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Report to
med. & m.
for 10/2/2

Reviewing the

MADRAS RECORD OFFICE.
Government Records.

16

29TH APRIL 1893, Nos. 344, 345, PUBLIC.

ORDER—dated 29th April 1893, No. 344, Public.

The analytical work done by the Chemical Examiner in 1892 is compared with that performed in 1891 in No. 344, page 2 of the report. The principal increase was in cases of suspected human poisoning. There was a falling off in miscellaneous analyses, which was principally due to the transfer to the Customs Department of the spirit testing work.

2. The statements on pages 3 and 4 of the report show the numbers of cases of suspected human poisoning examined during 1892 and 1891, with the results. The number of cases was 136 against 116, and there was an increase from 52·58 to 58·82 in the percentage of detections in the year under review. Inorganic poisons were found in 57 cases, as against 39 in 1891 and 59 in 1890.

3. The total number of ascertained deaths from the effects of poison was 58, or 19 more than in the preceding year. Forty-five deaths were due to inorganic, and thirteen to organic, poisons, as against 26 and 13, the corresponding figures for 1891.

4. *Cases of suspected Cattle-poisoning.*—The number of cases examined was 77, or 7 less than in 1891. Poison was detected in 66 cases, and arsenic was the agent used in no less than 62. The percentage of detections was 85·7, as against 77·4 and 83·3 in 1891 and 1890 respectively.

5. *Blood Stains.*—Thirty-seven cases were examined and blood was detected in 31. In the year under review 143 examinations of 37 cases resulted in blood being found in 31 instances, in the preceding year 172 examinations in 44 cases showed blood in 31 cases.

6. *Spermatic Stains.*—Four cases were examined, with negative results in all.

7. *Miscellaneous Analyses.*—There were 692 samples of spirits tested for obscuration for the Customs Department, and 332 analyses of salt for the Board of Revenue. 109 examinations of water were made for Government, Municipalities, and private parties.

8. The remarks in paragraphs 10 and 22 of the report will be brought to the notice of the Judicial Department, to which the separate communication referred to in paragraph 28 has already been transferred.

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.
Editors' Table.

ENDORSEMENT—dated 29th April 1893, No. 345, Public.

Copy to the Government of India, Home Department.

J. F. PRICE,
Chief Secretary.

Exd. A: Raitt.

Department.

G. O. (Printed).

Dated _____ 18

No. _____

27. The pearl analyses of rain-water have been kept up and the results for the year are shown:—

USE of Madras Rain-water Monthly Results, 1892.

		June.	July.	August.	September.	October.	November.	December.	Total.
Rainfall	inches..	5.57	5.85	8.19	6.79	6.48	1.06	4.61	38.55
Total combined nitrogen as (NH ₃)	per acre.	0.339	0.358	0.339	0.328	0.324	0.046	0.234	1.968
Chlorine (as NaCl)	"	5.527	7.423	9.304	6.651	5.773	1.265	6.187	42.130
Solids	"	19.715	15.881	27.825	23.040	26.061	4.795	15.643	132.560
Ash	"	6.696	9.263	13.912	10.870	8.924	2.397	10.428	62.490

28. With reference to G.O., No. 969, dated 23rd May 1892, I beg to say that the defaulter list long one and that I am therefore submitting it to Government under separate cover.

29. The ser books of the establishments are up to date.

30. A genestatement including the figures shown in the separate tables is appended.

IX.—Tabular statement for the year.

[illegible]

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

Re	Nature of substance.	Number of examinations.	Total number of examinations for the year.	
Collector of Sea Customs	Blasting Gelatine	3	10	
	Dynamite	5		
	"Fuze"	1		
	Tonite	1		
	Cylinder Oil	4		
	Earth Oil	2	62	
	Engine Oil	1		
	Heavy Mineral Oil	1		
	Kerosine Oil	42		
	Lubricating Oil	4		
	Paints	5		
	Rangoon Oil	1		
	Spindle Oil	1		
	Turpentine	1		
	Caoutchoucine	4		
	Damar Oil	1		
	Essences	4		
	Essence of Rum	1		
	French Polish	2		
	Havanabrown	1		
	Kola Wine	1		
	Ham	1		
	Lemon Squash	1		
	Methylated Spirit	2		
	Port Wine	1		
	Patent Medicine	2	727	
	Potable Spirits	2		
Quinine Tonic Essence	1			
Sacramental Wine	1			
Sherry Wine	1			
Absinthe Extract	1			
Table Vinegar	1			
Unfermented Wine	1			
Varnish	4			
Vin-de-vial	1			
Zolakone	1			
Spirits for obscuration	692	39		
Earth	5			
Water	4			
Saline Efflorescence	1			
Water	2			
Collector of Bellary	Water	1	7	
	Earth	3		
	Saline Efflorescence	2		
	Earth	4		
	Earth	6		
	Earth	2	1	
	Water	2		
	Earth	6		
	Saline Efflorescence	1		
	Caoutchoucine	1		
Collector of North Arcot	Caoutchoucine	6	21	
Collector of South Arcot	Caoutchoucine	1		
Conservator of Forests, Scircle, Coimbatore	Wood oil under Petroleum Act	1		
Do. Grele, Madras	Earth	1		
District Magistrate, Saidi	Date seedlings and grubs	2		
District Medical Officer, Arcot	Crackers	1	1	
Do. Ar	Opium	1		
Executive Engineer, Milbrks, Madras	Water	2		
Do. Bangalore	Water	1		
Do. East railway, Chicacole	Water	3		
Do. Sout	Water	2	1	
Do. Kist	Water	5		
	Water	1		
	Quartzite	1		
		7		
Jail Department—	Water	11	1	
	Water	1		
	Water	1		
	Water	2		
	Water	3		
	Do. CentraVellore	Water	3	1
	Do. doSalem	Water	1	
	Magistrate, Second Class and Military Station, Bangalore	Ghee	1	
	Medical Officer, Samalk	Water	1	
	Do. Station, St. Thomas' Mount	Water	1	
Do. 26th Regt, Madras Infantry, Secubad	Water	1	1	
Do. Alatur	Suspected confection	1		

TABLE V-a.

Year.	Number of cases detected.	Inorganic poison.	Organic poison.	Percentage of column 3 to column 2.
1	2	3	4	5
1892	80	57	23	71.25
1891	61	39	22	63.93
1890	76	59	17	77.63
1889	90	49	41	54.40
1888	73	41	32	56.20

II.—BLOOD STAINS.

21. Out of the 31 cases in which the suspected stains were proved to contain blood, in 24 mammalian blood was detected. In 3 cases the examination included also identification of bones, nails, hair, &c., involving decisions upon questions of identity, age and mode of death.

TABLE VI.

Districts received from	Number of cases.	Number of cases in which blood was detected.	Number of examinations.
Anantapur	2	2	9
Arcot, North	7	6	27
Bellary	5	4	26
Coimbatore	2	1	4
Cuddapah	5	4	14
Ganjam	1	..	3
Kistna	3	3	20
Kurnool	2	2	5
Madras	1	1	3
Malabar	3	2	12
Nilgiris	1	1	1
Salem	4	4	11
Tinnevely	1	1	8
Total for the year { 1892 ..	37	31	143
1891 ..	44	31	172

III.—SPERMATIC STAINS.

