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of 18

ENCLOSURE

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CHEMICAL EXAMINER'S OFFICE,

Madras, 22nd March 1892

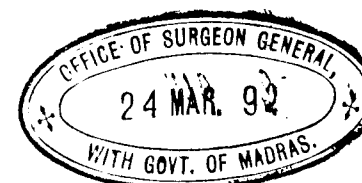
No. 299.

From Surgeon Major J. H. Pope M.D. B.Sc. *JHP*
Ag. CHEMICAL EXAMINER,

Madras,

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To



THE Surgeon General
with the Government of Madras

SIR,

I have the honor to forward
the Annual report of the Chemical
Examiner's Department for the year
1891, for transmission to Government,
at an early date, as the report is
due with Government on the 1st proximo.

I have the honor to be,

Sir,

Your most obedient servant

JHP

M.D. B.Sc.

Ag. Chemical Examiner.

2516

1892.

From

THE CHEMICAL EXAMINER,

MADRAS,

To

THE Surgeon General
with the Govt. of
Madras.

No. 299

Dated

Received

22nd } March 1892

ENCLOSURE.

Subject.

Forwarding the
Annual Report of
the Chemical Examiner's
Department for the
year 1891, for transmission
to Govt. at an early date.

CHEMICAL EXAMINER'S OFFICE,

Madras, 22nd March 1892.

No. 300

From

Surgeon Major F. H. Pope M. S. B. Sc
CHEMICAL EXAMINER,

Madras,

To

THE Chief Secretary to Government
Public Department.



SIR,

I have the honor to submit the
annual report of the work done in the
Chemical Examiner's Department during
the year 1891. The office was held by Doctor
Van Gijzel the permanent Chemical Analyst
till 30th March 1891, when I relieved him. Dr.
Grant acted for me when I went on
privilege leave for a month and
a half from 15th August 1891, and
I resumed charge from him on
29th September 1891.

2.

2

The number of Medico-legal —

Examinations exceeded those in the previous year
by 41 cases and the actual number of Analyses
performed in this Section has also exceeded
the work done in the last 4 years.

481²Table No. I.

No. I

3

La 5

Label

	Number of Cases investigated		Number of articles examined	
	1891	1890	1891	1890
Investigations.				
Arsoning	116	116	499	609
Do	84	54	214	151
	44	33	172	99
	3	3	7	5
Total	247	206	892	864
Cases.				
Municipalities	745	855	745	855
	26	30	26	30
The Customs Department	1136		1136	
Total	1907	885	1907	885
Grand Total	2154	1091	2799	1749

A. - Medico-legal Inves

cases of suspected human poi

Do Do Cattle

Blood Stains &c.

Seminal Stains

B. - Miscellaneous anal

For Government Departments and

For Private parties and Firms

Spirits tested for observation for

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Medico-legal Section.I. Cases of Suspected poisoning (Human)

3. The number of Analyses performed under the heading "Human poisoning" was smaller than in the previous year, while there has been a large increase under the heading "Cattle poisoning" "Blood and Seminal Stains." The 116 cases of Human poisoning this year included 499 articles requiring examination, and the number in which poison was detected was 61 or 52.58 per. Cent. The corresponding number last year was also 116 which included a large number of articles requiring examination viz, 609 and the percentage of detection was 65.52. The usual information regarding these cases of Human poisoning, is shown in the two following tabular statements

42

Districts received from	Number of Cases	Number of Cases in which patients were detected	Number of individuals affected	Number of deaths	Number of analyses	Poisons																				
						Inorganic						Organic														
						Arsenious oxide	Arsenious oxide and Arsenic Salt	Arsenious oxide and Arsenic	Arsenious oxide and Phosphoric	Arsenious oxide, Phosphoric and Arsenic	Inorganic Salt	Phosphoric	Arsenic	Calcic phosphoric	Phosphoric	Lead	Opium	Picrotoxin	Santonine powder	Styphnine						
Amantapur	4	2	5	2	15	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Arct North	4	4	12	1	24	2	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
Arct South	4	2	4	3	8	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.
Bellary	1	1	15	..	8	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Banara South	1	.	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Bimbarone	3	2	8	2	15	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Biddappa	7	5	11	6	42	2	.	.	.	.	.	1	.	1	.	.	.	.	.	1	.	.	.	.	.	.
Bangann	4	3	4	3	32	.	1	.	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.
Godavari	8	4	13	8	57	2	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
Histia	5	1	5	4	20	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hosur	1	1	4	..	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mandras	2	1	2	2	18	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mandura	7	2	15	4	28	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Malabar	3	2	3	3	18	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
Mellone	5	1	4	.	9	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Salem	4	3	8	4	20	2	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
Tanjore	7	3	7	6	39	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
Tichinopoly	5	2	18	6	25	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Tinnevely	3	2	7	4	22	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
Vizagapatam	5	5	12	3	29	4	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
Total for the year 1891	83	46	158	42	430	25	1	.	.	.	.	5	.	4	1	.	2	4	.	1	3	.	.	.	.	.
Do do 1890	92	46	201	71	551	40	.	1	1	1	9	1	2	2	3	.	2	1	.	2	.	.	.	.	.	.

Table III. Human Cases - Class. B.
Including Cases in which no viscera or excreta were received for examination, but only suspected substances food &c.

Districts received from	Number of Cases.	Number of Cases in which poisons were detected	Number of analyses	Poisons.														58
				Inorganic							Organic.							
				Arsonious oxide	Arsonious oxide & arsenic, sub and natural	Arsonious oxide & arsenic, sub and natural	Realgar	Opium	Mercuric Salt	Acetic	Benzoic	Stearic	Chloroform	Hydrocyanic	Opium			
Anantapur	1	1	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	
Arco North	2	1	2	.	.	.	.	.	1	.	.	.	.	.	.	.	.	
Arco South	2	2	4	.	.	.	.	.	.	.	.	1	.	.	.	1	.	
Bellary	5	3	26	.	.	.	.	1	.	.	.	.	1	.	.	1	.	
Chingleput	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Chintamani	2	2	4	1	.	.	.	.	.	.	.	.	.	.	.	1	.	
Chittoor	2	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Chittoor	1	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	
Chittoor	2	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Chittoor	3	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Chittoor	2	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Chittoor	2	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Chittoor	2	1	2	.	.	.	.	.	.	1	.	.	.	.	.	.	.	
Chittoor	1	1	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	
Chittoor	1	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Chittoor	1	1	4	1	.	.	.	.	.	.	.	.	.	.	.	.	.	
Chittoor	2	1	3	1	.	.	.	.	.	.	.	.	.	.	.	.	.	
Chittoor	1	1	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	
Total for the year 1891	33	15	69	4	.	.	.	1	1	1	1	.	1	2	1	1	.	
Do Do 1890	24	10	58	3	1	.	.	.	.	2	1	.	1	.	.	1	.	

4.

There were 55 cases of alleged poisoning
in which the Chemical Examination did not
result in the discovery of any poisons, and which
may be primarily divided into two groups viz: -

Group i. consisting of 30 cases
which were unattended by

a fatal result, and

Group ii - of 25 cases which ended
fatally.

I submit herewith 2 tabular
statements explanatory of the above groups.

Group i - consisting of cases which were unattended
by a fatal result. 1977

Station	Date of Receipt of case	Brief abstract of case
1. Trichendoor	5.1.91	Muddy and frothy water supposed to be poisoned.
2. Ramaswaram	31.1.91	Woman attempted suicide on account of a quarrel with her son.
3. Kudlighi	5.2.91	Suspected abortifacient
4. Anantapur	24.2.91	Suspected poisoned jaggery
5. Madras	26.2.91	Child vomited after Ipecac and vomit examined under suspicion
6. Tirukooloor	20.3.91	Cumboo food kept 4 days supposed to be poisoned, and eaten by woman.
7. Sivaganga	26.3.91	Vomited matter mixed with earth.
8. Vaniemboddy	9.4.91	Chatty containing boiling water supposed to be poisoned.
9. Datchepally	14.4.91	Suspected substance.
10. Pradatur	20.4.91	Native shoes supposed to have been smeared with poison.
11. Nellore	21.4.91	Suspected poisoned food. Individual who ate it sent to Hospital and showed no further symptoms.
12. Madras	13.5.91	Milk and Soda supposed to have been tampered with domestic to poison.

Group 1 - continued

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Station	Date of Receipt of case	Brief abstract of Case
13. Nandyal	15. 6. 91	Bengal gram mixed with Jaggery. No poison
14. Gudiyatom	16. 6. 91	Suspected substance. No poison.
15. Jaggayapur	22. 6. 91	Remand prisoner. Supposed to have been poisoned. Recovered after treatment. No poison in vomited matter.
16. Kavali	25. 6. 91	Few persons, after meal, felt drowsy. No suspicion of poison and none found.
17. Amalapur	25. 6. 91	Woman ate her food and supposed to have been poisoned. Felt giddy, etc. Recovered. No poison.
18. Simshuli	26. 6. 91	Woman ate some Cornbobs and found it bitter. No poison.
19. Mayavaram	29. 6. 91	Suspected poisoning by Arsenic none found.
20. Madura	24. 7. 91	Boiled Maize Conjee, eaten by 3 persons one day and again by some others next day - symptoms, vomiting etc. no poison
21. Cuddapah	24. 8. 91	A man and wife ate gingely seed - vomited and purged. No poison.

Group 1 - continued.

Station	Date of Receipt of case	Brief abstract of case
22. Ongole	24. 8. 91	Woman ate Bengal gram and jaggy, vomited and recovered. No poison.
23. Ongole	24. 8. 91	Suspected substance in case 22. No poison.
24. Chingleput.	28. 8. 91	Suspected (love charm). No poison found.
25. Krishna + +	18. 9. 91	Suspected green substance put into chutney. Not poisonous.
26. Adambic	6. 10. 91.	Suspected poison in rice and Chutney. No poison.
27. Tuticorin	14. 10. 91	A young man felt thirsty and giddy, recovered in evening after vomiting. No poison.
28. Nandyal	23. 11. 91	A woman was given some meal as a love potion, to recreate passion for an old lover; this was tasted and felt bitter and hence it was rejected. No poison was found in the meal.
29. Guntur.	30. 11. 91	Suspected boiled rice. No poison.
30. Tuni	31. 12. 91	Suspected food with butter milk. Symptoms of poisoning in his persons male and female. Both recovered after treatment. No poison could be found.

Group II - Consisting of cases which ended fatally, 11

Station	Date of Receipt of case	Brief abstract of case
1. Tranquebar	5.1.91.	Reported case of cholera, but doubtful for Post. Mortem symptoms.
2. Madras.	20.1.91.	Woman admitted into Hospital with severe convulsions, unconscious with dilated pupils. Died after two days in Hospital. Probably vegetable alkaloid poison, not detected.
3. Trichinopoly	23.1.91	Suspected case of cholera but doubted by relatives.
4. Trichinopoly	18.2.91	A native soldier, ill for some days said to have died suddenly, inflammation of all alimentary tract, no poison could be detected.
5. Cherala	11.3.91	Case of drowning. Suspected on account of no information being obtainable.
6. Anantapur	16.3.91	Criminal abortion with suspicion.
7. Coonadu	2.4.91.	Suspected imbuter poison. Intense inflammation of stomach &c. Death sudden, no poison could be found.

Station	Date of Receipt of case	Brief abstract of case
8. Fivale	3.4.91	Suspected suicide by Oleander but no alkaloids found.
9. Trichengode	20.4.91	Suspected heart disease. giddiness.
10. Yambur	20.5.91	Sudden death of lad after food, a suspicious case, but no poison could be detected.
11. Ellore	21.4.91	Suspected poisoning by medicine. Post. Mortem examination. Dislocation of neck was found.
12. Rajapur.	21.5.91	Suspected poisoned liquor. Post. Mortem examination. Congestion of lungs and heart. Cavities dilated &c, sufficient. Cause for death.
13. Malabar	8.6.91	Woman ill for twenty two days supposed to have been poisoned by drugs.
14. Amalapur	25.6.91	Death from supposed violence. Medical evidence. Death from natural causes.
15. Mercanum	6.7.91	Suspected cholera case.

Group II - Continued.

Station	Date of Receipt of case	Brief abstract of case
16. Erode	22. 7. 91	Suspected poisoning of a female. was ill for twenty days. Post mortem ~~examination~~ symptoms resembling mercurialism
17. Erishuli	24. 7. 91	Poison supposed to be administered with sugar to a boy 5 years old half an hour after food. Boy lived for five days and died. Suspicious matter found ^{at} Post mortem, was analyzed and found not to be poisonous.
18. Erichinopoly	20. 8. 91	Probable Cholera case
19. Rajamundry	4. 9. 91	Supposed over dose of Aconite in old man. no alkaloid detected
20. Kumbakonam	22. 9. 91	Suspected poisonous butter milk taken by a man who, half an hour afterwards got convulsions and an epileptic attack and died. no poison
21. Kadiri	16. 11. 91	Suspected poisonous drugs taken by two children. The drugs which were various were examined and no poisonous one detected.

Group II - Continued.

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Station	Date of Receipt of case	Brief abstract of case
22. Cuddalore	23. 11. 91	Suspected criminal abortion. Death from tetanus after twenty days. No poison could be detected.
23. Kondapur	1. 12. 91	Suspected poison. Man fell from coconut tree during a thunder storm and body found by others. No poison detected.
24. Paralakudi	4. 12. 91	Sudden death of child eight months old. No poison found.
25. Panyakulam	18. 12. 91	Five persons supposed to have been poisoned and two died. Suspected Arsenic. None detected.

5. There were sixty-one cases in which poison was detected and of the individuals poisoned thirty-nine died. The poisons detected include thirty-eight Inorganic and twenty three — organic poisons

6. Inorganic Poisons. — The following tabular statement affords the usual information regarding cases which occurred from this class of poisons for five years: —

Table IV.

	1891	1890	1889	1888	1887
Cases included in class A.	31	52	36	31	40
—do — do — do — B.	8	7	13	10	11
No. of individuals affectedd in A and B.	105	159	98	76	90
No. of deaths in A and B.	26	47	25	21	30

7.

The following are a few of the more —
important cases of poisoning caused by inorganic
Substances.

(A) Arsenic

(1) Woman admitted into Hospital
in a collapsed condition, great
pain in abdomen, tongue and
gums red, and swollen, eyes
slightly red, and a vesicular
eruption on both sides of neck.

She stated that she was living
in concubinage with a man
whose brother was jealous of
her and that she one day went
to the temple at which her
paramour and his brother were
cooks and that the brother
gave her some food. After
eating

eating this food, she was seized with vomiting and purging, which continued for about a week.

She died after admission into hospital.

2. There was a quarrel between neighbours, and a native quack, who was discovered meddling with the rice flour in the house of one of these neighbours, was suspected of having poisoned the flour, inasmuch as fifteen persons who ate cakes made of it suffered from vomiting and purging. The quack was found guilty and sentenced to death.

3. A family of 5 persons was
some w

Seized with vomiting and purging
 soon after supper, and it was
 suspected that a neighbour who
 was at enmity with the son in
 the family and who came into
 the house to light a cigar must
 have poisoned the food. This
 suspicion increased inasmuch
 as the man absconded and
 was arrested.

4. Four persons (a female, her
 son, her father, and another) after
 a meal prepared by the
 step-daughter had burning
 sensation from mouth to
 stomach vomited and purged

Three died. The survivor
 some w

one only, tasted the Curry which
 She said had a medicinal taste

The two accused were the step-
 daughter and her son-in-law.

They were found guilty; the
 first was sentenced to transpor-
 -tation for life and the second
 to death.

5. A woman after eating jagger
 given by her paramour, vomited
 and purged and complained
 of burning sensation in
 the stomach. died 5 days
 afterwards.

6. A family of 5 persons soon
 after taking ragi food —
 experienced tingling &
 me w

20
in throat and down to Stomach and
two died. It was suspected that
a female who was at enmity with
a member of this family mixed
something in the flour (ragi)
when it was being ground.
Arsenic was found in the flour.

7. A Kormati after taking coffee
given to him by his concubine
vomited and purged and died.

His wife and sons lived apart
from him while his daughter
stayed with him and his
Concubine. It was suspected
that his wife and sons got
some white powder mixed
in the coffee to poison him.

That he should make me
to some w

his property to the daughter; the concubine was tried for murder and acquitted as the case was not proved.

8. A man went to his father-in-law's house on the 20th July and died on the 21st idem. As there was no suspicion about the cause of his death he was buried. His father suspected that the death was due to poison and had the body exhumed and viscera &c were sent for Chemical examination. About 37 grains of ^{white arsenic} ~~arsenic~~ were found to be present in the viscera alone.

A woman was originally present in

Supposed to have died from
 Cholera, information was
 however given by an enemy
 of her husband's that she had
 been poisoned by her husband
 himself. It was known that
 the husband and wife were in
 bad terms with each other: and
 Chemical examination was
 considered necessary. She
 suffered from vomiting and
 purging, and about one-fourth
 of a grain of White Arsenic
 and one-tenth grain of White
 Arsenic were extracted from
 the viscera and vomited matter
 respectively.

the jag family of three (husband
 Arsenic w

wife and child, after eating
their morning rice, perceived
the previous night were attacked
by vomiting half an hour
afterwards. White powder was
found at bottom of the rice
pot which proved to be White
Arsenic after examination.

11. A man took betel nut powder
from a friend with whom he
went on a journey. He had
peculiar taste in his mouth:
vomited four times, and had
a burning sensation in mouth
and throat. The powder was
found to ^{contain} ~~be~~ White Arsenic

12. Buzel gram mixed
tho jaggy was taken by
Arsenic

one-fourth grain of Corrosive

25 24

three persons, it tasted bitter,
after being eaten, a burning
sensation was felt from
the throat and down to the
intestines. One of the persons
vomited blood. The accused
was sentenced to six months
rigorous imprisonment.

8. (b) Compounds of Mercury

1. A female child aged four
years was given sweetmeat
by her step-mother; three hours
afterwards she complained
of a burning sensation in
the throat and stomach, became
restless, vomited and purged
lots of blood. Arsenic was

one-fourth grain of Corrosive
Sublimate.

2. A woman who was quite
well one evening took her usual
evening meal which was
partaken of by her husband
mother-in-law and her husband's
Concubine also, and she suffered
from giddiness and inability
to talk, vomited and purged
and died in twelve hours. The
other members of the family
who partook of the meals
also said that she died of
difficulty of breathing notwithstanding
standing their application of
heated bran to her chest. The
no one woman. The ^{viscera} ~~viscera~~ ^{viscera}
fores

viscera contained seventeen grains
of Corrosive Sublimate

3. A woman left her husband
and afterwards lived with
another man as his mistress.
Another individual on several
occasions invited her to his
house, but she had refused
saying that by way of relation-
ship he was her father. In
order to put an end to her life
the accused who used to frequent
her paramour's house threw
some medicine one evening
in the "kum cha" in which food
was served and which belonged
to the woman. The suspected
food

food contained about two
 grains of Corrosive —
 Sublimate. The accused
 was sentenced to three
 years rigorous imprisonment.

Organic Poisons.

9. The number of cases of this class, has
 increased slightly this year, as will be seen
 from the following table.

Table V.

	1891	1890	1889	1888	1887
Cases included in Class A—	15	14	33	20	9
—do—do—do—B—	7	3	8	12	2
No. of individuals affected in A and B.	42	28	59	51	20
No. of deaths in A and B—	13	7	28	17	9

01/07/28
Organic Poisons

10. Opium was detected in six cases and of these the following are noteworthy.

(a) A woman was said to have died either from a kick in the stomach or from cholera or from poison. There were no symptoms observed during life. The Medical officer who held the Post Mortem examination did not pronounce any opinion as to the cause of death, hence a chemical examination was ordered and opium was detected.

(b) A man went into an arrack shop to drink and on enquiry of his observing him

him preceded him and threw
 something into the jar in
 which arrack was stored and
 on being questioned as to the
 cause of his doing it by the
 owner, he replied that he
 wanted one rupee worth of
 arrack and that he simply
 examined the jar to see —
 whether it contained sufficient,
 but the first named drank
 five ounces of the Arrack
 and soon after vomited,
 complained of cramps
 and pains in the body and
 the jar of arrack was found
 to contain opium.

(c) A man became senseless and fell down after eating his meal. Salt of a black colour was placed in the food by his wife at the instigation of her paramour.

11. Strychnine was detected in three cases viz:—

(a) Six persons who were in the habit of stealing toddy went one day to a date tree stole some toddy and drank it. All of them suffered from drowsiness, dizziness &c and one who took double the quantity than the others took died. It was suspected that the toddy drawers

to find out the thief had
mixed some poisonous drug
in the toddy pots previously

(b) A woman said to have
committed suicide by
taking *ura-vomica* juice
from the leaves of the *Stychnum*
plant on account of her not
being allowed to go to her
mother's house; Symptoms
observed: Shivering, —
grinding of teeth and
contraction of the muscles

(c) A woman committed
suicide as she was beaten
by her paramour.

Aconite

12. Aconite was detected in the following
three cases, and in another case of Suicide.

1. A widow, who became pregnant, was given a black powder by her paramour to induce the abortion. She suffered from colic, looseness of bowels, and died.

2. A woman of jandy caste who went into the fields in search of rats to eat, was found dead, presumably from Snake bite.

3. A woman and two others are jagging picked up on the pond side. The woman became unconscious
three

three hours after and died. Two
others suffered from numbness
of tongue and mouth, burning
sensation in stomach and
gradual unconsciousness.

13. Juice of the Calotropis gigantea was detected in two abortion cases, in one of which a stick dipped in the juice of Calotropis gigantea was given to a woman by her paramour to cause abortions, but the woman objected and produced the same before Magistrate, and in the other case also a stick was introduced into vagina of a woman and it caused abortion. In the latter case the first prisoner was sentenced to one-year's rigorous imprisonment and the second to four months rigorous imprisonment, whereas in the former case the result of the enquiry was not communicated.

14. Atropine was found in Bengal gram pudding in a case, in which

which a girl was given some by her neighbour. It is as well to note here that the Magistrate in this case after he was in receipt of the certificate enquired whether the "alkaloid Atropine" was poisonous.

15. Oleander was detected in two cases of Suicide.

16. Gangah was found in one case
II. Blood cases.

17. The following tabular Statement furnishes the usual information regarding these cases.

Table VI

Table VI - Blood Cases.

Districts received from	Number of Cases.	Number of Cases in which Blood was detected	Number of Examinations
Anantapur.	2	1	5
Arcoth North.	4	4	10
Arcoth South	1	1	1
Bellary	4	3	17
Bhungleput	2	2	3
Bimbatore	1	1	5
Buddappah	10	9	65
Godavari	3	1	6
Histna	3	1	13
Humnab	4	2	9
Madras	2	2	5
Malabar	4	1	17
Kallone	1	1	6
Salem	1	1	5
Tanjore	1	1	4
Tinnevely.	1	"	1
Total for the year 1891	44	31	172
Do Do 1890	33	27	99

18. Mammalian blood was detected in twenty-two cases out of thirty one, in which the presence of blood was established. Twenty-two of the cases, in which examinations for blood were conducted, related to the crime of murder, three to homicidal wounds, one to rape; and in five cases no particulars were received.

III. Spermatie stains.

Table VII.

Districts received from	Number of cases	No. of cases in which semen was detected	Number of examinations
Arcot. North	1	-	4
Malabar	1	-	1
Trichinopoly	1	-	2
Total for the year 1891	3	-	7
do - do - 1890	3	1	5

19. All the three cases referred to the crime of "rape."

IV - Cases of Suspected Cattle poisoning

20. There has been a large increase in the number of cattle cases examined this year as compared with former years. The number this year is eighty-four as compared with fifty-four last year, and the poison is as usual Arsenic in some form. In one case the juice of the Calotropis gigantea was used as a strong irritant.

Table VIII.-Cattle Cases.

39

Districts received from	Class. A					Class. B.							
	Number of Cases	Number of deaths	Number of Cases in which poisons was detected.	Number of analyses.	Nature of poisons	Number of Cases.	Number of Cases in which poisons was detected	Number of analyses.	Nature of poisons				
					Arsenious Oxide	Arsenious Oxide and Realgar	Calciferous Pyrophosphate						
Anantapur	8	9	4	22	4	.	.	2	2	2	2	.	.
Arant mouth	1	2	1	3	1	.	.	.	.	.	.	.	.
Bellary	1	1	.	3	.	.	.	.	.	.	.	.	.
Bhimsanpet	.	.	.	.	.	.	.	1	1	1	1	.	.
Bimbaru	9	9	8	20	7	.	1	3	3	3	2	1	.
Buddanpet	3	4	3	9	3	.	.	1	1	1	1	.	.
Ganjam	1	1	1	3	1	.	.	1	1	1	1	.	.
Gudavari	5	7	4	29	4	.	.	2	2	2	2	.	.
Kistna	9	15	5	35	5	.	.	1	.	1	.	.	.
Kurnool	2	2	2	6	2	.	.	1	.	2	.	.	.
Madara	.	.	.	.	.	.	.	2	1	2	1	.	.
Malabar	.	.	.	.	.	.	.	1	.	1	.	.	.
Nellore	6	8	6	22	4	.	.	.	.	.	.	.	.
Salem	1	3	.	2	.	.	.	5	5	5	5	.	.
Tanjore	.	.	.	.	.	.	.	3	1	3	1	.	.
Trichinopoly	5	5	4	16	4	.	.	2	2	2	2	.	.
Tinnevely	4	5	4	13	4	.	.	1	1	1	1	.	.
Vizagapatnam.	.	.	.	.	.	.	.	3	3	4	3	.	.
Total for the year 1891	55	71	42	183	41	.	1	29	23	31	22	1	.
Do 1890	34	70	26	129	2	1	1	20	19	22	19	.	.

21.

Miscellaneous Section

There has been a decrease under this head
this year, the number of examination being
771 against 885 of the previous year; and of these
26 examinations only were made for private
parties.

Table

Examinations made for Government Departments of
4 4347

Received from		Nature of Substance	No. of Examinations	Total Number of Examinations for the year
Assistant Adjutant. General Madras District	{	Water	4	4
Assistant Physician General Hospital Madras.	{	Urine	2	2
Board of Revenue	{	Salt	222	
		Spirits	10	
		Malt liquor	4	
		Souli Sori	1	
		Beer	18	
		Opium	5	
		Pills	1	
		Salt petre	1	
		Toddy	1	
		Ball of Spice	1	
		Cigarettes	1	
		Medicine	1	
		"Henda"	2	
Sample of drugs used in the manufacture of		4	372	

Examinations made for Government Departments & continue

Received from	Nature of substance	No. of examinations	Total No. of examinations
Chemical Laboratory	Camphor	15	15
Commissioner's Department	Malt liquor	6	
	Brandy	4	
	Rum	3	
	Portwine	3	16
	Methylated Spirit	5	
	Kerosine oil	45	
	Rangoon oil	6	
	Engine oil	1	
	Cylinder oil	1	
	Lubricating oil	2	
Collector of Customs	Spirits	1136	
	Machine oil	1	
	Mineral oil	2	
	Carth oil	2	
	Sequah's Instant Relief	2	
	Sequah's cure	1	
	Manure	1	
	Blasting Gelatine	6	
	Gebonite	3	1214

Examinations made for Government Departments &c - continuing

Received from	Nature of substance	No. of examinations	Total No. of examinations for the year
Collector of Sea Customs.	Dynamite	7	1244
	Caoutchoucine	7	
	Unfermented wine	1	
	Marsala	1	
	Benzine	1	
	Casewee	9	1240
Collector, South Arcot.	Milk Punch	1	
	Ind oil	1	
	Caoutchoucine	4	6
—do—, Trichinopoly	Water	3	3
Deputy Collector, in charge of Customs, Malabar.	Black Salt	1	1
Deputy, Surgeon-General Southern District.	water	1	1
District Medical Officer, Villor	Opium	2	2
— " — " —, Salem	Phosphate of Iron	1	1
— " — " —, Rajamundry	Water	3	3
Executive Engineer, Rucki Kuka Division, Gurgaon	Water	1	1

Examinations made for Government Departments &c (Continued)

Received from	Nature of substance	No. of examinations	Total No. of examinations in the year
Executive Engineers Military works, Bangalore	Water	6	6
Executive Engineers Military works, Madras	Water	3	
Executive Engineers Military works, Madras	Charcoal	1	4
Medical officers, Her Majesty's Penitentiary, Madras	Water	4	
Medical officers, Central Jail, Rajamundry	Water	3	
Superintendent, Hill Jail Parvatepur	Water	1	
Superintendent, Central Jail, Vellore	Water	18	26
Magistrate, Second Class Bellary	Ghee	3	3
Medical Officer, Station Hospital Madras	Brandy	1	
— do — do — do — do —	Claret	1	
— do — do — do — do —	Water	2	4