TABLE VII.

Districts received from	Number of cases.	Number of cases in which semen was detected.	Number of examinations.
Chingleput	2	..	3
Madura	1	..	1
Tanjore	1	..	2
Total for the year { 1892 ..	4	..	6
1891 ..	3	..	7

22. In none of these cases were sperms detected. Forwarding officers entirely disregard the instructions regarding the care with which suspected spermatic stains should be packed, and do not appreciate what has been insisted on before that the very slightest pressure or friction is sufficient to crush beyond any hope of recognition these minute objects upon whose detection alone the presence of the spermatic fluid in any stains can be established. Instead of carefully cutting out the suspected stains and packing them in a soft material like cotton wool, the whole cloth is invariably rolled up into a bundle and sent by parcel post.

Two of the cases related to the offence of rape, and another to sodomy. The fourth comprised the offences of kidnapping a woman to seduce her to illicit intercourse and of murder, the accused being sentenced for the former offence to the maximum punishment of ten years' rigorous imprisonment.

IV.—CASES OF SUSPECTED CATTLE-POISONING.

23. The percentage of detections to cases examined was 85.7, white arsenic alone contributing 80 per cent.

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 in which poison was detected.	Number of analyses.	Nature of poisons.		
					Arsenious oxide.	Arsenious oxide and mercuric salt.	Calatropis gigantea.	Dhatura.	Mercurio salt.			Arsenious oxide.	Potash alum.	Lime (Chunam).
Anantapur	10	10	8	27	8	..	..	..	..	..	..	1	..	..
Arcot, South	2	2	1	14	1	..	..	..	..	1	..	..	..	..
Bellary	2	2	2	6	2	..	..	..	..	..	1	..	..	..
Chingleput	1	2	1	6	1	..	..	..	..	..	..	..	..	..
Coimbatore	9	10	9	28	9	..	..	..	..	..	..	..	..	..
Cuddapah	3	3	3	8	3	..	..	..	..	1	1	..	..	..
Ganjam	1	1	1	1	..	..	..	..	..	2	2	..	..	..
Godavari	1	1	1	6	1	..	..	..	1	..	..	..	..	..
Kistna	4	5	2	13	1	..	..	..	..	4	..	5	4	..
Kurnool	5	6	2	17	2	..	..	..	1	4	4	4	3	1
Madras	1	1	1	4	1	..	..	..	..	1	..	..	..	..
Madura	3	5	3	13	3	..	..	..	..	1	1	..	1	..
Nellore	4	4	4	14	4	..	..	..	..	1	1	1	1	..
Nilgiris	1	1	..	1	..	..	..	..	..	1	1	1	1	..
Salem	2	2	1	8	1	..	..	..	..	..	..	..	..	..
Tanjore	1	2	1	7	1	..	..	..	..	3	3	3	3	..
Trichinopoly	1	1	1	5	1	..	..	..	..	2	2	2	2	..
Tinnevely	2	2	2	6	1	..	1	..	..	1	1	2	1	..
Vizagapatam	..	..	..	..	..	..	..	..	..	2	2	3	2	..
Total for the year 1892	53	60	43	184	40	1	..	1	1	24	23	27	22	1
1891	55	71	42	183	41	..	1	..	1	29	23	31	22	1

B.—MISCELLANEOUS ANALYSES.

24. The work performed under this section is as usual tabulated below:—

EXAMINATIONS made for Government Departments, &c.

Received from	Nature of substance.	Number of examinations.	Total number of examinations for the year.
Assistant Engineer, South Indian Railway, Vellore ..	Water	3	3
	Salt	332	
	Beer	18	
	Bombay Beedi (Cigarettes)	1	
Board of Revenue	Cured Fish	6	374
	"Liebtraumilch"	1	
	"Majum"	1	
	Opium	1	
	Spirits	10	
	"Sonti Mundu"	1	
Chemical Laboratory	Plant found in Toddy	1	18
	Toddy	1	
	"Vin-de-vial"	1	
Commissariat Department	Rain-water	17	7
	Butter	1	
	Condensed Milk	2	
	Jaye's Disinfecting Powder	1	
	Kerosine Oil	3	
	Rum	1	

statement in the certificate; and if arsenic had been introduced into the bottles containing the viscera, not only the spirit but also the contained viscera would have been tainted with arsenic, there being no means of ascertaining by chemical examination whether or not the arsenic had been absorbed into the tissues during life. I refer to this as it appears to be a matter which might assume greater importance in some future case, and deserves to be generally understood.

Mercurial Compounds.—(a) A hospital servant, having been dismissed for misconduct, drank off some corrosive sublimate lotion and died from the effects of gastro-intestinal irritation. Although the organs were separately removed and examined separately in the laboratory, the poison was found only in the stomach, colon and urine, none being found in the small intestines or kidneys. The curious distribution of the poison is noteworthy and a not unlikely explanation may be found in the diffusibility of crystalline poisons introduced into the body.

(b) A girl aged 15 years was given something in her food with a view to making her endear herself to a certain man who wished to marry her. She suffered from irritant poisoning by corrosive sublimate, but recovered.

(c) Three persons noticed a peculiar taste in the beet-root served at tiffin, and two of them were seized with vomiting. The pieces sent for examination contained over one grain of corrosive sublimate.

(d) A female who was accused of theft was given some flour to eat as a test of innocence. She was soon seized with vomiting and bloody stools, but fortunately came through the ordeal alive.

Copper Salt.—A man had been complaining of feeling unwell, and his friends administered something with lime-juice. He was soon seized with vomiting and purging, had jaundice, but recovered. In the vomited and purged matters the presence of copper was detected equivalent to nearly $5\frac{1}{2}$ grains of crystalline copper sulphate.

Organic Poisons.

11. There were 23 cases in which this class of poisons was detected, and the following table shows the number of such cases for 5 years past:—

TABLE V.

	1892.	1891.	1890.	1889.	1888.
Cases included in Class A	16	15	14	33	20
Class B	7	7	3	8	12
Number of individuals affected in A and B	33	42	28	59	51
„ of deaths in A and B	13	13	7	28	17

12. *Aconite* was detected in three cases, in one of which only excretions mixed with ashes were available; and in another the suspected food and vomited matter of 8 persons were sent. In the 3rd case earth from 3 different parts of the grave with the bones found therein (skull and 9 ribs) were sent for examination, but no poison could be detected in them; a piece of "bark" with which it was alleged that deceased had been poisoned was identified as portion of the aconite plant.

13. *Atropine* and *Datura* were detected in 8 cases, in 3 of which portions of the datura plant were identified among articles sent for examination, and in the remainder a mydriatic alkaloid was extracted from them.

(a) A woman who was boarding with a family poisoned their food, and while they were drugged she abstracted their money and jewellery and stealthily left the house. She was sentenced to 5 years' rigorous imprisonment.

(b) A man seeing a pot of toddy in his path drank some, became comatosed and died.

(c) A man was found dead in the streets, suspected to have died of alcoholic poisoning. The viscera were sent up just as they were taken out of the body, but no alcohol was found in them; an alkaloid resembling atropine physiologically was detected.

(d) A party of pilgrims was joined by a stranger who, after accompanying them sometime, treated them with sweet-meats, in which datura seeds were found at the chemical examination. The persons who ate this fortunately only suffered from vomiting.

14. *Camphor*—was detected in a case, in which, at the inquest, a verdict of suicidal death by camphor and chloral was given. Fatal poisoning by camphor is of extremely rare occurrence, and the number of recorded cases are very few. A bottle containing camphor and chloral was found, together with other drugs, in the room where the deceased was found, and though a most careful search was made for chloral in the viscera, none was detected. This drug is said to undergo decomposition in the body into chloroform which, being volatile, might escape during the *post-mortem* examination; but though the chemical examination of the organs, &c., was directed to the detection of chloroform first, in case of its presence as a decomposition product of chloral, none was found.

15. *Colocynth*.—A boy was reported to have died of cholera, and to clear the doubt a chemical examination was required. In searching the contents of the stomach at the laboratory 10 seeds of the colocynth fruit were found; and from the mixed material was extracted a substance which gave the chemical re-actions of colocynthin. The *post-mortem* examination revealed intense irritation of the rectum, the portion of the alimentary canal upon which this drug specially acts.

16. *Ganjah*—was detected alone in two cases. In one of these a bandy-driver was found dead on his cart from the effects of the drug, some of which was found on his person in the form of a confection; in the other case 3 persons, who procured a special strength-giving and venereal-curing preparation from Bombay, died from the effects of this poison. This drug was also found together with *plumbagin* in an electuary which caused giddiness, vomiting, twitchings of muscles, dilatation of pupil, partial unconsciousness, and collapse.

17. *Opium*—was detected in the stomach of an infant which died from the effects of over-dosing for diarrhoea; and also in the viscera of a lad who was taken to hospital suffering from strong general convulsions (except trismus) with unconsciousness and dilatation of pupils. Temperature ran up to 107° Fahrenheit before death. The occurrence of convulsions in man, after coma has set in, is rare; in the lower animals the paralyzing effect on the brain of large doses of opium is followed by increased irritability of the spinal cord. In opium-poisoning the pupils are markedly contracted, but sometimes dilate just before death as in this case: like in the late stages of chloroform-poisoning. In comatosed states, as in opium-poisoning, there is always a tendency to rapid loss of body heat, and this is a point which is not usually appreciated during the treatment of these cases. The sudden rise of temperature before death is a curious feature of this case.

18. *Strychnine*—was detected in three cases—

(a) A woman took some powdered root given by her brother as a cure for chronic dyspepsia and fell dead in a severe convulsion.

(b) A patient suffered from twitchings after taking 2 doses of a tonic mixture containing strychnine and quinine. The remainder of the mixture showed that there was nearly one grain of strychnine in the 6 ounces of the mixture, that is, 2 drachms (instead of half a drachm as prescribed) of the B. P. Liquor Strychniæ must have been added to the mixture by the compounder.

(c) A pregnant woman took some drug, apparently with view to cause abortion, suffered from twitchings and died.

19. *Tobacco*.—Snuff was the cause of poisoning in two women who were persuaded to follow a man under a false pretext and to share a meal with him.

20. The following information is tabulated at the request of Government:—

- (6) A woman, who was ill for about a week, was given some medicine by her paramour, and she was found dead next morning. Symptoms prior to death were unknown, and there was nothing noteworthy in the *post-mortem* notes except the remarkably small weight of the different viscera.
- (7) A young married woman, aged 14 years, had her breakfast at 7 A.M., and died suddenly at 11 A.M., it is said of "stomach-ache." *Post-mortem* examination threw no light on the cause of death.
- (8) A woman, aged about 60 years, was found dead on the road-side, body highly decomposed.
- (9) Immediately after his meal a man was seen to go to a shallow channel of water, in which he was subsequently found dead.
- (c) Cases in which the balance of evidence appears to be in favour of death by poison, but in which no poison was detected:—
- (1) A woman was given some medicine by a native quack which caused vomiting and purging. A week after she was admitted into hospital still suffering from mercurial poisoning, and died in two days. The poison had no doubt been eliminated from the system.
 - (2) A woman poisoned herself with oleander owing to a quarrel with her husband. No evidence of this or of other poison could be obtained from the materials sent for examination.
 - (3) A woman died suddenly and was buried; it turned out subsequently that she was pregnant and that she died from the effects of a drug. The body was exhumed 10 days after, but no poison could be detected in the viscera. The *post-mortem* examination was so carelessly performed that the uterus was not examined nor was even the identity of the individual proved. The Surgeon-General has taken notice of the conduct of this subordinate.
 - (4) A person suffering from fever was administered juice of the *Calotropis gigantea*, was seized with symptoms of irritant poisoning, and died. Only the ashes from the burning ground were available for chemical examination.

7. In the 83 cases in which poison was detected, there were in all 58 deaths, of which 45 were caused by inorganic poisons and the remainder by organic poisons.

Inorganic Poisons.

8. There were 57 cases of poisoning under this class and the table below shows the number of cases during the past 5 years:—

TABLE IV.

	1892.	1891.	1890.	1889.	1888.
Cases included in Class A	51	31	52	36	31
Class B	6	8	7	13	10
Number of individuals affected in A and B	102	105	159	98	76
" deaths in A and B	45	26	47	25	21

9. A few of the noteworthy cases of poisoning by inorganic substances is given below:—

Compounds of Arsenic.—(a) A woman was given an abortifacient by her paramour and she is reported to have died without vomiting or purging having occurred. Arsenic was found in the viscera, and at the *post-mortem* examination two small pieces of brass bangle were found among the contents of the intestines.

(b) Ten children partook of gram and jaggery (mixed with a white substance) which an insane woman gave them and they were all seized with symptoms of irritant poisoning resulting in the death of one.

(c) A woman was suddenly taken ill and died, and the village munsif's enquiry resulted in a verdict of death from cholera. At the instance of her brother the viscera were sent for examination, which resulted in the detection of arsenic.

(d) A child was pounding grain and a stranger passing by asked for a light for his cigar. When the child returned the stranger was pounding the grain. Three persons who ate the food, cooked of this flour, suffered from vomiting and purging, and two of them died.

(e) A native quack threw down a piece of plantain, and four children who were following him ate it and suffered from vomiting and purging. One of them died and in his viscera arsenic was found.

(f) A man put his food on the fireplace and went out to work; on his return home he found a white powder in the food and took it to the munsif. A fowl was given some of the food by way of an experiment and it died. The remainder of the food, which was sent for examination, contained 125½ grains of white arsenic.

(g) A woman entrusted her jewellery to her paramour, who subsequently denied having received the same. One night he gave her a philter and she was immediately seized with vomiting and purging and died in 40 hours.

(h) A man whose concubine deserted him traced her to the house of her new paramour, visited the house with their consent, and contrived to introduce something into the food with the object of regaining her affections. Unfortunately for him the new paramour ate the food first, was taken ill and died.