Jail Department

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Examinations made for Government Departments &c / Continued

Received from	Nature of Substance	No. of examini- nation	Total No. of examina- tions
Medical Officer, Station Hospital Ponniamalle	Water	9	9
do do do do do St. Thomas Hospital	Water	26	26
do do do do do Regimental Hosp. Fritcham	Water	2	2
do do do do do Samalkot	Water	4	4
do do do do do 16th Regiment Secunderabad	Water	3	3
do do do do do Palicuv	Opium	1	1
do do do do do Bellary	Water	2	2
do do do do do Anantapur	Water	1	1
do do do do do Vellore	Opium	2	2
do do do do do Palikonda	Water	1	1
do do do do do 9th Regiment Vizagapatnam	Water	13	13
do do do do do 27th M. I. Berampore	Water	10	10
do do do do do 14th M. I. Bellary	Water	1	1
Medical College	Calculus	3	3
Military Secretary to His Excellency the Commander in - chief.	Water	1	1

Examinations made for Government Departments &c/Continued

Received from		Nature of Substance	No. of examinations	Total No. of examinations for the year
Municipalities	Coimbatore	Water	3	
	Onjole	do	5	
	Madras	do	11	
	Tanjore	do	3	
	Salem	do	1	
	Vaniambadi	do	3	
	Kurruol	do	1	27
Officers in charge. Special				
vaccine supply depart		Safe & Cloth	4	4
ment, Bangalore				
Ordnance officer, Arsenal		Soap	4	4
Madras				
Principal medical officer		Disinfecting powder	1	
Madras				
do do do		Carbolic powder	5	
do do do		Sulph. Hydrocyanic acid	1	
do do do		Cocaine	5	12

Examinations made for Government departments & continuing

Received from	Nature of substance	No. of exami- nations	Total No. of exami- nations for the year
Principal Medical Stores, Standard Station			12
Madras.	for water Analyses	3	
do do do	Pills	1	
do do do	Cocaine Hydrochloride	1	17
Sanitary Engineer from Coimbatore	Water	3	
do do do	Tuberculosis	4	
do do do	Timuvelly	2	9
Senior Surgeon, General Carrosine Cotton		1	1
Hospital, Madras			
Surgeon, (Second) General	Water	1	1
Hospital, Madras			
Superintendent, Government	Adulterated Milk	1	1
Lying-in Hospital Madras			
Superintendent, Army Clothing	Naphthalene	2	2
Madras			
Sub Assistant Supt. of	Bichromate of	1	1
Telegraph Stores	Potash		
Superintendent of Stationery	Inks	16	16
Surgeon General with Govt. of Madras	Inks		
Surgeon to His Excellency the Governor	Water		

Examinations made for Government departments &c / Continued

Received from Nature of substance No. of examinations made No. of substances examined

Private Parties and Firms

Water	10	
Saltpetre	1	
Crude saltpetre	1	
Cocoanut oil	1	
Silver plate	5	
Soap	1	
Coal	1	
Beer	1	
Urine	1	
Kola water	1	
Linseed oil cake	1	
Carbolic disinfecting powder	2	26

Total 1907 190

4849 49

22. Testing of Spirits by the method of
Observation.

This method of testing was introduced by the Government during the early part of the year and a Special Assistant was deputed to learn the work in this office and after sufficient knowledge of the methods to carry on the testing of all samples sent from the Customs office Madras and from the different parts such as Cochin, Calicut &c. The number of samples tested has been 1136. This method is adopted with a view of getting more accurate estimates of the percentage of alcohol in different samples and it quite supplants the old test by means of the hydrometer. The Government intend to give this method of testing a trial for one year after which it will be compared with that of the old method from a financial point of view.

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The Assistant in charge has been thoroughly trained and is quite capable of carrying on the work independently and arrangements are being made to move his work to the Customs Office as a more convenient place for all the parties concerned.

The supervision of this branch of work has added largely to the other responsibilities of the Chemical Examiner.

23. Waters. The number of Analyses under this head has increased from 158 last year to 171 this year. Analyses are only undertaken when it is convenient to perform them, but every endeavour is made to meet the requirements of Municipalities, Jail Departments and others. There were also 15 samples of Rain water examined and the results are given below.

Analyses of Madras Rain-water - Monthly Results, 1891.

	February	May	June	July	August	September	October	November	December	Total
Rainfall	.89	.46	.22	.50	2.14	1.18	11.24	3.55	4.50	24.68
Total Combined Nitrogen (as N.H. ₃) <i>th. per pore</i>	.050	.037	.019	.041	.214	.093	.569	.289	.129	1.44
Chlorine (as NaCl.)	1.527	.292	.287	.521	2.841	2.026	10.368	3.709	2.907	23.77
Solids	6.040	1.040	.994	1.131	4.841	5.338	28.291	8.031	8.678	64.384
Ash.	2.013	.520	.496	.565	2.368	2.669	11.469	4.015	3.963	28.07

577
24. Salt. Three hundred and twenty-two —
Samples were analysed during the year.
The two salt assistants being more than
fully occupied with the analyses.

25. Customs work. One hundred and four
examinations were made for the Customs
Department. There were sixty examinations
performed under the Petroleum Act, being
a much larger number than usual; and
sixteen examinations under the Explosives
Act.

26. In the month of August when I was
on privilege leave certain correspondence was
carried on between this office and a Mr. Spatz
a barrister who was appointed by the crown
to defend an individual, who was arrested
in charge of murder in Triplicane (Madras).
The correspondence led to serious imputations
^{and being made}
~~very~~ against the Police of this city and
the

5877
the Commissioner of Police referred the matter to Government. On my return to duty in October I carefully looked into the whole matter and I was led to suspect the Assistant Chemical Examiner Mr. W. S. Newman of divulging matters of the greatest confidence to the outside public. An investigation was ordered by the Government and was held in this office and the result of the same was communicated. In the meanwhile Mr. Newman was reported on a second charge of misappropriating large quantities of spirits which were being tested for the Customs office, and I suspended him from his duties.

His duties were immediately undertaken by the First Assistant in this office — Mr. M. Goolab Roy and I cannot speak too highly of the hardworking, zealous and painstaking way in which he has undertaken the duties to my entire satisfaction.

The work of the First Assistant

Mr. M. Goolab Roy was undertaken by the Second Assistant and the Clerk of the office, who had also some practical knowledge of laboratory work and they have performed their duties creditably.

27. The entries in the Service books have been duly made and kept up to date.

28. There appears to be still ^{some} ~~unusual~~ difficulty in obtaining the results of trials in criminal cases in which Chemical Examination is sought for, and I would request the Government to again bring to the notice of the Judicial Department the failure in reporting the results of such trials.

29. With reference to last para. of G. O. No. 354, dated 4th May 1891, appended to the Annual report of this office for 1890, I have the honor to furnish the statements therein called for. The Statement ~~Set~~ has been inserted

in this year's Annual report in place of the
one that was usually furnished.

Year	A				B				Total	
	Cases in which viscera or evacuations were examined				Cases in which only suspected food etc was received for examination					
	Total number of cases	Number of cases in which person was detected	Percentage of detections	Total number of cases	Number of cases in which person was detected	Percentage of detections	Total number of cases	Number of cases in which person was detected	Percentage of detections	
1890	92	66	71.74	24	10	41.6	116	76	65.52	
1891	83	46	55.42	33	15	45.45	116	61	52.586	

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year	Number of cases detected	Inorganic poison	Organic poison	Percentage of column 3 to column 2.
1	2	3	4	5
1891	61	39	22	63.93
1890	76	59	17	77.63
1889	90	49	41	54.4
1888	73	41	32	56.2
1887	62	51	11	82.3.

30. A general statement, including the
figures given in the previous tables, is, as
usual, given below.

		Inorganic										Organic									
		Poisons																			

Nature of work		Total number of cases.	Total number of Articles received for examination.	Total number of cases in which
Human cases	class A	83	430	
	class B	33	69	
Blood Stains		44	172	
Semin. Stains		3	7	
Cattle cases	class A	55	182	
	class B	29	31	
Examinations for Government Departments		1881	1881	
For private parties, firms &c		26	26	
Total for the year 1891		2154	2799	1
do do 1890		1091	1749	

00
55
I have the honor to be,

Sir,

Your most obedient servant

W. D. Pe

M. S. B. Sc

Ag. Chemical Examiner.

1892.

From

THE CHEMICAL EXAMINER,

MADRAS.

To

THE Chief Secretary to Govt.

Public Department.

Fort St. George.

No. 300

Dated

22nd

Received

March 1892

ENCLOSURE.

Subject.

Submitting the Annual
Report of the Chemical
Examiner's Department
for the year 1891.

No. 100

WITH THE GOVERNMENT

Madras, 30th March

From

THE SURGEON-GENERAL WITH THE

GOVERNMENT OF MADRAS,

To

THE Chief SECRETARY TO GOVERNMENT,

Public DEPARTMENT,

SIR,

I have the honor to forward the
Annual Report of the Chemical
Examiner for 1891.
2. The Report for 1890 showed a
slight fall in the number of medica-
legal examinations but it is satis-
-factory to note that during 1891
there was an increase both in
this and the number of analysis
performed.

I have the honor to be,

Sir,

Your most obedient Servant,

W. H. Schuchard S.M.G.
Surgeon-General with the Govt. of Madras.

THE SURGEON-GENERAL WITH THE
FROM
GOVERNMENT OF MADRAS,
Madras.

No. 280

Dated 30 March 1892

Received 31 MAR 1892

Encls. 3
No.

Pub. 316-17-7-592

SUBJECT.

Forwards Annual
Report of the Chemical
Examiner for 1891 with
his remarks thereon.

7TH MAY 1892, Nos. 316, 317, PUBLIC.

GOVERNMENT OF MADRAS.
PUBLIC DEPARTMENT.

READ—the following paper :—

From W. F. DEFABECK, Esq., M.D., S.M.G., Surgeon-General, to the Chief Secretary to Government, dated Madras, 30th March 1892, No. 280.

I have the honour to forward the annual report of the Chemical Examiner for 1891.

2. The report for 1890 showed a slight fall in the number of medico-legal examinations, but it is satisfactory to note that during 1891 there was an increase both in this and the number of analyses performed.

From Surgeon-Major T. H. POPE, M.D., General, dated Madras, 22nd March 1892, No. 300.

I have the honour to forward the report for the year 1891 for transmission to Government on the 1st proximo.

From the Chemical Examiner, to the Surgeon-General, dated Madras, 22nd March 1892, No. 300.

From Surgeon-Major T. H. POPE, M.D., B.Sc., Acting Chemical Examiner, to the Chief Secretary to Government, dated Madras, 22nd March 1892, No. 300.

I have the honour to submit the annual report of the work done in the Chemical Examiner's Department during the year 1891. The office was held by Dr. VanGeyzel, the permanent Chemical Analyser, till 30th March 1891, when I relieved him. Dr Grant acted for me when I went on privilege leave for a month and a half from 15th August 1891, and I resumed charge from him on 29th September 1891.

2. The number of medico-legal examinations exceeded those in the previous year by 41 cases, and the actual number of analyses performed in this section has also exceeded the work done in the last four years.

TABLE No. I.

		Number of cases investigated.		Number of articles examined.	
		1891.	1890.	1891.	1890.
A.—Medico-legal investigations.	Cases of suspected human poisoning	116	116	499	609
	 cattle	84	54	214	151
	Blood stains, &c.	44	33	172	99
	Seminal stains	3	3	7	5
	Total ..	247	206	892	864
B.—Miscellaneous analyses.	For Government Departments and Municipalities.	745	855	745	855
	For private parties and firms	26	30	26	30
	Spirits tested for obsecration for the Customs Department.	1,136	..	1,136	..
	Total ..	1,907	885	1,907	885
Grand Total ..		2,154	1,091	2,799	1,749

MEDICO-LEGAL SECTION.

I. CASES OF SUSPECTED POISONING (HUMAN).

3. The number of analyses performed under the heading "Human poisoning" was smaller than in the previous year, while there has been a large increase under the headings "Cattle poisoning" and "Blood and seminal stains." The 116 cases of human poisoning this year included 499 articles requiring examination, and the number in which poison was detected was 61, or 52.58 per cent. The corresponding number last year was also 116, which included a large number of articles requiring examination, viz., 609, and the percentage of detection was 65.52. The usual information regarding these cases of human poisoning is shown in the two following tabular statements :—

From DE St

2

7TH MAY 1892, Nos. 316, 317, PUBLIC.

TABLE II.—Human Cases—Class A.

(Including cases in which viscera or evacuations were examined with or without suspected substances, food, &c.).

Districts received from.	Poisons.																			
	Inorganic.										Organic.									
	Number of cases.	Number of cases in which poison was detected.	Number of individuals affected.	Number of deaths.	Number of analyses.	Arsenious oxide.	Arsenious oxide and mercuric salt.	Arsenious oxide and atropine.	Arsenious oxide and plumbic.	Arsenious oxide, impure opium, and calomel.	Mercuric salt.	Atropine.	Aconite.	Calatropis gigantea.	Datura.	Oleander.	Opium.	Picrotoxin.	Santonine powder.	Stychnine.
1	83	46	158	62	430	25	1	1	1	1	6	1	4	1	1	1	1	1	1	1
Total for the year 1891	92	66	201	71	551	40	1	1	1	1	9	1	2	1	1	1	1	1	1	1
" " 1890																				

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7TH MAY 1892, Nos. 316, 317, PUBLIC.

TABLE III.—Human Cases—Class B.

(Including cases in which no viscera or evacuations were received for examination, but only suspected substances, food, &c.).

Districts received from.	Number of cases.	Number of cases in which poison was detected.	Number of analyses.	Poisons.											
				Inorganic.						Organic.					
				Arsenious oxide.	Arsenious oxide, mercuric salt, and calomel.	Arsenious oxide, ganjah and Gloriosa superba.	Arsenious oxide, ganjah and croton seeds.	Realgar.	Opiment.	Mercuric salt.	Aconite.	Asafetida.	Atropine.	Calatropis gigantea.	Opium.
Anantapur	1	1	1												
Arcot, North	1	1	1												
Arcot, South	2	2	2												
Bellary	5	3	26												
Chingleput	1	1	1												
Coimbatore	2	2	4												
Cuddapah	1	1	1												
Ganjam	2	3	3												
Godavari	3	3	3												
Kistna	2	3	3												
Kurnool	2	2	2												
Madras	2	1	2												
Madura	1	1	1												
Malabar	1	1	1												
Salem	1	1	1												
Tanjore	2	1	3												
Tinnevely	1	1	1												
Vizagapatam	1	1	1												
Total for the year 1891	33	15	69	4	1	1	1	1	1	1	1	1	2	1	2
Total for the year 1890	24	10	58	3	1	1	1	1	1	1	1	1	1	1	1

4. There were 55 cases of alleged poisoning in which the chemical examination did not result in the discovery of any poisons, and which may be primarily divided into two groups viz. :—

- Group I.—Consisting of 30 cases which were unattended by a fatal result ; and
Group II.—Of 25 cases which ended fatally.