(i) A long-lost uncle turned up at the house of his nephew with all his movable property including 5 buffaloes. The nephew took him in, fed him and looked after his cattle. The old man was dissatisfied with the treatment he received and one day disappeared with his own and some of his nephew's buffaloes; but was discovered and brought back. The old man vowed vengeance and said he would "see the family reduced to ashes," but the threat was not regarded seriously. One day 5 of the family were suddenly seized with vomiting and purging soon after a meal and one of them died. It was proved that accused had been making enquiries as to where he could obtain arsenic; that he had meddled with this meal while it was cooking; and that he had, contrary to custom, refused to partake of it himself. He was sentenced to death.

(j) A boy who was heir to property and was about to leave his step-mother and to live separately died suddenly and suspicion fell upon her, since arsenic was found in his viscera. The case is unique, in that it necessitated the separate examination and identification of 56 different articles in addition to the viscera. The amount of work involved in accurately identifying such articles by chemical, physiological and botanical tests is scarcely evident from the brief statement of results embodied in a certificate. The accused was a native quack and the whole of his drug stores was sent up for examination; and it was found to include the following articles amongst others of less interest, viz., sulphur, castor oil, ferric chloride, cinnabar, mustard powder, benzoic acid, calomel, arsenious oxide, oil of omum, opium, a mercurial compound, quartz, alum, croton seeds, aloes, turpentine.

10. In one of the arsenical cases it was suggested that the box might have been tampered with, since the medical subordinate, in despatching the box containing the articles to be examined, gave the peon the seal with which the box and articles had been sealed in order that he might put the railway receipt in an envelope and seal the same before posting it. This act of negligence has been noticed by the Surgeon-General; but the judge remarked that "the Chemical Examiner's report that the spirit was right and that he *extracted* (sic) arsenic shows that no arsenic could have been put in after death, only the living organs could absorb the arsenic into their tissues and arsenic put into the bottles would be absorbed by the spirit." These remarks are based upon a misconception of what is implied when the Chemical Examiner certifies that the "sample of spirit is free from poison." The sample of the spirit used for preserving the viscera, &c., and sent in a separate phial, is all that is covered by this.

TABLE III.—*Human Cases—Class B.*

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

District received from.	Number of cases.	Number of cases in which poison was detected.	Number of analyses.	Poisons.												
				Inorganic.							Organic.					
				Arsenious oxide.	Arsenious oxide, ganjah and croton seeds.	Arsenious oxide and mercuric salt.	Mercuric salt.	Opium.	Realgar.	Asa foetida.	Atropine.	Calotropis gigantea.	Datura.	Datura and nux vomica.	Ganjah.	Ganjah and plumbagin.
Anantapur	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Arcot, North	1	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..
Bellary	3	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..
Chingleput	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Cuddapah	3	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..
Ganjam	2	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..
Godavari	2	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..
Kistna	2	1	5	..	..	..	..	..	..	..	..	..	..	..	..	..
Kurnool	4	1	11	..	..	..	1	..	..	..	..	..	..	..	..	..
Madras	5	4	10	..	..	1	..	..	..	..	..	..	..	..	..	..
Madura	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..
Malabar	1	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..
Salem	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Tanjore	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Tinnevely	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..
Total for the year 1892.	29	13	56	3	..	1	2	..	..	1	2	1	3	1	1	..
" " 1891.	33	15	69	4	1	..	1	1	1	1	2	1	..	1	2	1

5. The following Table III (a) is added at the request of Government and shows the proportion of detections to cases examined for two years:—

TABLE III (a).

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.
1891	83	46	55.42	33	15	45.45	116	61	52.58
1892	107	67	62.61	29	13	44.82	136	80	58.82

6. Of 136 cases examined, poison was detected in 80, leaving 56 cases in which the chemical examination did not reveal the presence of any poison. Information regarding these 56 cases may be summarised under—

Group I—consisting of 21 cases in which no fatal result ensued, but in which suspicious circumstances rendered a chemical investigation advisable; and under

Group II—consisting of 35 cases attended with fatal result under suspicion of poisoning.

Group I.—In 6 out of the 21 cases, clothes, or earth tainted with evacuations were sent for examination; and in the remaining 15 only suspected food, vessels in which food was cooked, or other suspected articles were forwarded. The usual nature of these cases may be judged from the following examples:—

(a) A man who was subject to fits swooned immediately after drinking some broth, so the broth was sent for examination.

(b) Potted ham and toast was rejected from the table and the chockera suffered from vomiting a few hours afterwards. The cook was accused of drugging the ham "to gain master's favour"—I suppose on the principle of a love-philter.

(c) Some food was handed to the police because it was the gift of an enemy.

(d) Two pieces of a reptile's skeleton were discovered in the food during a meal. An enemy was accused of putting them into the food with intent to kill, such reptiles having a reputation in the district for being poisonous when swallowed. They turned out to be two skeletons of the scorpion, the soft parts having been separated from the bones probably in the cooking. No ill effects were complained of, though the party ate a good deal of the food.

(e) As an extreme case, the following is noteworthy illustrating the anxiety with which articles are sometimes hurried off to the Chemical Examiner:—A "pot of dholl," which it is surmised was suspected of being poisoned, was received here under unbroken seals and when opened and examined was found to consist "principally of cow-dung, earth, &c."

Group II.—In the 35 cases under this class, 40 persons were affected, of whom 36 died; and from the available information regarding them (i.e., from the police reports, *post-mortem* examination notes, and the judgment in some cases), they may be arranged in 3 classes:—

(a) Cases in which evidence in favour of a disease cause of death preponderates:—

Cerebral abscess	1
" apoplexy	1
Chronic abscess	2
Consequences of abortion	1
Drowning	6
Hanging	2
Heat apoplexy	2
Hydrophobia	1
Injury	1
Pneumonia	1
Puerperal eclampsia	1
Rupture of spleen	1
Snake-bite	2
Total	22

(b) Cases in which there is insufficient evidence in favour of either poison or disease as the cause of death. Fourteen persons were affected, of whom 11 died:—

(1) Two brothers, who were on a pilgrimage, rested and ate their food, and in 2 hours both suffered from vomiting, giddiness, tingling of throat, and one of them died.

(2) Two women and their two sons were seized with vomiting some time after a meal; one woman and one son died.

(3) A person was suddenly seized with vomiting and purging, he was treated by a native quack for irritant poisoning and died.

(4) Two persons were seized with vomiting, purging and abdominal cramps after eating a cake; one of them died after 7 days.

(5) A young female was missed from home and her corpse was found in the river.

TABLE No. I.

		Number of cases investigated.		Number of articles examined.	
		1892.	1891.	1892.	1891.
A.—Medico-legal investigations.	I. Cases of suspected human poisoning	136	116	674	499
	II. Blood stains, &c.	37	44	143	172
	III. Seminal stains	4	3	6	7
	IV. Cases of suspected cattle-poisoning	77	84	211	214
	Total	254	247	1,034	892
B.—Miscellaneous analyses.	For Government Departments and Municipalities ..	697	745	697	745
	For private parties and firms	46	26	46	26
	Spirits tested for obscured strength for the Customs Department	692	1,136	692	1,136
	Total	1,435	1,907	1,435	1,907
Grand Total		1,689	2,154	2,469	2,799

3. The total number of analyses appears less than in the year immediately preceding on account of the transfer to the Customs House of the spirit-testing work which was undertaken by desire of Government tentatively for a year. Excluding the number of spirit-testings from the figures for the period affected by them, there is, as usual, an increase of work performed by the regular establishment; which has remained unaltered in strength while the work has doubled in the past decade.

A.—MEDICO-LEGAL INVESTIGATIONS.

I.—CASES OF SUSPECTED HUMAN POISONING.

4. The usual information regarding these cases is given in the two following statements:—

TABLE II.—Human Cases—Class A.

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

District received from.	Number of cases.	Number of cases in which poison was detected.	Number of individuals affected.	Number of deaths.	Number of analyses.	Poisons.											
						Inorganic.						Organic.					
						Arsenious oxide.	Arsenious oxide and mercuric salt.	Arsenious oxide and sulphur.	Arsenious oxide and orpiment.	Arsenious oxide, orpiment and calomel.	Copper.	Mercuric salt.	Aconite.	Atropine.	Calotropis gigantea.	Cannabis Indica (ganjah).	Camphor.
Anantapur ..	1	1	1	1	4	..	..	..	..	..	..	..	..	..	..	..	..
Arcoot, North ..	3	2	1	1	10	..	..	..	..	..	..	..	..	..	..	..	..
Arcoot, South ..	7	6	15	6	38	..	..	..	..	..	..	..	..	..	..	..	..
Bellary ..	9	4	13	3	113	..	..	..	..	..	..	..	..	..	..	..	..
Canara, South ..	2	4	18	6	27	..	..	..	..	..	..	..	..	..	..	..	..
Chingleput ..	6	4	3	2	15	..	..	..	..	..	..	..	..	..	..	..	..
Coinabato ..	3	2	11	5	41	..	..	..	..	..	..	..	..	..	..	..	..
Cuddapah ..	8	6	4	4	18	..	..	..	..	..	..	..	..	..	..	..	..
Ganjam ..	4	1	3	2	5	..	..	..	..	..	..	..	..	..	..	..	..
Godavari ..	2	2	19	4	6	..	..	..	..	..	..	..	..	..	..	..	..
Kistna ..	13	11	14	12	72	..	..	..	..	..	..	..	..	..	..	..	..
Kurnool ..	6	6	16	6	27	..	..	..	..	..	..	..	..	..	..	..	..
Madras ..	6	6	9	6	38	..	..	..	..	..	..	..	..	..	..	..	..
Madura ..	4	4	4	4	27	..	..	..	..	..	..	..	..	..	..	..	..
Malabar ..	6	4	9	6	15	..	..	..	..	..	..	..	..	..	..	..	..
Nellore ..	3	1	6	2	12	..	..	..	..	..	..	..	..	..	..	..	..
Nilgiris ..	1	..	1	1	5	..	..	..	..	..	..	..	..	..	..	..	..
Salem ..	1	..	1	1	7	..	..	..	..	..	..	..	..	..	..	..	..
Tanjore ..	9	4	12	8	57	..	..	..	..	..	..	..	..	..	..	..	..
Trichinopoly ..	7	6	13	6	94	..	..	..	..	..	..	..	..	..	..	..	..
Tinnevely ..	6	1	6	2	18	..	..	..	..	..	..	..	..	..	..	..	..
Vizagapatam ..	3	..	4	3	16	..	..	..	..	..	..	..	..	..	..	..	..
Hyderabad ..	1	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Total for the year 1892 ..	107	67	175	93	618	35	4	1	1	1	1	8	3	4	..	2	1
" " " 1891 ..	83	46	158	62	430	25	1	..	..	..	..	6	4	..	1	3	3

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

READ—the following papers:—

From Surgeon-Major-General W. F. DEFABECK, M.D., Surgeon-General with the Government of Madras, to the Chief Secretary to Government, dated Madras, 27th March 1893, No. 298.

I have the honour to forward the annual report of the Chemical Examiner for 1892.

2. The total number of analyses performed during the year was less than in 1891, but the decrease is due to the transfer to the Customs House of the spirit testing work as explained by the Chemical Examiner. Excluding this, the work performed by the regular establishment is reported to show an increase as usual.

3. With reference to paragraph 22 of the report, I have to state, for the information of Government, that several medical subordinates were heavily punished during the year on account of carelessness in transmitting suspected articles to the Chemical Examiner and every publicity given to these cases.

4. Every complaint from the Chemical Examiner is carefully enquired into, and though large numbers of articles are transmitted, yet, considering the class of subordinates in the rank of 3rd-grade hospital assistants and the defective training they undergo in these matters during their collegiate course, the number of complaints cannot be considered excessive. As teaching becomes more complete and hospital assistants' actions in these cases are more supervised, the number of these complaints must decrease.

From Surgeon-Major J. L. VANGEYZEL, M.B., C.M., F.C.S., F.I.C., Chemical Examiner, Madras, to the Chief Secretary to Government, dated Madras, 21st March 1893, No. 253.

I have the honour to submit the annual report on the work of the Chemical Examiner's department for the year 1892. The charge of the office was held till the 9th May by Dr. Pope, who was succeeded by Dr. Allison. I resumed charge, on my return from furlough, on the 3rd October. The First Assistant, Mr. Goolab Roy, acted temporarily during the greater part of the year in the appointment of Assistant Chemical Examiner until M.R.Ry. C. Krishnan joined on 10th November. The Special Assistant appointed to carry out testing of spirits was transferred to the Customs department on 16th May under the orders of Government.

2. A numerical estimate of the total work performed during the year is shown in the table below:—

Pub 344/45
 729-483
 Desp 107793

The Collectors of
 The District Magistrates of

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

ORDER—dated 29th April 1893, No. 344 Public.

The analytical work done by the Chemical Examiner in 1892 is compared with that performed in 1891 in Table No. I at page 2 of the report. The principal increase was in cases of suspected human poisoning. There was a falling off in miscellaneous analyses, which was principally due to the transfer to the Customs Department of the spirit testing work.

2. The statements at pages 3 and 4 of the report show the numbers of cases of suspected human poisoning examined during 1892 and 1891, with the results. The number of cases was 136 against 116, and there was an increase from 52.58 to 58.82 in the percentage of detections in the year under review. Inorganic poisons were found in 57 cases, as against 39 in 1891 and 59 in 1890.

3. The total number of ascertained deaths from the effects of poison was 58, or 19 more than in the preceding year. Forty-five deaths were due to inorganic, and thirteen to organic, poisons, as against 26 and 13, the corresponding figures for 1891.

4. *Cases of suspected Cattle-poisoning.*—The number of cases examined was 77, or 7 less than in 1891. Poison was detected in 66 cases, and arsenic was the agent used in no less than 62. The percentage of detections was 85.7, as against 77.4 and 83.3 in 1891 and 1890 respectively.