I submit herewith two tabular statements explanatory of the above groups :—

Group I.—Consisting of cases which were unattended by a fatal result.

Station.	Date of receipt of case.	Brief abstract of case.
1. Tiruchendur	5th Jan. 1891	Muddy and frothy water supposed to be poisoned.
2. Rameswaram	31st " "	Woman attempted suicide on account of a quarrel with her son.
3. Kaddigi	5th Feb. "	Suspected abortifacient.
4. Anantapur	24th " "	Do. poisoned jaggery.
5. Madras	26th " "	Child vomited after ipecac, and vomit examined under suspicion.
6. Tirukoilur	20th March "	Cumbe food kept four days, supposed to be poisoned and eaten by a woman.
7. Sivaganga	25th " "	Vomited matter mixed with earth.
8. Vaniyambadi	9th April "	Chatty containing boiling water supposed to be poisoned.
9. Datchepalle	14th " "	Suspected substance.
10. Proddutur	20th " "	Native shoes supposed to have been smeared with poison.
11. Nellore	21st " "	Suspected poisoned food. Individual who ate it sent to hospital and showed no further symptoms.
12. Madras	13th May "	Milk and soda supposed to have been tampered with by a domestic. No poison.
13. Nandyal	15th June "	Bengal-grass mixed with jaggery. No poison.
14. Gudiyatam	16th " "	Suspected substance. No poison.
15. Jaggayapet	22nd " "	Remand prisoner. Supposed to have been poisoned. Recovered after treatment. No poison in vomited matter.
16. Kavali	25th " "	Ten persons, after meal, felt drowsy. No suspicion of poison and none found.

From
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7TH MAY 1892, Nos. 316, 317, PUBLIC.

Group I—cont

Station.	Date of receipt of case.	Brief abstract of case.
17. Amalapuram ..	25th June 1891	Woman ate her food and supposed to have been poisoned. Felt giddy, &c. Recovered. No poison.
18. Tiruchuli ..	26th ..	Woman ate some cumbu and found it bitter. No poison.
19. Māvavaram ..	29th ..	Suspected poisoning by arsenic. None found.
20. Madura ..	24th July ..	Boiled maize congee eaten by three persons one day and again by some others next day. Symptoms—vomiting, &c. No poison.
21. Cuddapah ..	24th Aug. ..	A man and wife ate gingelly seed, vomited and purged. No poison found.
22. Ongole ..	24th ..	Woman ate Bengal-gram and jaggery, vomited and recovered. No poison.
23. Do. ..	24th ..	Suspected substance in case 22. No poison.
24. Chingleput ..	28th ..	No love charm. No poison found.
25. Kistna ..	18th Sept ..	No green substance put into chutney. Not poisonous.
26. Adambi ..	6th Oct. ..	No poison in rice and chutney. No poison.
27. Tuticorin ..	14th ..	A young man felt thirsty and giddy; recovered in evening after vomiting. No poison.
28. Nandyal ..	23rd Nov. ..	A woman was given some meal as a love-potion, to recreate passion for an old lover; this was tasted and felt bitter, and hence it was rejected. No poison was found in the meal.
29. Guntūr ..	30th ..	Suspected boiled rice. No poison.
30. Tuni ..	31st ..	No food with butter-milk. Symptoms of poisoning in two persons, male and female. Both recovered after treatment. No poison could be found.

Group II.—Consisting of cases which ended fatally.

Station.	Date of receipt of case.	Brief abstract of case.
1. Tranquebar ..	5th Jan 1891	Reported case of cholera; but doubtful post-mortem symptoms.
2. Madras ..	20th ..	Woman admitted into hospital with severe convulsion, unconscious, with dilated pupils. Died after two days in hospital. Probably vegetable alkaloid poison; not detected.
3. Trichinopoly ..	23rd ..	Suspected case of cholera, but doubted by relatives.
4. Do. ..	18th Feb. ..	A native soldier ill for some days, said to have died suddenly. Inflammation of all alimentary tract. No poison could be detected.
5. Chirala ..	11th March ..	Case of drowning. Suspected on account of no information being obtainable.
6. Anantapur ..	16th ..	Criminal abortion with suspicion.
7. Cocanada ..	2nd April ..	Suspected irritant poison. Intense inflammation of stomach, &c. Death sudden. No poison could be found.
8. Tiruvaloor ..	2nd ..	Suspected suicide by oleander, but no alkaloid found.
9. Tiruchengod ..	20th ..	Suspected heart-disease, giddiness, &c.
10. Guntūr ..	20th ..	Sudden death of lad after food. A suspicious case, but no poison could be detected.
11. Ellore ..	21st ..	Suspected poisoning by medicine. Post-mortem examination: Dislocation of neck was found.
12. Rasipur ..	21st May ..	Suspected poisoned liquor. Post-mortem examination: congestion of lungs and heart cavities dilated, &c., sufficient cause for death.
13. Malabar ..	8th June ..	Woman ill for twenty-two days; supposed to have been poisoned by drugs.
14. Amalapuram ..	26th ..	Death from supposed violence. Medical evidence: death from natural causes.
15. Merkanam ..	6th July ..	Suspected cholera case.
16. Erode ..	22nd ..	Suspected poisoning of a female; was ill for twenty days. Post-mortem symptoms resembling mercurialism.
17. Tiruchuli ..	24th ..	Poison supposed to be administered with sugar to a boy five years' old half an hour after food. Boy lived for five days and died. Suspicious matter found at post-mortem was analysed and found not to be poisonous.
18. Trichinopoly ..	20th August ..	Probable cholera case.
19. Rajahmundry ..	4th Sept. ..	Supposed over-dose of aconite in old man. No alkaloid detected.
20. Kumbakonam ..	22nd ..	Suspected poisonous butter-milk taken by a man who half an hour afterwards got convulsions and an epileptic attack and died. No poison.
21. Kadiri ..	16th Nov. ..	Suspected poisonous drugs taken by two children. The drugs, which were various, were examined and no poisonous one detected.
22. Cuddapah ..	23rd ..	Suspected criminal abortion. Death from tetanus after twenty days. No poison could be detected.
23. Kondapur ..	1st Dec. ..	Suspected poison. Man fell from coconut tree during a thunder-storm and body found by others. No poison detected.
24. Parlākimedi ..	4th ..	Sudden death of child eight months' old. No poison found.
25. Periyakulam ..	18th ..	Five persons supposed to have been poisoned and two died. Suspected arsenic. None detected.

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5. There were 61 cases in which poison was detected, and of the individuals poisoned 39 died. The poisons detected include 38 inorganic and 23 organic poisons.

Inorganic Poisons.

6. The following tabular statement affords the usual information regarding cases which occurred from this class of poisons for five years:—

TABLE IV.

	1891.	1890.	1889.	1888.	1887.
Cases included in Class A ..	31	52	36	31	40
" in Class B ..	8	7	13	10	11
Number of individuals affected in A and B ..	105	159	98	76	90
" of deaths in A and B ..	26	47	25	21	30

7. The following are a few of the more important cases of poisoning caused by inorganic substances:—

(a) *Arsenic*.—(1) Woman admitted into hospital in a collapsed condition; great pain in abdomen; tongue and gums red and swollen; eyes slightly red and a vesicular eruption on both sides of neck. She stated that she was living in concubinage with a man whose brother was jealous of her, and that she one day went to the temple at which her paramour and his brother were cooks, and that the brother gave her some food. After eating this food she was seized with vomiting and purging, which continued for about a week. She died after admission into hospital.

(2) There was a quarrel between neighbours, and a native quack, who was discovered meddling with the rice-flour in the house of one of these neighbours, was suspected of having poisoned the flour, inasmuch as fifteen persons who ate cakes made of it suffered from vomiting and purging. The quack was found guilty and sentenced to death.

(3) A family of five persons was seized with vomiting and purging soon after supper; and it was suspected that a neighbour who was at enmity with the son in the family, and who came into the house to light a cigar, must have poisoned the food. This suspicion increased, inasmuch as the man absconded and was arrested.

(4) Four persons (a female, her son, her father, and another), after a meal prepared by the step-daughter, had burning sensation from mouth to stomach, vomited and purged. Three died. The surviving one only tasted the curry, which she said had a metallic taste. The two accused were the step-daughter and her son-in-law. They were found guilty; the first was sentenced to transportation for life and the second to death.

(5) A woman after eating jaggery given by her paramour, vomited and purged and complained of burning sensation in the stomach, died five days afterwards.

(6) A family of five persons, soon after taking ragi food, experienced tingling sensation in throat and down to stomach and two died. It was suspected that a female who was at enmity with a member of this family mixed something with the flour (ragi) when it was being ground. Arsenic was found in the flour.

(7) A Komati, after taking coffee given to him by his concubine, vomited and purged and died. His wife and sons lived apart from him, while his daughter stayed with him and his concubine. It was suspected that his wife and sons got some white powder mixed in the coffee to poison him lest he should make over his property to the daughter. The concubine was tried for murder and acquitted as the case was not proved.

(8) A man went to his father-in-law's house on the 20th July and died on the 21st idem. As there was no suspicion about the cause of his death he was buried. His father suspected that the death was due to poison and had the body exhumed, and viscera, &c., were sent for chemical examination. About 37 grains of white arsenic were found to be present in the viscera alone.

(9) A woman was originally supposed to have died from cholera. Information was, however, given by an enemy of her husband's that she had been poisoned by her husband himself. It was known that the husband and wife were on bad terms with each other, and chemical examination was considered necessary. She suffered from vomiting and purging, and about one-fourth of a grain of white arsenic and one-tenth grain of white arsenic were extracted from the viscera and vomited matter respectively.

(10) A family of three (husband, wife and child), after eating their morning rice, preserved the previous night, were attacked by vomiting half an hour afterwards. White powder was found at bottom of the rice pot, which proved to be white arsenic after examination.

(11) A man took betel-nut powder from a friend with whom he went on a journey. He had peculiar taste in his mouth, vomited four times, and had a burning sensation in mouth and throat. The powder was found to contain white arsenic.

(12) Bengal-gram mixed with jaggery was taken by three persons; it tasted bitter; after being eaten a burning sensation was felt from the throat and down to the intestines. One of the persons vomited blood. The accused was sentenced to six months' rigorous imprisonment.

8. (b) *Compounds of Mercury*.—(1) A female child, aged four years, was given sweetmeat by her step-mother; three hours afterwards she complained of a burning sensation in the throat and stomach; became restless; vomited and purged clots of blood. Arsenic was suspected; the viscera contained mercury equal to one-fourth grain of corrosive sublimate.

(2) A woman who was quite well one evening, took her usual evening meal, which was partaken of by her husband, mother-in-law, and her husband's concubine also, and she suffered from giddiness and inability to talk, vomited and purged, and died in twelve hours. The other members of the family, who partook of the meals also, said that she died of difficulty of breathing notwithstanding their application of heated bran to her chest. The viscera contained 17 grains of corrosive sublimate.

(3) A woman left her husband and afterwards lived with another man as his mistress. Another individual on several occasions invited her to his house, but she had refused, saying that by way of relationship he was her father. In order to put an end to her life, the accused, who used to frequent her paramour's house, threw some medicine one evening in the "kuncha" in which food was served, and which belonged to the woman. The suspected food contained about two grains of corrosive sublimate. The accused was sentenced to three years' rigorous imprisonment.

Organic Poisons.

9. The number of cases of this class has increased slightly this year, as will be seen from the following table:—

TABLE V.

	1891.	1890.	1889.	1888.	1887.
Cases included in Class A	15	14	33	20	0
.. .. . in Class B	7	3	8	12	2
Number of individuals affected in A and B	42	28	59	51	20
.. .. . of deaths in A and B	13	7	28	17	9

10. *Opium* was detected in six cases, and of these the following are noteworthy:—

(a) A woman was said to have died either from a kick in the stomach, or from cholera, or from poison. There were no symptoms observed during life. The Medical officer who held the post-mortem examination did not pronounce any opinion as to the cause of death; hence a chemical examination was ordered and opium was detected.

(b) A man went into an arrack shop to drink, and an enemy of his observing him, preceded him and threw something into the jar in which arrack was stored, and on being questioned as to the cause of his doing it by the owner, he replied that he wanted one rupee worth of arrack and that he simply examined the jar to see whether it contained sufficient; but the first-named drank 5 ounces of the arrack and soon after vomited, complained of cramps and pains in the body, and the jar of arrack was found to contain opium.

(c) A man became senseless and fell down after eating his meal. Salt of a black colour was placed in the food by his wife at the instigation of her paramour.

11. *Strychnine* was detected in three cases, viz.:—

(a) Six persons, who were in the habit of stealing toddy, went one day to a date tree, stole some toddy, and drank it. All of them suffered from drowsiness, dizziness, &c., and one who took double the quantity that the others took died. It was suspected that the toddy-drawers, to find out the thief, had mixed some poisonous drug in the toddy-pots previously.

(b) A woman said to have committed suicide by taking nux vomica juice from the leaves of the strychnine plant on account of her not being allowed to go to her mother's house. Symptoms observed—shivering, grinding of teeth, and contraction of the muscles, &c.

(c) A woman committed suicide as she was beaten by her paramour.

12. *Aconite* was detected in the following three cases and in another case of suicide:—

(1) A widow, who became pregnant, was given a black powder by her paramour to induce abortion. She suffered from colic, looseness of bowels, and died.

(2) A woman of Jandy caste, who went into the fields in search of rats to eat, was found dead, presumably from snake-bite.

(3) A woman and two others ate jaggery picked up on the roadside. The woman became unconscious three hours after and died. Two others suffered from numbness of tongue and mouth, burning sensation in stomach and gradual unconsciousness.

13. Juice of the *Calatropis gigantea* was detected in two abortion cases, in one of which a stick dipped in the juice of *Calatropis gigantea* was given to a woman by her paramour to cause abortion; but the woman objected and produced the same before a magistrate; and in another case also a stick was introduced into the vagina of a woman and it caused abortion. In the latter case the first prisoner was sentenced to one year's rigorous imprisonment and the second to four months' rigorous imprisonment; whereas in the former case the result of the inquiry was not communicated.