5. *Blood Stains.*—Thirty-seven cases were examined and blood was detected in 31. In the year under review 143 examinations of 37 cases resulted in blood being found in 31 instances, while in the preceding year 172 examinations in 44 cases showed blood in 31 cases.

6. *Spermatic Stains.*—Four cases were examined, with negative results in all.

7. *Miscellaneous Analyses.*—There were 692 samples of spirits tested for obscuration for the Customs Department, and 332 analyses of salt for the Board of Revenue. 109 examinations of water were made for Government, Municipalities, and private parties.

8. The remarks in paragraphs 10 and 22 of the report will be brought to the notice of the Judicial Department, to which the separate communication referred to in paragraph 28 has already been transferred.

9. The report is satisfactory.

(True Extract.)

J. F. PRICE,
 Chief Secretary.

To the Judicial Department.
 " the Surgeon-General. 6
 " the Chemical Examiner. 6
 " the Sanitary Commissioner. 6
 " the Revenue Department. 6
 " the Local and Municipal Department. 6
 " the Military Department. 6
 " the Inspector-General of Police. 6
 " the Secretary to the Government of Hongkong, with C.L. 3
 " all District Magistrates. 173
 Editors' Table.

ENDORSEMENT—dated 29th April 1893, No. 345, Public.

Copy to the Government of India, Home Department.

Chief Secretary.

3.513.
 25/4

Press

Don't overlook pencil communication
 in root place.

ANALYSES of Madras Rain-water Monthly Results, 1892.

	June.	July.	August.	September.	October.	November.	December.	Total.
Rainfall inches.	5.57	5.85	8.19	6.79	6.48	1.06	4.61	38.55
Total combined nitrogen as (NH ₃) lb. per acre.	0.339	0.358	0.339	0.328	0.324	0.046	0.234	1.968
Chlorine (as NaCl) "	5.527	7.423	9.304	6.651	5.773	1.265	6.187	42.130
Solids "	19.715	15.881	27.825	23.040	26.061	4.795	15.643	132.960
Ash "	6.696	9.263	13.912	10.870	8.924	2.397	10.428	62.490

28. With reference to G.O., No. 969, dated 23rd May 1892, I beg to say that the defaulter list is a long one and that I am therefore submitting it to Government under separate cover.

29. The service books of the establishments are up to date.

30. A general statement including the figures shown in the separate tables is appended.

IX.—Tabular statement for the year.

Nature of work.	Poisons.																																	
	Inorganic.										Organic.																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
	Total number of cases.	Total number of articles received for examination.	Total number of cases in which poison was detected.	Total number of cases in which blood was detected.	Total number of cases in which semen was detected.	Arsenious oxide.	Arsenious oxide and mercuric salt.	Arsenious oxide and sulphur.	Arsenious oxide and orpiment.	Arsenious oxide, orpiment and calomel.	Arsenious oxide, ganjah and croton seeds.	Mercuric salt.	Copper.	Orpiment.	Realgar.	Potash alum.	Lime (chunam).	Aconite.	Atropine.	Assafoetida.	Colatropis gigantea.	Camphor.	Colocynth.	Dhatura.	Dhatura and nux vomica.	Ganjah.	Ganjah and plumbagin.	Oleander.	Opium.	Santonine.	strychnine.	Tobacco.		
			67	..	..	35	4	1	1	1	..	8	1	..	..	..	..	..	3	4	..	..	1	1	..	2	..	..	2	..	..	1	..	
Human cases.	107	618	13	..	..	3	1	..	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	3	1	2	1	..	..	1	..	..		
Blood stains ..	29	56	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Seminal stains ..	37	143	..	31	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
	4	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Cattle cases	53	184	43	..	..	40	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..		
	24	27	23	..	..	22	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Examinations for Government Departments, &c.	1,389	1,389	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Examinations for private parties, firms, &c.	46	46	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Total for the year { 1892 .. { 1891 ..	1,689	2,469	146	31	..	100	6	1	1	1	..	11	1	..	..	..	1	..	3	5	2	..	1	1	4	1	2	1	..	2	6	3	1	..

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

Received from	Nature of substance.	Number of examinations.	Total number of examinations for the year.
Collector of Sea Customs—			
Explosives Act	Blasting Gelatine	3	10
	Dynamite	5	
	"Fuze"	1	
	Tonite	1	
	Cylinder Oil	4	
Petroleum Act	Earth Oil	2	62
	Engine Oil	1	
	Heavy Mineral Oil	1	
	Kerosine Oil	42	
	Lubricating Oil	4	
	Paints	5	
	Rangoon Oil	1	
	Spindle Oil	1	
	Turpentine	1	
	Caoutchoucine	4	
	Damar Oil	1	
	Essences	4	
	Essence of Rum	1	
	French Polish	2	
	Havanabrown	1	
	Kola Wine	1	
	Ham	1	
	Lemon Squash	1	
	Methylated Spirit	2	
	Port Wine	1	
	Patent Medicine	2	
	Potable Spirits	2	
	Quinine Tonic Essence	1	
	Sacramental Wine	1	
	Sherry Wine	1	
	Absinthe Extract	1	
Table Vinegar	1		
Unfermented Wine	1		
Varnish	4		
Vin-de-vial	1		
Zolakone	1		
Spirits for obscuration	692	727	
Earth	5		
Water	4		
Saline Efflorescence	1		
Water	2		
Water	1		
Earth	3		
Saline Efflorescence	2		
Earth	4		
Earth	6		
Earth	2		
Water	2		
Earth	6		
Saline Efflorescence	1		
Caoutchoucine	1		
Caoutchoucine	6		
Wood oil under Petroleum Act	1		
Earth	1		
Date seedlings and grabs	2		
Crackers	1		
Opium	2		
Water	1		
Water	3		
Water	2		
Water	5		
Water	1		
Quartzite	7		
Collector of Bellary			
Bellary	Water	4	39
Kadiri	Water	2	
Proddutur	Water	1	
	Earth	3	
	Saline Efflorescence	2	
Sirvél	Earth	4	
Jammalamadugu	Earth	6	
	Earth	2	
Cuddapah	Water	2	
	Earth	6	
Nandyál	Saline Efflorescence	1	
Collector of North Arcot	Caoutchoucine	1	1
Collector of South Arcot	Caoutchoucine	6	7
Conservator of Forests, Southern Circle, Coimbatore	Wood oil under Petroleum Act	1	1
Do. Central Circle, Madras	Earth	1	2
District Magistrate, Saidápet	Date seedlings and grabs	2	2
District Medical Officer, North Arcot	Crackers	1	1
Do. Anantapur	Opium	2	2
Executive Engineer, Military Works, Madras	Water	1	1
Do. do. Bangalore	Water	3	3
Do. East Coast Railway, Chicacole	Water	2	2
Do. South Arcot	Water	5	5
Do. Kistna	Water	1	1
	Quartzite	7	7
Jail Department.			
Medical Officer, Her Majesty's Penitentiary, Madras	Water	11	21
Do. District Jail, Vizagapatam	Water	1	
Superintendent, Hill Jail, Párvatipur	Water	1	
Do. Jail, Bellary	Water	2	
Do. Central Jail, Vellore	Water	3	
Do. do. Salem	Water	3	
Magistrate, Second Class, Civil and Military Station, Bangalore	Water	3	1
	Ghee	1	1
Medical Officer, Sámalkót	Water	1	1
Do. Station Hospital, St. Thomas' Mount	Water	1	1
Do. 26th Regiment, Madras Infantry, Secunderabad	Water	1	1
Do. Alatur	Suspected confection	1	1

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

Received from	Nature of substance.	Number of examinations.	Total number of examinations for the year.
Municipalities—			
Conjeeveram	Water	2	24
Chimbatore (through Sanitary Engineer)	Water	1	
Cuddapah	Water	2	
Kurnool (through Sanitary Engineer)	Water	3	
Madras	Water	8	
Srirangam	Water	6	1
Ganjam	Water	2	
Officer in Charge, Telegraph Stores, Madras	Sulphate of Copper	1	1
Officer Commanding 19th Field Battery, Royal Artillery, Bangalore	Bracket of a Gun Carriage	1	
Ordnance Officer, Arsenal, Bellary	Antimony	1	2
Do. do. do.	Antimony Sulphuret	1	
Principal Medical Storekeeper, Madras	Cocaine	1	11
	Carbolic Disinfecting Powder	3	
	Drugs	6	
	Rectified Spirit	1	
Principal, Agricultural College, Saidapet	Butter	4	10
	Buffaloe Milk	1	
	Cow's Milk	3	
	Skimmed Milk	1	
	Fresh Cream	1	
Principal Medical Officer, Madras	Ragi	2	3
	Rice	1	
Presidency Port Officer, Madras	Water	1	1
Physician (Second), General Hospital, Madras	Suspected Powder	1	
Residency Surgeon, Bangalore	Soda Water	9	10
Superintendent of Stationery, Madras	Inks	10	
Superintendent, Ophthalmic Hospital, Madras	Cocaine Solution	2	6
Do. Lunatic Asylum, Madras	Water	6	
Do. Public Works, Periyár Division	Earth	3	3
Surgeon (Second), General Hospital, Madras	Chloroform	1	
Surgeon to His Excellency the Governor	Butter	1	2
Sub-Assistant Superintendent of Telegraph Stores, Madras	Water	1	
Sub-Magistrate, Guntúr	Bichromate of Potash	1	1
Do. Adóni	Opium	1	
Private Parties and Firms	Opium	1	46
	Carbolic Disinfecting Powder	1	
	Cholera Pills	1	
	Castor Oil	2	
	Country Arrack	1	
	Dynamite	8	
	Blasting Gelatine	2	
	Gelignite	2	
	Bees Wax	1	
	Engine Ashes	1	
	Grease	1	
	Linseed Oil	2	
	Moura Poonac	1	
	Ground-nut-Meal	1	
	Poonac	1	
	Soda Water	2	
	Elluppa Poonac	1	
	Sherry Wine	1	
	Saltpetre	1	
	Quicksilver	2	
	Water	12	
	Whiskey	1	
	Urine	1	

25. *Salt*.—There were 332 examinations during the year, and the work was very heavy owing to the Principal Salt Assistant having to perform the duties of Assistant Chemical Examiner.

26. *Efflorescence on Soil*.—The black-cotton lands under the Kurnool-Cuddapah canal when irrigated are said to throw up for the first 4 or 5 years a saline efflorescence to which is attributed poor outturn of crops, and the ryots therefore avoid irrigating these lands, while same kind of land in other parts of the district have no such defect. To ascertain the cause of this, analyses of samples of soil and of irrigation water are being conducted and the results will shortly be reported.

27. The periodical analyses of rain-water have been kept up and the results for the year are shown below:—

TABLE V-a.

Year.	Number of cases detected.	Inorganic poison.	Organic poison.	Percentage of column 3 to column 2.
1	2	3	4	5
1892	80	57	23	71.25
1891	61	39	22	63.93
1890	76	59	17	77.63
1889	90	49	41	54.40
1888	73	41	32	56.20

II.—BLOOD STAINS.

21. Out of the 31 cases in which the suspected stains were proved to contain blood, in 24 mammalian blood was detected. In 3 cases the examination included also identification of bones, nails, hair, &c., involving decisions upon questions of identity, age and mode of death.

TABLE VI.

Districts received from	Number of cases.	Number of cases in which blood was detected.	Number of examinations.
Anantapur	2	2	9
Arcot, North	7	6	27
Bellary	5	4	26
Coimbatore	2	1	4
Cuddapah	5	4	14
Ganjam	1	..	3
Kistna	3	3	20
Kurnool	2	2	5
Madras	1	1	3
Malabar	3	2	12
Nilgiris	1	1	1
Salem	4	4	11
Tinnevely	1	1	8
Total for the year { 1892	37	31	143
{ 1891	44	31	172

III.—SPERMATIC STAINS.

TABLE VII.

Districts received from	Number of cases.	Number of cases in which semen was detected.	Number of examinations.
Chingleput	2	..	3
Madura	1	..	1
Tanjore	1	..	2
Total for the year { 1892	4	..	6
{ 1891	3	..	7

22. In none of these cases were sperms detected. Forwarding officers entirely disregard the instructions regarding the care with which suspected spermatic stains should be packed, and do not appreciate what has been insisted on before that the very slightest pressure or friction is sufficient to crush beyond any hope of recognition these minute objects upon whose detection alone the presence of the spermatic fluid in any stains can be established. Instead of carefully cutting out the suspected stains and packing them in a soft material like cotton wool, the whole cloth is invariably rolled up into a bundle and sent by parcel post.

Two of the cases related to the offence of rape, and another to sodomy. The fourth comprised the offences of kidnapping a woman to seduce her to illicit intercourse and of murder, the accused being sentenced for the former offence to the maximum punishment of ten years' rigorous imprisonment.

IV.—CASES OF SUSPECTED CATTLE-POISONING.

23. The percentage of detections to cases examined was 85.7, white arsenic alone contributing 80 per cent.

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.
					Arsenious oxide.	Arsenious oxide and mercuric salt.	Calotropis gigantea.	Datura.	Mercuric salt.			
Anantapur	10	10	8	27	8	..	..	..	..	..	..	..
Arcot, South	2	2	1	14	1	..	..	..	..	1	1	1
Bellary	2	2	2	6	2	..	..	..	..	1	1	1
Chingleput	1	2	1	6	1	..	..	..	..	..	..	..
Coimbatore	9	10	9	28	9	..	..	..	..	1	1	1
Cuddapah	3	3	3	8	3	..	..	..	..	2	2	2
Ganjam	1	1	1	1	1	..	..	1	..	..	..	..
Godavari	1	1	1	6	1	..	..	..	..	4	4	5
Kistna	4	5	2	13	1	..	..	..	1	4	4	3
Kurnool	5	6	2	17	2	..	..	..	..	..	..	..
Madras	1	1	1	4	1	..	..	..	..	1	1	1
Madura	3	5	3	13	3	..	..	..	..	1	1	1
Nellore	4	4	4	14	4	..	..	..	..	1	1	1
Nilgiris	1	1	..	1	..	..	..	..	..	..	..	..
Salem	2	2	1	8	1	..	..	..	..	3	3	3
Tanjore	1	2	1	7	1	..	..	..	..	..	..	..
Trichinopoly	1	1	1	5	1	..	..	..	..	2	2	2
Tinnevely	2	2	2	6	1	1	..	..	..	1	1	2
Vizagapatam	..	..	..	..	..	..	..	..	..	2	2	3
Total for the year 1892	53	60	43	184	40	1	..	1	1	24	23	27
1891	55	71	42	183	41	..	1	..	..	29	23	31

B.—MISCELLANEOUS ANALYSES.