14. *Atropine* was found in Bengal-gram pudding in a case in which a girl was given some by her neighbour. It is as well to note here that the magistrate in this case, after he was in receipt of the certificate, inquired whether the "alkaloid atropine" was poisonous.

15. *Oleander* was detected in two cases of suicide.

16. *Ganjah* was found in one case.

II. BLOOD CASES.

17. The following tabular statement furnishes the usual information regarding these cases:—

TABLE VI.

Districts received from.	Number of cases.	Number of cases in which blood was detected.	Number of examinations.
Anantapur	2	1	5
Arcoot, North	4	4	10
Arcoot, South	1	1	1
Bellary	4	3	17
Chingleput	2	2	3
Chingleput	1	1	5
Coimbatore	10	9	65
Cuddapah	3	1	6
Godavari	3	1	13
Kistna	4	2	9
Kurnool	2	2	5
Madras	4	1	17
Malabar	1	1	6
Nellore	1	1	5
Salem	1	1	4
Tanjore	1	..	1
Tinnevely	..	..	..
Total for the year 1891	44	31	172
.. .. . 1890	33	27	99

18. Mammalian blood was detected in 22 cases out of 31 in which the presence of blood was established. Twenty-two of the cases in which examinations for blood were conducted related to the crime of murder, three to homicidal wounds, one to rape; and in five cases no particulars were received.

III. SPERMATIC STAINS.

TABLE VII.

Districts received from.	Number of cases.	Number of cases in which semen was detected.	Number of examinations.
Arcoot, North	1	..	4
Malabar	1	..	1
Trichinopoly	1	..	2
Total for the year 1891	3	..	7
.. .. . 1890	3	1	5

19. All the three cases referred to the crime of "rape."

IV. CASES OF SUSPECTED CATTLE-POISONING.

20. There has been a large increase in the number of cattle cases examined this year as compared with former years. The number this year is 84 as compared with 54 last year, and the poison is as usual arsenic in some form. In one case the juice of the *Calatropis gigantea* was used as a strong irritant.

TABLE VIII.

Districts received from.	Class A.						Class B.						
	Number of cases.	Number of deaths.	Number of cases in which poison was detected.	Number of analyses.	Nature of poisons.			Number of cases.	Number of cases in which poison was detected.	Number of analyses.	Nature of poisons.		
					Arsenious oxide.	Arsenious oxide and resalgar.	Calotropis gigantea.				Arsenious oxide.	Litmus (Assam).	
Anantapur	8	9	4	22	4	..	..	2	2	2	..	2	..
Arcot, North	1	2	1	3	1	..	..	..	..	..	..	..	..
Bellary	1	1	..	3	..	..	..	..	..	..	..	..	..
Chingleput	..	..	..	..	..	..	..	..	..	..	..	..	..
Coimbatore	9	9	8	20	..	..	..	1	1	1	..	1	..
Cuddapah	3	4	3	9	3	..	1	3	3	3	..	2	1
Ganjam	1	1	1	3	1	..	..	1	1	1	..	1	..
Godavari	5	7	4	29	4	..	..	1	1	1	..	1	..
Kistna	9	15	5	35	5	..	..	2	2	2	..	2	..
Kurnool	2	2	2	6	2	..	..	1	1	1	..	..	..
Madura	..	..	..	..	..	..	..	1	..	2	..	..	..
Malabar	..	..	..	..	..	..	..	2	1	2	..	1	..
Nellore	6	8	6	22	6	..	..	1	..	1	..	..	..
Salem	1	3	..	2	..	..	..	5	5	5	..	5	..
Tanjore	..	..	..	..	..	..	..	..	..	..	..	..	..
Trichinopoly	5	5	4	16	4	..	..	3	1	3	..	1	..
Tinnevely	4	5	4	13	4	..	..	2	2	2	..	2	..
Vizagapatam	..	..	..	..	..	..	..	1	1	1	..	1	..
Total for 1891 ..	55	71	42	183	41	1	1	29	23	31	22	19	1
.. 1890 ..	34	70	26	129	24	..	..	20	19	22	19	..	..

MISCELLANEOUS SECTION.

21. There has been a decrease under this head this year, the number of examinations being 771 against 885 of the previous year; and of these 26 examinations only were made for private parties.

EXAMINATIONS made for Government Departments, &c.

Received from	Nature of substance.	Number of examinations.	Total number of examinations for the year.
Assistant Adjutant-General, Madras District.	Water	4	4
Assistant Physician, General Hospital, Madras.	Urine	2	2
Board of Revenue	Salt	322	372
	Spirits	10	
	Malt liquor	4	
	Sonti soru	1	
	Beer	18	
	Opium	5	
	Pills	1	
	Sulphate	1	
	Toddy	1	
	Ball of spice	1	
Chemical Laboratory	Cigarette	1	15
	Medicine	1	
	"Henda"	2	
	Sample of drugs used in the manufacture of Henda.	4	
	Rain-water	15	15

Examinations made for Government Departments, &c.—cont.

Received from	Nature of substance.	Number of examinations.	Total number of examinations for the year.
Commissariat Department	Malt liquor	6	16
	Brandy	4	
	Rum	3	
	Portwine	3	
Collector of Sea Customs	Methylated spirit	5	1,240
	Kerosine oil	45	
	Rangoon oil	6	
	Engine oil	1	
	Cylinder oil	1	
	Lubricating oil	2	
	Spirits	1,136	
	Machine oil	1	
	Mineral oil	2	
	Earth oil	2	
	Sequah's Instant Relief	2	
	Sequah's Cure	1	
	Manure	1	
	Blasting Gelatine	6	
	Gelignite	3	
	Dynamite	7	
	Caoutchoucine	7	
	Unfermented wine	1	
Collector, South Arcot	Marsala	1	6
	Benzine	1	
	Essences	9	
Collector, Trichinopoly	Milk punch	1	6
	Mud oil	1	
	Caoutchoucine	4	
Deputy Collector in charge of Customs, Malabar.	Water	3	3
	Black salt	1	
	Water	1	
Deputy Surgeon-General, Southern District.	Opium	2	2
	Phosphate of Iron	1	
	Water	3	
District Medical Officer, Vellore	Do.	1	1
	Do.	3	
	Do.	1	
Executive Engineer, Rajahmundry	Do.	6	6
	Do.	3	
	Do.	3	
Executive Engineer, Military Works, Bangalore.	Charcoal	1	4
	Do.	3	
	Do.	3	
Executive Engineer, Military Works, Madras.	Water	4	26
	Do.	3	
	Do.	1	
Jail Department.	Do.	18	
	Do.	3	
	Do.	1	
Medical Officer, Her Majesty's Penitentiary, Madras.	Ghee	3	3
	Brandy	1	
	Claret	1	
Medical Officer, Central Jail, Rajahmundry.	Water	2	4
	Do.	2	
Superintendent, Hill Jail, Parvati-pur.	Do.	1	1
	Do.	1	
Superintendent, Central Jail, Vellore.	Do.	1	1
	Do.	1	
Magistrate, Second Class, Ellore	Do.	1	1
	Do.	1	
Medical Officer, Station Hospital, Madras.	Do.	1	1
	Do.	1	

Examinations made for Government Departments, &c.—cont.

Received from.	Nature of substance.	Number of examination.	Total number of examinations for the year.
Medical Officer, Station Hospital, Poonamallee.	Water	9	9
Medical Officer, Station Hospital, St. Thomas' Mount.	Do.	26	26
Medical Officer, Regimental Hospital, Trichoor.	Do.	2	2
Medical Officer, Regimental Hospital, Salmalkót.	Do.	4	4
Medical Officer, 16th Regiment, Secunderabad.	Do.	3	3
Medical Officer, Calicut	Opium	1	1
Medical Officer, Bellary	Water	2	2
Medical Officer, Anantapur	Do.	1	1
Medical Officer, Vellore	Opium	2	2
Medical Officer, Pattikonda	Water	1	1
Medical Officer, 9th Regiment, Vizagapatam.	Do.	13	13
Medical Officer, 27th Regiment, Madras Infantry, Berhampore.	Do.	10	10
Medical Officer, 14th Regiment, Madras Infantry, Bellary.	Do.	1	1
Medical College	Calculi	3	3
Military Secretary to His Excellency the Commander-in-Chief.	Water	1	1
Municipalities. { Coimbatore	Water	3	27
{ Ongole	Do.	5	
{ Madras	Do.	11	
{ Tanjore	Do.	3	
{ Salem	Do.	1	
{ Vaniyambadi	Do.	3	
{ Kurnool	Do.	1	
Officer in charge, Special Vaccine Supply Department, Bangalore.	Tape and cloth	4	4
Ordnance Officer, Arsenal, Madras	Soap	4	4
Principal Medical Storekeeper, Madras	Disinfecting powder	1	17
	Carbolic powder	5	
	Dilute Hydrocyanic Acid	1	
	Cocaine	5	
	Standard solutions for water analyses.	3	
Sanitary Engineer from Coimbatore	Pills	1	9
	Cocaine Hydrochloras	1	
	Water	3	
Do do. Tuticorin	Do.	4	1
Do do. Tinnevely	Do.	2	
Do do.	Do.	1	
Senior Surgeon, General Hospital, Madras.	Corrosive cotton	1	1
Surgeon (Second), do. do.	Water	1	1
Superintendent, Government Lying-in Hospital, Madras.	Adulterated milk	1	1
Superintendent, Army Clothing, Madras.	Naphthaline	2	2
Sub-Assistant Superintendent, Telegraph Stores.	Bichromate of Potash	1	1
Superintendent of Stationery	Inks	16	16
Surgeon-General with Government of Madras.	Do.	7	7

Examinations made for Government Departments, &c.—cont.

Received from	Nature of substance.	Number of examinations.	Total number of examinations for the year.
Surgeon to His Excellency the Governor, Ootacamund.	Water	2	2
Private Parties and Firms	Water	10	26
	Saltpetre	1	
	Crude Saltpetre	1	
	Cocanut oil	1	
	Silver plate	5	
	Soap	1	
	Coal	1	
	Beer	1	
	Urine	1	
	Kola water	1	
	Linseed oil cake	1	
	Carbolic disinfecting powder	2	
Total		1,907	1,907

TESTING OF SPIRITS BY THE METHOD OF OBSCURATION.

22. This method of testing was introduced by the Government during the early part of the year, and a Special Assistant was deputed to learn the work in this office, and after sufficient knowledge of the methods, to carry on the testing of all samples sent from the Customs Office, Madras, and from the different ports, such as Cochin, Calicut, &c. The number of samples tested has been 1,136. This method is adopted with a view of getting more accurate estimates of the percentage of alcohol in different samples, and it quite supplants the old test by means of the hydrometer. The Government intend to give this method of testing a trial for one year, after which it will be compared with that of the old method from a financial point of view. The Assistant in charge has been thoroughly trained and is quite capable of carrying on the work independently, and arrangements are being made to move his work to the Customs office as a more convenient place for all the parties concerned.

The supervision of this branch of work has added largely to the other responsibilities of the Chemical Examiner.

WATERS.

23. The number of analyses under this head has increased from 158 last year to 171 this year. Analyses are only undertaken when it is convenient to perform them, but every endeavour is made to meet the requirements of Municipalities, Jail departments and others. There were also 15 samples of rain-water examined and the results are given below:—

ANALYSES of Madras Rain-water—Monthly Results, 1891.

	February.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Rainfall Inches.	·89	·46	·22	·50	2·14	1·18	11·24	3·55	4·50	24·68
Total combined nitrogen (as NH ₃) lb. per acre.	·050	·037	·019	·041	·214	·093	·569	·289	·129	1·441
Chlorine as Na cl. "	1·527	·292	·287	·521	2·141	2·026	10·368	3·709	2·907	23·778
Solids "	6·040	1·040	·994	1·131	4·841	5·338	28·291	8·031	8·678	64·384
Ash "	2·013	·520	·496	·565	2·368	2·669	11·469	4·015	3·963	28·078

SALT.

24. Three hundred and twenty-two samples were analysed during the year, the two Salt Assistants being more than fully occupied with the analyses.

CUSTOMS WORK.

25. One hundred and four examinations were made for the Customs Department. There were 60 examinations performed under the Petroleum Act, being a much larger number than usual, and 16 examinations under the Explosives Act.

26. In the month of August, when I was on privilege leave, certain correspondence was carried on between this office and a Mr. Gantz, a Barrister, who was appointed by the Crown to defend an individual who was arrested on a charge of murder in Triplicane (Madras). The correspondence led to serious imputations being made against the Police of this City, and the Commissioner of Police referred the matter to Government. On my return to duty in October I carefully looked into the whole matter, and I was led to suspect the Assistant Chemical Examiner, Mr. W. S. Newman, of divulging matters of the greatest confidence to the outside public. An investigation was ordered by the Government and was held in this office, and the result of the same was communicated. In the meanwhile Mr. Newman was reported on a second charge of misappropriating large quantities of spirits which were being tested for the Customs office, and I suspended him from his duties. His duties were immediately undertaken by the First Assistant in this office, Mr. M. Goolab Roy, and I cannot speak too highly of the hardworking, zealous and painstaking way in which he has undertaken the duties to my entire satisfaction.

The work of the First Assistant, Mr. M. Goolab Roy, was undertaken by the Second Assistant and the clerk of the office, who had also some practical knowledge of laboratory work, and they have performed their duties creditably.

27. The entries in the service-books have been duly made and kept up to date.

28. There appears to be still some difficulty in obtaining the results of trials in criminal cases in which chemical examination is sought for, and I would request the Government to again bring to the notice of the Judicial Department the failure in reporting the results of such trials.

29. With reference to last paragraph of G.O., No 354, dated 4th May 1891, appended to the annual report of this office for 1890, I have the honour to furnish the statements therein called for. The statement No. 1 has been inserted in this year's annual report in place of the one that was usually furnished.

Year.	A.			B.			Total.		
	Cases in which viscera or evacuations were examined.			Cases in which only suspected food, &c., was received for examination.					
	Total number of cases.	Number of cases in which poison was detected.	Percentage of detections.	Total number of cases.	Number of cases in which poison was detected.	Percentage of detections.	Total number of cases.	Number of cases in which poison was detected.	Percentage of detections.
1890 ..	92	66	71.74	24	10	41.6	116	76	65.52
1891 ..	83	46	55.42	33	15	45.45	116	61	52.586

Year.	Number of cases detected.	Inorganic poison.	Organic poison.	Percentage of column 3 to column 2.
1	2	3	4	5
1891 ..	61	39	22	63.93
1890 ..	76	59	17	77.63
1889 ..	90	49	41	54.4
1888 ..	73	41	32	56.2
1887 ..	62	51	11	82.3

30. A general statement, including the figures given in the previous tables, is, as usual, given below :—

IX.—Tabular statement for the

Nature of work.	Poisons.									
	Inorganic.									
	Arsenious oxide, mercuric salt, and calomel.	Arsenious oxide and plumbagin.	Arsenious oxide and atropine.	Arsenious oxide and mercuric salt.	Arsenious oxide.	Total number of cases in which semen was detected.	Total number of cases in which blood was detected.	Total number of cases in which poison was detected.	Total number of articles received for examination.	Total number of cases.
Human cases.	1	1	1	1	25	1	31	46	430	83
Blood stains	1	1	1	1	4	1	31	15	69	33
Seminal stains	1	1	1	1	41	1	31	23	172	44
Cattle cases.	1	1	1	1	22	1	31	26	7	3
Examinations for Government departments	1	1	1	1	1,881	1	31	26	1,881	29
Do. for private parties, firms, &c.	1	1	1	1	26	1	31	26	26	26
Total for the year 1891	11	11	11	11	86	1	27	121	2,739	2,154
" " 1890	11	11	11	11	86	1	27	121	1,749	1,091

Tabular statement for the year—cont.

Nature of work.	Poisons—cont.														
	Inorganic—cont.					Organic.									
	Opium.	Rosigar.	Lime.	Aconite.	Atropine.	Calatropa gigantea.	Datura.	Oleander.	Opium.	Picrotoxin.	Scutellaria powder.	Strychnine.	Ganja.	Asafoetida.	
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Human cases.	..	..	..	..	..	1	..	2	4	..	1	3	..	..	
Class A {	..	..	..	4	..	1	..	..	..	..	..	..	1	1	
Class B {	1	1	..	..	2	1	..	..	2	..	..	..	1	..	
Blood stains	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Seminal stains	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Cattle cases	..	..	..	..	..	1	..	..	..	..	..	..	..	..	
Class A {	..	..	1	..	..	..	..	..	..	..	..	..	..	..	
Class B {	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Examinations for Government departments	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Do. for private parties, firms, &c.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Total for the year 1891	1	1	1	4	2	3	3	2	6	1	1	3	1	1	
Do. " 1890	..	..	..	3	2	3	..	..	3	..	..	2	1	..	

From

T.

ORDER—dated 2nd May 1892, No 316 Pub.

The analytical work done by the Chem. miner in 1891 is compared with that performed in 1890 in Table No. 1 at page report. The principal increase was in cases of suspected cattle-poisoning. There was a falling off in miscellaneous analyses for Government Departments and Municipalities.

2. The statements at page 12 of the report show the numbers of cases of suspected human poisoning examined during 1891 and with the results. The number of cases was the same in both years, but there was an increase in the percentage of detections in the year under review. Inorganic poisons were found in only 39 cases, as against 59 in 1890.

3. The total number of ascertained deaths due to the effects of poison was 39, or 15 less than in the preceding year. Twenty deaths were due to inorganic, and thirteen to organic, poisons, as against 47 and 32 respectively for 1890.

4. Cases of suspected Cattle-poisoning.—The number of cases examined was 84, or 30 more than in 1890. Poison was detected in 63 cases, and arsenic was the agent used in no less than 63. The percentage of detections was 77.1, as against 83.3 and 70.6 in 1890 and 1889 respectively.

5. Blood Stains.—Forty-four cases were examined and blood was detected in 31. In the year under review, 172 examinations were made, and blood was found in 31 instances, while in the preceding year 172 examinations in 33 cases showed blood in 27 cases.

6. Spermatoc Stains.—Three cases were examined, with negative results in all.

7. Miscellaneous Analyses.—There were 171 samples of spirits tested for obscuration for the Customs Department, and 171 of salt for the Board of Revenue. 171 examinations of water were made for Government, Municipalities, and private parties.

8. Paragraph 28 of the report will be sent to the notice of the Judicial Department.

9. The report is satisfactory. It will be sent to the notice of the Judicial Department if similar reports in future years are submitted to Government in type.

(True Ex

J. R. PRICE,
Chief Secretary.

To the Judicial Department.
" Surgeon-General.
" Chemical Examiner.
" Sanitary Commissioner.
" Revenue Department.
" Local and Municipal Department.
" Military Department.
" Inspector-General of Police.
" Superintendent, Government Press (with cc. to paragraph 8).
" Secretary to the Government of Hongkong C.L.
" all District Magistrates.

ENDORSEMENT—dated 2nd May 1892, No 316.

Copy to the Government of Home Department.

Chief Secretary.

Exd. A. Baill.

Jul 90 31
2/7-5-92

~~The Collectors of~~

The District Magistrates of

Sept 17.5.92

Anantapur. 8
North Arcot, Chittoor. 8
South Arcot, Cuddalore. 8
Bellary. 7
South Canara, Mangalore. 2
Chingleput, Saidapet. 8
Coimbatore. 8
Cuddapah. 8
Ganjam, Chatrapur. 4
Godavari, Cocanada. 2
Kistna, Masulipatam. 8
Kurnool. 8
~~Madras (if necessary).~~
Madura. 8
Malabar, Calicut. 12
Nilgiris, Ootacamund. 8
Nellore. 8
Salem. 8
Tanjore. 9
Tinnevely. 8
Trichinopoly. 8
Vizagapatam. 8

7TH MAY 1892, Nos. 316, 317, PUBLIC.

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

READ—the following paper :—

From W. F. DEFABECK, Esq., M.D., S.M.G., Surgeon-General, to the Chief Secretary to Government, dated Madras. 30th March 1892, No. 280.

I have the honour to forward the annual report of the Chemical Examiner for 1891.

2. The report for 1890 showed a slight fall in the number of medico-legal examinations, but it is satisfactory to note that during 1891 there was an increase both in this and the number of analyses performed.

ENCLOSURES.

From Surgeon-Major T. H. POPE, M.D., B.SC., Acting Chemical Examiner, to the Surgeon-General, dated Madras, 22nd March 1892, No. 299.

I have the honour to forward the annual report of the Chemical Examiner's Department for the year 1891 for transmission to Government at an early date, as the report is due with Government on the 1st proximo.

From Surgeon-Major T. H. POPE, M.D., B.SC., Acting Chemical Examiner, to the Chief Secretary to Government, dated Madras, 22nd March 1892, No. 300.

I have the honour to submit the annual report of the work done in the Chemical Examiner's Department during the year 1891. The office was held by Dr. VanGeyzel, the permanent Chemical Analyser, till 30th March 1891, when I relieved him. Dr. Grant acted for me when I went on privilege leave for a month and a half from 15th August 1891, and I resumed charge from him on 29th September 1891.

2. The number of medico-legal examinations exceeded those in the previous year by 41 cases, and the actual number of analyses performed in this section has also exceeded the work done in the last four years.

TABLE No. I.

		Number of cases investigated.		Number of articles examined.	
		1891.	1890.	1891.	1890.
A.—Medico-legal investigations.	Cases of suspected human poisoning	116	116	499	609
	" " cattle	84	54	214	151
	Blood stains, &c.	44	33	172	99
	Seminal stains	3	3	7	5
	Total ..	247	206	892	864
B.—Miscellaneous analyses.	For Government Departments and Municipalities.	745	855	745	855
	For private parties and firms	26	30	26	30
	Spirits tested for obscuration for the Customs Department.	1,136	..	1,136	..
	Total ..	1,907	885	1,907	885
Grand Total ..		2,154	1,091	2,799	1,749

MEDICO-LEGAL SECTION.

I. CASES OF SUSPECTED POISONING (HUMAN).

3. The number of analyses performed under the heading "Human poisoning" was smaller than in the previous year, while there has been a large increase under the headings "Cattle poisoning" and "Blood and seminal stains." The 116 cases of human poisoning this year included 499 articles requiring examination, and the number in which poison was detected was 61, or 52.58 per cent. The corresponding number last year was also 116, which included a large number of articles requiring examination, viz., 609, and the percentage of detection was 65.52. The usual information regarding these cases of human poisoning is shown in the two following tabular statements :—

TABLE II.—Human Cases—Class A.
(Including cases in which viscera or evacuations were examined with or without suspected substances, food, &c.).

Districts received from.	Poisons.										
	Inorganic.					Organic.					
	Arsenious oxide and mercuric salt.	Arsenious oxide and plumb.	Arsenious oxide and atropine.	Arsenious oxide, impure oxph. ment, and calomel.	Mercuric salt.	Atropine.	Aconite.	Calotropis gigantea.	Datura.	Oleander.	Opium.
Anantapur	1	1	1	1	1	1	1	1	1	1	1
Arct. North	1	1	1	1	1	1	1	1	1	1	1
Arct. South	1	1	1	1	1	1	1	1	1	1	1
Bellary	1	1	1	1	1	1	1	1	1	1	1
Chingleput	1	1	1	1	1	1	1	1	1	1	1
Coimbatore	1	1	1	1	1	1	1	1	1	1	1
Cuddapah	1	1	1	1	1	1	1	1	1	1	1
Ganjam	1	1	1	1	1	1	1	1	1	1	1
Godavari	1	1	1	1	1	1	1	1	1	1	1
Kistna	1	1	1	1	1	1	1	1	1	1	1
Kurnool	1	1	1	1	1	1	1	1	1	1	1
Madras	1	1	1	1	1	1	1	1	1	1	1
Madurai	1	1	1	1	1	1	1	1	1	1	1
Malabar	1	1	1	1	1	1	1	1	1	1	1
Belon	1	1	1	1	1	1	1	1	1	1	1
Tanjore	1	1	1	1	1	1	1	1	1	1	1
Tinnevely	1	1	1	1	1	1	1	1	1	1	1
Vizagapatnam	1	1	1	1	1	1	1	1	1	1	1
Total for the year 1891	83	99	158	158	158	158	158	158	158	158	158
Total for the year 1890	83	99	158	158	158	158	158	158	158	158	158

TABLE III.—Human Cases—Class B.

(Including cases in which no viscera or evacuations were received for examination, but only suspected substances, food, &c.).

Districts received from.	Poisons.										
	Inorganic.					Organic.					
	Arsenious oxide, mercuric salt, and calomel.	Arsenious oxide, ganjah and Gloriosa superba.	Arsenious oxide, ganjah and croton seed.	Resin.	Opium.	Mercuric salt.	Aconite.	Asafoetida.	Atropine.	Calotropis gigantea.	Opium.
Anantapur	1	1	1	1	1	1	1	1	1	1	1
Arct. North	1	1	1	1	1	1	1	1	1	1	1
Arct. South	1	1	1	1	1	1	1	1	1	1	1
Bellary	1	1	1	1	1	1	1	1	1	1	1
Chingleput	1	1	1	1	1	1	1	1	1	1	1
Coimbatore	1	1	1	1	1	1	1	1	1	1	1
Cuddapah	1	1	1	1	1	1	1	1	1	1	1
Ganjam	1	1	1	1	1	1	1	1	1	1	1
Godavari	1	1	1	1	1	1	1	1	1	1	1
Kistna	1	1	1	1	1	1	1	1	1	1	1
Kurnool	1	1	1	1	1	1	1	1	1	1	1
Madras	1	1	1	1	1	1	1	1	1	1	1
Madurai	1	1	1	1	1	1	1	1	1	1	1
Malabar	1	1	1	1	1	1	1	1	1	1	1
Belon	1	1	1	1	1	1	1	1	1	1	1
Tanjore	1	1	1	1	1	1	1	1	1	1	1
Tinnevely	1	1	1	1	1	1	1	1	1	1	1
Vizagapatnam	1	1	1	1	1	1	1	1	1	1	1
Total for the year 1891	33	15	15	15	15	15	15	15	15	15	15
Total for the year 1890	24	10	10	10	10	10	10	10	10	10	10

4. There were 55 cases of alleged poisoning in which the chemical examination did not result in the discovery of any poisons, and which may be primarily divided into two groups viz. :—
Group I.—Consisting of 30 cases which were unattended by a fatal result; and
Group II.—Of 25 cases which ended fatally.

I submit herewith two tabular statements explanatory of the above groups :—
Group I.—Consisting of cases which were unattended by a fatal result.

Station.	Date of receipt of case.	Brief abstract of case.
1. Pichondur	5th Jan. 1891	Muddy and frothy water supposed to be poisoned.
2. Rameswaram	31st "	Woman attempted suicide on account of a quarrel with her son.
3. Kaddigi	5th Feb. "	Suspected abortifacient.
4. Anantapur	24th "	Do. poisoned jaggery.
5. Madras	26th "	Child vomited after ipecac, and vomit examined under suspicion.
6. Tirukollur	20th March "	Cumbar food kept four days, supposed to be poisoned and eaten by a woman.
7. Sivaganga	25th "	Vomited matter mixed with earth.
8. Vaniyambadi	9th April "	Chatty containing boiling water supposed to be poisoned.
9. Pudukottai	14th "	Suspected substance.
10. Proddutur	20th "	Native shoes supposed to have been smeared with poison.
11. Nellore	21st "	Suspected poisoned food. Individual who ate it sent to hospital and showed no further symptoms.
12. Madras	13th May "	Milk and soda supposed to have been tampered with by a domestic. No poison.
13. Nandyal	16th June "	Bengal-gran mixed with jaggery. No poison.
14. Gudiyatam	16th "	Suspected substance. No poison.
15. Jaggayyapet	22nd "	Roman prisoner. Supposed to have been poisoned. Recovered after treatment. No poison in vomited matter.
16. Kavali	26th "	Ten persons, after meal, felt drowsy. No suspicion of poison and none found.

Group I—cont.

Station.	Date of receipt of case.	Brief abstract of case.
17. Amalapuram	25th June 1891 ..	Woman ate her food and supposed to have been poisoned. Felt giddy, &c. Recovered. No poison.
18. Tirushuli	26th " " ..	Woman ate some cumbu and found it bitter. No poison.
19. Mavavaram	29th " " ..	Suspected poisoning by arsenic. None found.
20. Madura	24th July " ..	Boiled maize congee eaten by three persons one day and again by some others next day. Symptoms—vomiting, &c. No poison.
21. Cuddapah	21st Aug. " ..	A man and wife ate gingelly seed, vomited and purged. No poison found.
22. Ongole	24th " " ..	Woman ate Bengal-gram and jaggery, vomited and recovered. No poison.
23. Do.	24th " " ..	Suspected substance in case 22. No poison.
24. Chingleput	28th " " ..	Do. (love charm). No poison found.
25. Kistna	18th Sept. " ..	Do. green substance put into chutney. Not poisonous.
26. Adambi	6th Oct. " ..	Do. poison in rice and chutney. No poison.
27. Tuticorin	14th " " ..	A young man felt thirsty and giddy; recovered in evening after vomiting. No poison.
28. Nandyál	23rd Nov. " ..	A woman was given some meal as a love-potion, to recreate passion for an old lover; this was tasted and felt bitter and hence it was rejected. No poison was found in the meal.
29. Guntúr	30th " " ..	Suspected boiled rice. No poison.
30. Tuni	31st " " ..	Do. food with butter-milk. Symptoms of poisoning in two persons, male and female. Both recovered after treatment. No poison could be found.

Group II.—Consisting of cases which ended fatally.

Station.	Date of receipt of case.	Brief abstract of case.
1. Tranquebar	5th Jan. 1891 ..	Reported case of cholera; but doubtful <i>post-mortem</i> symptoms.
2. Madras	20th " " ..	Woman admitted into hospital with severe convulsion, unconscious, with dilated pupils. Died after two days in hospital. Probably vegetable alkaloid poison; not detected.
3. Trichinopoly	23rd " " ..	Suspected case of cholera, but doubted by relatives.
4. Do.	18th Feb. " ..	A native soldier, ill for some days, said to have died suddenly. Inflammation of all alimentary tract. No poison could be detected.
5. Chirala	11th March " ..	Case of drowning. Suspected on account of no information being obtainable.
6. Anantapur	16th " " ..	Criminal abortion with suspicion.
7. Cocanada	2nd April " ..	Suspected irritant poison. Intense inflammation of stomach, &c. Death sudden. No poison could be found.
8. Tiruvaloor	3rd " " ..	Suspected suicide by oleander, but no alkaloid found.
9. Tiruchengod	20th " " ..	Suspected heart-disease, giddiness, &c.
10. Guntúr	20th " " ..	Sudden death of lad after food. A suspicious case, but no poison could be detected.
11. Ellore	21st " " ..	Suspected poisoning by medicine. <i>Post-mortem</i> examination: Dislocation of neck was found.
12. Razipúr	21st May " ..	Suspected poisoned liquor. <i>Post-mortem</i> examination: congestion of lungs and heart cavities dilated, &c., sufficient cause for death.
13. Malabar	8th June " ..	Woman ill for twenty-two days; supposed to have been poisoned by drugs.
14. Amalapuram	25th " " ..	Death from supposed violence. Medical evidence: death from natural causes.
15. Merkanam	6th July " ..	Suspected cholera case.
16. Erode	22nd " " ..	Suspected poisoning of a female; was ill for twenty days. <i>Post-mortem</i> symptoms resembling mercurialism.
17. Tirushuli	24th " " ..	Poison supposed to be administered with sugar to a boy five years' old half an hour after food. Boy lived for five days and died. Suspicious matter found at <i>post-mortem</i> was analysed and found not to be poisonous.
18. Trichinopoly	20th August " ..	Probable cholera case.
19. Rajahmundry	4th Sept. " ..	Supposed over-dose of aconite in old man. No alkaloid detected.
20. Kambakonam	22nd " " ..	Suspected poisonous butter-milk taken by a man who half an hour afterwards got convulsions and an epileptic attack and died. No poison.
21. Kadiri	16th Nov. " ..	Suspected poisonous drugs taken by two children. The drugs, which were various, were examined and no poisonous one detected.
22. Cuddapah	23rd " " ..	Suspected criminal abortion. Death from tetanus after twenty days. No poison could be detected.
23. Kondapur	1st Dec. " ..	Suspected poison. Man fell from coconut tree during a thunder-storm and body found by others. No poison detected.
24. Parlákimedi	4th " " ..	Sudden death of child eight months' old. No poison found.
25. Periyakulam	18th " " ..	Five persons supposed to have been poisoned and two died. Suspected arsenic. None detected.

5. There were 61 cases in which poison was detected, and of the individuals poisoned 39 died. The poisons detected include 38 inorganic and 23 organic poisons.

Inorganic Poisons.

6. The following tabular statement affords the usual information regarding cases which occurred from this class of poisons for five years:—

TABLE IV.

	1891.	1890.	1889.	1888.	1887.
Cases included in Class A	31	52	36	31	40
" " " " in Class B	8	7	13	10	11
Number of individuals affected in A and B ..	105	159	98	76	90
" " " " of deaths in A and B	26	47	25	21	30

7. The following are a few of the more important cases of poisoning caused by inorganic substances:—

(a) *Arsenic*.—(1) Woman admitted into hospital in a collapsed condition; great pain in abdomen; tongue and gums red and swollen; eyes slightly red and a vesicular eruption on both sides of neck. She stated that she was living in concubinage with a man whose brother was jealous of her, and that she one day went to the temple at which her paramour and his brother were cooks, and that the brother gave her some food. After eating this food she was seized with vomiting and purging, which continued for about a week. She died after admission into hospital.

(2) There was a quarrel between neighbours, and a native quack, who was discovered meddling with the rice-flour in the house of one of these neighbours, was suspected of having poisoned the flour, inasmuch as fifteen persons who ate cakes made of it suffered from vomiting and purging. The quack was found guilty and sentenced to death.

(3) A family of five persons was seized with vomiting and purging soon after supper; and it was suspected that a neighbour who was at enmity with the son in the family, and who came into the house to light a cigar, must have poisoned the food. This suspicion increased, inasmuch as the man absconded and was arrested.

(4) Four persons (a female, her son, her father, and another), after a meal prepared by the step-daughter, had burning sensation from mouth to stomach, vomited and purged. Three died. The surviving one only tasted the curry, which she said had a metallic taste. The two accused were the step-daughter and her son-in-law. They were found guilty; the first was sentenced to transportation for life and the second to death.

(5) A woman after eating jaggery given by her paramour, vomited and purged and complained of burning sensation in the stomach, died five days afterwards.

(6) A family of five persons, soon after taking ragi food, experienced tingling sensation in throat and down to stomach and two died. It was suspected that a female who was at enmity with a member of this family mixed something with the flour (ragi) when it was being ground. Arsenic was found in the flour.

(7) A Komati, after taking coffee given to him by his concubine, vomited and purged and died. His wife and sons lived apart from him, while his daughter stayed with him and his concubine. It was suspected that his wife and sons got some white powder mixed in the coffee to poison him lest he should make over his property to the daughter. The concubine was tried for murder and acquitted as the case was not proved.

(8) A man went to his father-in-law's house on the 20th July and died on the 21st idem. As there was no suspicion about the cause of his death he was buried. His father suspected that the death was due to poison and had the body exhumed, and viscera, &c., were sent for chemical examination. About 37 grains of white arsenic were found to be present in the viscera alone.

(9) A woman was originally supposed to have died from cholera. Information was, however, given by an enemy of her husband's that she had been poisoned by her husband himself. It was known that the husband and wife were on bad terms with each other, and chemical examination was considered necessary. She suffered from vomiting and purging, and about one-fourth of a grain of white arsenic and one-tenth grain of white arsenic were extracted from the viscera and vomited matter respectively.

(10) A family of three (husband, wife and child), after eating their morning rice, preserved the previous night, were attacked by vomiting half an hour afterwards. White powder was found at bottom of the rice pot, which proved to be white arsenic after examination.

(11) A man took betel-nut powder from a friend with whom he went on a journey. He had peculiar taste in his mouth, vomited four times, and had a burning sensation in mouth and throat. The powder was found to contain white arsenic.

(12) Bengal-gram mixed with jaggery was taken by three persons; it tasted bitter; after being eaten a burning sensation was felt from the throat and down to the intestines. One of the persons vomited blood. The accused was sentenced to six months' rigorous imprisonment.

8. (b) *Compounds of Mercury*.—(1) A female child, aged four years, was given sweetmeat by her step-mother; three hours afterwards she complained of a burning sensation in the throat and stomach; became restless; vomited and purged clots of blood. Arsonic was suspected; the viscera contained mercury equal to one-fourth grain of corrosive sublimate.

(2) A woman who was quite well one evening, took her usual evening meal, which was partaken of by her husband, mother-in-law, and her husband's concubine also, and she suffered from giddiness and inability to talk, vomited and purged, and died in twelve hours. The other members of the family, who partook of the meals also, said that she died of difficulty of breathing notwithstanding their application of heated bran to her chest. The viscera contained 17 grains of corrosive sublimate.

(3) A woman left her husband and afterwards lived with another man as his mistress. Another individual on several occasions invited her to his house, but she had refused, saying that by way of relationship he was her father. In order to put an end to her life, the accused, who used to frequent her paramour's house, threw some medicine one evening in the "kuncha" in which food was served, and which belonged to the woman. The suspected food contained about two grains of corrosive sublimate. The accused was sentenced to three years' rigorous imprisonment.

Organic Poisons

9. The number of cases of this class has increased slightly this year, as will be seen from the following table:—

TABLE V.

	1891.	1890.	1889.	1888.	1887.
Cases included in Class A					
" " in Class B	15	14	33	20	9
Number of individuals affected in A and B	7	3	8	12	2
" of deaths in A and B	42	28	59	51	20
	13	7	28	17	9

10. *Opium* was detected in six cases, and of these the following are noteworthy:—

(a) A woman was said to have died either from a kick in the stomach, or from cholera, or from poison. There were no symptoms observed during life. The Medical officer who held the post-mortem examination did not pronounce any opinion as to the cause of death; hence a chemical examination was ordered and opium was detected.

(b) A man went into an arrack shop to drink, and an enemy of his observing him, preceded him and threw something into the jar in which arrack was stored, and on being questioned as to the cause of his doing it by the owner, he replied that he wanted one rupee worth of arrack and that he simply examined the jar to see whether it contained sufficient; but the first-named drank 5 ounces of the arrack and soon after vomited, complained of cramps and pains in the body, and the jar of arrack was found to contain opium.

(c) A man became senseless and fell down after eating his meal. Salt of a black colour was placed in the food by his wife at the instigation of her paramour.

11. *Strychnine* was detected in three cases, viz.:—

(a) Six persons, who were in the habit of stealing toddy, went one day to a date tree, stole some toddy, and drank it. All of them suffered from drowsiness, dizziness, &c., and one, who took double the quantity that the others took died. It was suspected that the toddy-drawers, to find out the thief, had mixed some poisonous drug in the toddy-pots previously.

(b) A woman said to have committed suicide by taking nux vomica juice from the leaves of the strychnine plant on account of her not being allowed to go to her mother's house. Symptoms observed—shivering, grinding of teeth, and contraction of the muscles, &c.

(c) A woman committed suicide as she was beaten by her paramour.

12. *Aconite* was detected in the following three cases and in another case of suicide:—

(1) A widow, who became pregnant, was given a black powder by her paramour to induce abortion. She suffered from colic, looseness of bowels, and died.

(2) A woman of Jandy caste, who went into the fields in search of rats to eat, was found dead, presumably from snake-bite.

(3) A woman and two others ate jaggery picked up on the roadside. The woman became unconscious three hours after and died. Two others suffered from numbness of tongue and mouth, burning sensation in stomach and gradual unconsciousness.

13. Juice of the *Calatropis gigantea* was detected in two abortion cases, in one of which a stick dipped in the juice of *Calatropis gigantea* was given to a woman by her paramour to cause abortion; but the woman objected and produced the same before a magistrate; and in another case also a stick was introduced into the vagina of a woman and it caused abortion. In the latter case the first prisoner was sentenced to one year's rigorous imprisonment and the second to four months' rigorous imprisonment; whereas in the former case the result of the inquiry was not communicated.

14. *Atropine* was found in Bengal-gram pudding in a case in which a girl was given some by her neighbour. It is as well to note here that the magistrate in this case, after he was in receipt of the certificate, inquired whether the "alkaloid atropine" was poisonous.

15. *Oleander* was detected in two cases of suicide.

16. *Ganjah* was found in one case.

II. BLOOD CASES.

17. The following tabular statement furnishes the usual information regarding these cases:—

TABLE VI.

Districts received from.	Number of cases.	Number of cases in which blood was detected.	Number of examinations.
Anantapur	2	1	5
Arcoot, North	4	4	10
Arcoot, South	1	1	1
Bellary	4	3	17
Chingleput	2	2	8
Coinjatore	1	1	5
Cuddapah	10	9	65
Godavari	3	1	6
Kistna	3	1	13
Kurnool	4	2	9
Madras	2	2	5
Malabar	4	1	17
Nellore	1	1	6
Salem	1	1	5
Tanjore	1	1	4
Tinnevely	1		1
Total for the year 1891	44	31	172
" " " 1890	33	27	99

18. Mammalian blood was detected in 22 cases out of 31 in which the presence of blood was established. Twenty-two of the cases in which examinations for blood were conducted related to the crime of murder; three to homicidal wounds, one to rape; and in five cases no particulars were received.

III. SPERMATIC STAINS.

TABLE VII.

Districts received from.	Number of cases.	Number of cases in which semen was detected.	Number of examinations.
Arcoot, North	1		4
Malabar	1		1
Trichinopoly	1		2
Total for the year 1891	3		7
" " " 1890	3	1	5

19. All the three cases referred to the crime of "rape."

IV. CASES OF SUSPECTED CATTLE-POISONING.

20. There has been a large increase in the number of cattle cases examined this year as compared with former years. The number this year is 84 as compared with 54 last year, and the poison is as usual arsenic in some form. In one case the juice of the *Calatropis gigantea* was used as a strong irritant.

TABLE VIII.

Districts received from.	Class A.					Class B.					Lime (Assam)
	Number of cases.	Number of deaths.	Number of cases in which poison was detected.	Number of analyses.	Nature of poisons.			Number of cases in which poison was detected.	Number of analyses.	Nature of poisons.	
					Arsenious oxide.	Arsenious oxide and realgar.	Calotropis gigantea.				
Anantapur	8	9	4	23	4			2	2	2	
Arcoot, North	1	2	1	3	1						
Bellary	1	1		3							
Chingleput											
Coimbatore	9	9	8	20	7			1	1	1	
Cuddapah	3	4	3	9	8			3	3	3	
Ganjam	1	1	1	3	1			1	1	1	
Godavari	5	7	4	29	4			2	2	2	
Kistna	9	15	5	35	5			1	1	1	
Kurnool	2	2	2	6	2			2	2	2	
Madura											
Malabar											
Nellore	6	8	6	23	6			4	4	4	
Salem	1	3		2							
Tanjore								5	5	5	
Trichinopoly	5	5	4	16	4			3	3	3	
Tinnevely	4	5	4	13	4			2	2	2	
Vizagapatam								1	1	1	
Total for 1891	55	71	42	183	41			29	23	31	
1890	34	70	26	139	24	1	1	20	19	22	1

MISCELLANEOUS SECTION.

21. There has been a decrease under this head this year, the number of examinations being 771 against 885 of the previous year; and of these 26 examinations only were made for private parties.

EXAMINATIONS made for Government Departments, &c.

Received from	Nature of substance.	Number of examinations.	Total number of examinations for the year.
Assistant Adjutant-General, Madras District.	Water	4	4
Assistant Physician, General Hospital, Madras.	Urine	2	2
Board of Revenue	Salt	322	372
	Spirits	10	
	Malt liquor	4	
	Sonti soru	1	
	Beer	18	
	Opium	5	
	Pills	1	
	Saltpetre	1	
	Toddy	1	
	Ball of spice	1	
Chemical Laboratory	Cigarette	1	15
	Medicine	1	
	"Henda"	2	
	Sample of drugs used in the manufacture of Henda.	4	
	Rain-water	15	15

Examinations made for Government Departments, &c.—cont.

Received from	Nature of substance.	Number of examinations.	Total number of examinations for the year.
Commissariat Department	Malt liquor	6	16
	Brandy	4	
	Rum	3	
	Portwine	3	
Collector of Sea Customs	Methylated spirit	5	1,240
	Kerosine oil	45	
	Rangoon oil	6	
	Engine oil	1	
	Cylinder oil	1	
	Lubricating oil	2	
	Spirits	1,136	
	Machine oil	1	
	Mineral oil	2	
	Earth oil	2	
	Sequah's Instant Relief	2	
	Sequah's Cure	1	
	Manure	1	
	Blasting Gelatine	6	
	Gelignite	3	
	Dynamite	7	
	Caoutchoucine	7	
	Unfermented wine	1	
	Marsala	1	
	Benzine	1	
	Essences	9	
Collector, South Arcot	Milk punch	1	6
	Mud oil	1	
	Caoutchoucine	4	
Collector, Trichinopoly	Water	3	3
	Black salt	1	
	Water	1	
	Opium	2	
	Phosphate of Iron	1	
	Water	3	
	Do.	1	
	Do.	6	
	Do.	3	
	Do.	1	
Jail Department.	Charcoal	1	26
	Water	4	
	Do.	3	
	Do.	1	
	Do.	18	
	Ghee	3	3
	Brandy	1	
	Claret	1	
	Water	2	4

Examinations made for Government Departments, &c.—cont.

Received from.	Nature of substance.	Number of examination.	Total number of examinations for the year.
Medical Officer, Station Hospital, Poonamallee.	Water	9	9
Medical Officer, Station Hospital, St. Thomas' Mount.	Do.	26	26
Medical Officer, Regimental Hospital, Trichoor.	Do.	2	2
Medical Officer, Regimental Hospital, Salmakot.	Do.	4	4
Medical Officer, 16th Regiment, Secunderabad.	Do.	3	3
Medical Officer, Calicut	Opium	1	1
Medical Officer, Bellary	Water	2	2
Medical Officer, Anantapur	Do.	1	1
Medical Officer, Vellore	Opium	2	2
Medical Officer, Pattikonda	Water	1	1
Medical Officer, 9th Regiment, Vizagapatam.	Do.	13	13
Medical Officer, 27th Regiment, Madras Infantry, Berhampore.	Do.	10	10
Medical Officer, 14th Regiment, Madras Infantry, Bellary.	Do.	1	1
Medical College	Calculi	3	3
Military Secretary to His Excellency the Commander-in-Chief.	Water	1	1
Municipalities. { Coimbatore	Water	3	27
{ Ongole	Do.	5	
{ Madras	Do.	11	
{ Tanjore	Do.	3	
{ Salem	Do.	1	
{ Vaniyambadi	Do.	3	
{ Kurnool	Do.	1	
Officer in charge, Special Vaccine Supply Department, Bangalore.	Tape and cloth	4	4
Ordnance Officer, Arsenal, Madras ..	Soap	4	4
Principal Medical Storekeeper, Madras ..	Disinfecting powder	1	17
	Carbolic powder	5	
	Dilute Hydrocyanic Acid	1	
	Cocaine	5	
	Standard solutions for water analyses.	3	
	Pills	1	
	Cocaine Hydrochloras	1	
Sanitary Engineer from Coimbatore ..	Water	3	9
Do do. Tuticorin	Do.	4	
Do do. Tinnevely	Do.	2	
Senior Surgeon, General Hospital, Madras.	Corrosive cotton	1	1
Surgeon (Second), do. do. ..	Water	1	1
Superintendent, Government Lying-in Hospital, Madras.	Adulterated milk	1	1
Superintendent, Army Clothing, Madras.	Naphthaline	2	2
Sub-Assistant Superintendent, Telegraph Stores.	Bichromate of Potash	1	1
Superintendent of Stationery	Inks	16	16
Surgeon-General with Government of Madras.	Do.	7	7

Examinations made for Government Departments, &c.—cont.

Received from	Nature of substance.	Number of examinations.	Total number of examinations for the year.
Surgeon to His Excellency the Governor, Ootacamund.	Water	2	2
	Water	10	26
	Saltpetre	1	
	Crude Saltpetre	1	
	Cocoonut oil	5	
	Silver plate	1	
	Soap	1	
	Coal	1	
	Beer	1	
	Urine	1	
	Kola water	1	
Private Parties and Firms	Linseed oil cake	2	
	Carbolic disinfecting powder	2	
	Total	1,907	1,907

TESTING OF SPIRITS BY THE METHOD OF OBSCURATION.

22. This method of testing was introduced by the Government during the early part of the year, and a Special Assistant was deputed to learn the work in this office, and after sufficient knowledge of the methods, to carry on the testing of all samples sent from the Customs Office, Madras, and from the different ports, such as Cochin, Calicut, &c. The number of samples tested has been 1,136. This method is adopted with a view of getting more accurate estimates of the percentage of alcohol in different samples, and it quite supplants the old test by means of the hydrometer. The Government intend to give this method of testing a trial for one year, after which it will be compared with that of the old method from a financial point of view. The Assistant in charge has been thoroughly trained and is quite capable of carrying on the work independently, and arrangements are being made to move his work to the Customs office as a more convenient place for all the parties concerned.

The supervision of this branch of work has added largely to the other responsibilities of the Chemical Examiner.

WATERS.

23. The number of analyses under this head has increased from 158 last year to 171 this year. Analyses are only undertaken when it is convenient to perform them, but every endeavour is made to meet the requirements of Municipalities, Jail departments and others. There were also 15 samples of rain-water examined and the results are given below:—

ANALYSES OF MADRAS RAIN-WATER—Monthly Results, 1891.

	February.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Rainfall Inches.	.89	.46	.22	.50	2.14	1.18	11.24	3.55	4.50	24.68
Total combined nitrogen (as NH ₃) lb. per acre.	.050	.087	.019	.041	.214	.093	.569	.289	.129	1.441
Chlorine as Na cl. "	1.527	.292	.287	.531	2.141	2.026	10.368	3.709	2.907	23.778
Solids "	8.040	1.040	.994	1.131	4.841	5.338	28.291	8.031	8.678	64.884
Ash "	2.013	.520	.496	.565	2.368	2.669	11.469	4.015	3.963	28.078

SALT.

24. Three hundred and twenty-two samples were analysed during the year, the two Salt Assistants being more than fully occupied with the analyses.

25. One hundred and four examinations were made for the Customs Department. There were 60 examinations performed under the Petroleum Act, being a much larger number than usual, and 16 examinations under the Explosives Act.

26. In the month of August, the duties of the Assistant Chemical Examiner were undertaken by the First Assistant in this office, Mr. M. Goolab Roy, and I cannot speak too highly of the hardworking, zealous and painstaking way in which he has undertaken the duties to my entire satisfaction.

The work of the First Assistant, Mr. M. Goolab Roy, was undertaken by the Second Assistant and the clerk of the office, who had also some practical knowledge of laboratory work, and they have performed their duties creditably.

27. The entries in the service-books have been duly made and kept up to date.

28. There appears to be still some difficulty in obtaining the results of trials in criminal cases in which chemical examination is sought for, and I would request the Government to again bring to the notice of the Judicial Department the failure in reporting the results of such trials.

29. With reference to last paragraph of G.O., No. 354, dated 4th May 1891, appended to the annual report of this office for 1890, I have the honour to furnish the statements therein called for. The statement No. I has been inserted in this year's annual report in place of the one that was usually furnished.

Year.	A.			B.			Total		
	Cases in which viscera or evacuations were examined.			Cases in which only suspected food, &c., was received for examination.					
	Total number of cases.	Number of cases in which poison was detected.	Percentage of detections	Total number of cases.	Number of cases in which poison was detected.	Percentage of detections	Total number of cases.	Number of cases in which poison was detected.	Percentage of detections
1890 ..	92	66	71.74	24	10	41.6	116	76	65.52
1891 ..	83	46	55.42	33	15	45.45	116	61	52.58

Year.	Number of cases detected.	Inorganic poison.	Organic poison.	Percentage of column 3 to column 2.
1	2	3	4	5
1891	61	39	22	63.93
1890	76	59	17	77.63
1889	90	49	41	54.4
1888	73	41	32	56.2
1887	62	51	11	82.3

30. A general statement, including the figures given in the previous tables, is, as usual, given below :—

IX.—Tabular statement for the year.

Nature of work.	Total number of cases. 2	Total number of articles received for examination. .3	Total number of cases in which poison was detected. 4	Total number of cases in which blood was detected. 5	Total number of cases in which semen was detected. 6
Inorganic.					
Arsenic oxide, impure orpiment, and calomel.					
Arsenious oxide and plumbagin.					
Arsenious oxide, mercuric salt, and calomel.					
Arsenous oxide, ganjah, and Gloriosus superba.					
Arsenious oxide, ganjah, and croton seeds.					
Arsenious oxide and realgar.					
Mercuric salt.					
Human cases. { Class A .. ,, B ..	83 33	430 69	46 15	.	. .
Blood stains ..	44	172	.	31	.
Seminal stains ..	3	7	.	.	.
Cattle cases. { Class A .. ,, B ..	55 29	183 31	42 23	.	.
Examinations for Government departments ..	1,881	1,881	.	.	.
Do. for private parties, firms, &c. ..	26	26	.	.	.
Total for the year 1891 ..	2,154	2,799	126	31	..
" " 1890 ..	1,091	1,749	121	27	..

Tabular statement for the year—cont.

Nature of work.	Inorganic—cont.		Organic.		Total	
	Class A	Class B	Class A	Class B	Class A	Class B
Human cases.	17	1	1	1	1	1
Blood stains	18	1	1	1	1	1
Seminal stains	19	1	1	1	1	1
Cattle cases	20	1	1	1	1	1
Examinations for Government departments	21	1	1	1	1	1
Do. for private parties, firms, &c.	22	1	1	1	1	1
Total for the year 1891	23	1	1	1	1	1
Do. " " 1890	24	1	1	1	1	1
	25	1	1	1	1	1
	26	1	1	1	1	1
	27	1	1	1	1	1
	28	1	1	1	1	1
	29	1	1	1	1	1
	30	1	1	1	1	1
	31	1	1	1	1	1
	32	1	1	1	1	1
	33	1	1	1	1	1
	34	1	1	1	1	1
	35	1	1	1	1	1
	36	1	1	1	1	1
	37	1	1	1	1	1
	38	1	1	1	1	1
	39	1	1	1	1	1
	40	1	1	1	1	1
	41	1	1	1	1	1
	42	1	1	1	1	1
	43	1	1	1	1	1
	44	1	1	1	1	1
	45	1	1	1	1	1
	46	1	1	1	1	1
	47	1	1	1	1	1
	48	1	1	1	1	1
	49	1	1	1	1	1
	50	1	1	1	1	1

ORDER—dated 7th May 1892, No. 316, Public.

The analytical work done by the Chemical Examiner in 1891 is compared with that performed in 1890 in Table No. I at page 1 of the report. The principal increase was in cases of suspected cases of poisoning. There was a falling off in miscellaneous analyses for Government Departments and Municipalities.

2. The statements at page 12 of the report show the numbers of cases of suspected human poisoning examined during 1891 and 1890, with the results. The number of cases was the same in both years, but there was a decrease in the percentage of detections in the year under review. Inorganic poisons were found in only 39 cases, as against 59 in 1890.

3. The total number of ascertained deaths from the effects of poison was 39, or 15 less than in the preceding year. Twenty-six deaths were due to inorganic, and thirteen to organic, poisons, as against 47 and 7, the corresponding figures for 1890.

4. Cases of suspected Cattle poisoning.—The number of cases examined was 84, or 30 more than in 1890. Poison was detected in 65 cases, and arsenic was the agent used in no less than 63. The percentage of detections was 77.4, as against 83.3 and 70.6 in 1890 and 1889 respectively.

5. Blood Stains.—Forty-four cases were examined and blood was detected in 31. In the year under review, 172 examinations of 44 cases resulted in blood being found in 31 instances, while in the preceding year 99 examinations in 33 cases showed blood in 27 cases.

6. Spermatoc Stains.—These cases were examined, with negative results in all.

7. Miscellaneous Analyses.—There were 1,136 samples of spirits tested for obscuration for the Customs Department, and 322 analyses of salt for the Board of Revenue. 171 examinations of water were made for Government, Municipalities, and private parties.

8. Paragraph 28 of the report will be dealt with in the Judicial Department.

9. The report is satisfactory.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Judicial Department.
" the Surgeon-General.
" the Chemical Examiner.
" the Sanitary Commissioner.
" the Revenue Department.
" the Local and Municipal Department.
" the Military Department.
" the Inspector-General of Police.
" the Secretary to the Government of Hongkong, with C.L.
" all District Magistrates.
Editor Table.

RESPONSE—dated 7th May 1892, No. 317, Public.
Copy to the Government of India, Home Department.

J. F. PRICE,
Chief Secretary.

Ed. L. A. Parnage.

Govt. of Madras.
PUBLIC.

Issued

Recd.

Encl.

G.O., &c., 7th May 1892,
Nos. 316, 317.

MAY

Chemical Examiner's Report.

Reviewing the — for 1891.