24. The work performed under this section is as usual tabulated below :—

EXAMINATIONS made for Government Departments, &c.

Received from	Nature of substance.	Number of examinations.	Total number of examinations for the year.
Assistant Engineer, South Indian Railway, Vellore ..	Water	3	3
	Salt	332	
	Beer	18	
	Bombay Beedi (Cigarettes)	1	
Board of Revenue	Cured Fish	6	374
	"Liebfraumilch"	1	
	"Majum"	1	
	Opium	1	
	Spirits	10	
	"Sonti Mundu"	1	
Chemical Laboratory	Plant found in Toddy	1	18
	Toddy	1	
	"Vin-de-vial"	1	
	Rain-water	17	
Commissariat Department	Butter	1	7
	Condensed Milk	2	
	Jaye's Disinfecting Powder	1	
	Kerosine Oil	3	
	Rum	1	

statement in the certificate; and if arsenic had been introduced into the bottles containing the viscera, not only the spirit but also the contained viscera would have been tainted with arsenic, there being no means of ascertaining by chemical examination whether or not the arsenic had been absorbed into the tissues during life. I refer to this as it appears to be a matter which might assume greater importance in some future case, and deserves to be generally understood.

Mercurial Compounds.—(a) A hospital servant, having been dismissed for misconduct, drank off some corrosive sublimate lotion and died from the effects of gastro-intestinal irritation. Although the organs were separately removed and examined separately in the laboratory, the poison was found only in the stomach, colon and urine, none being found in the small intestines or kidneys. The curious distribution of the poison is noteworthy and a not unlikely explanation may be found in the diffusibility of crystalline poisons introduced into the body.

(b) A girl aged 15 years, was given something in her food with a view to making her endear herself to a certain man who wished to marry her. She suffered from irritant poisoning by corrosive sublimate, but recovered.

(c) Three persons noticed a peculiar taste in the beet-root served at tiffin, and two of them were seized with vomiting. The pieces sent for examination contained over one grain of corrosive sublimate.

(d) A female who was accused of theft was given some flour to eat as a test of innocence. She was soon seized with vomiting and bloody stools, but fortunately came through the ordeal alive.

Copper Salt.—A man had been complaining of feeling unwell, and his friends administered something with lime-juice. He was soon seized with vomiting and purging, had jaundice, but recovered. In the vomited and purged matters the presence of copper was detected equivalent to nearly $5\frac{1}{2}$ grains of crystalline copper sulphate.

Organic Poisons.

11. There were 23 cases in which this class of poisons was detected, and the following table shows the number of such cases for 5 years past:—

TABLE V.

	1892.	1891.	1890.	1889.	1888.
Cases included in Class A	16	15	14	33	21
Class B	7	7	3	8	12
Number of individuals affected in A and B	33	42	28	59	51
.. of deaths in A and B	13	13	7	28	17

20/

12. *Aconite* was detected in three cases, in one of which only excretions mixed with ashes were available; and in another the suspected food and vomited matter of 8 persons were sent. In the 3rd case earth from 3 different parts of the grave with the bones found therein (skull and 9 ribs) were sent for examination, but no poison could be detected in them; a piece of "bark" with which it was alleged that deceased had been poisoned was identified as portion of the aconite plant.

13. *Atropine* and *Datura* were detected in 8 cases, in 3 of which portions of the datura plant were identified among articles sent for examination, and in the remainder a mydriatic alkaloid was extracted from them.

(a) A woman who was boarding with a family poisoned their food, and while they were drugged she abstracted their money and jewellery and stealthily left the house. She was sentenced to 5 years' rigorous imprisonment.

(b) A man seeing a pot of toddy in his path drank some, became comatosed and died.

(c) A man was found dead in the streets, suspected to have died of alcoholic poisoning. The viscera were sent up just as they were taken out of the body, but no alcohol was found in them; an alkaloid resembling atropine physiologically was detected.

(d) A party of pilgrims was joined by a stranger who, after accompanying them sometime, treated them with sweet-meats, in which datura seeds were found at the chemical examination. The persons who ate this fortunately only suffered from vomiting.

14. *Camphor*—was detected in a case, in which, at the inquest, a verdict of suicidal death by camphor and chloral was given. Fatal poisoning by camphor is of extremely rare occurrence, and the number of recorded cases are very few. A bottle containing camphor and chloral was found, together with other drugs, in the room where the deceased was found, and though a most careful search was made for chloral in the viscera, none was detected. This drug is said to undergo decomposition in the body into chloroform which, being volatile, might escape during the *post-mortem* examination, but though the chemical examination of the organs, &c., was directed to the detection of chloroform first, in case of its presence as a decomposition product of chloral, none was found.

15. *Colocynth.*—A boy was reported to have died of cholera, and to clear the doubt a chemical examination was required. In searching the contents of the stomach at the laboratory 10 seeds of the colocynth fruit were found; and from the mixed material was extracted a substance which gave the chemical re-actions of colocynthia. The *post-mortem* examination revealed intense irritation of the rectum, the portion of the alimentary canal upon which this drug specially acts.

16. *Ganjah*—was detected alone in two cases. In one of these a bandy-driver was found dead on his cart from the effects of the drug, some of which was found on his person in the form of a confection; in the other case 3 persons, who procured a special strength-giving and venereal-curing preparation from Bombay, died from the effects of this poison. This drug was also found together with *plumbagin* in an electuary which caused giddiness, vomiting, twitchings of muscles, dilatation of pupil, partial unconsciousness, and collapse.

17. *Opium*—was detected in the stomach of an infant which died from the effects of over-dosing for diarrhoea; and also in the viscera of a lad who was taken to hospital suffering from strong general convulsions (except trismus) with unconsciousness and dilatation of pupils. Temperature ran up to 107° Fahrenheit before death. The occurrence of convulsions in man, after coma has set in, is rare; in the lower animals the paralysing effect on the brain of large doses of opium is followed by increased irritability of the spinal cord. In opium-poisoning the pupils are markedly contracted, but sometimes dilate just before death as in this case, like in the late stages of chloroform-poisoning. In comatosed states, as in opium-poisoning, there is always a tendency to rapid loss of body heat, and this is a point which is not usually appreciated during the treatment of these cases. The sudden rise of temperature before death is a curious feature of this case.

18. *Strychnine*—was detected in three cases:—

(a) A woman took some powdered root given by her brother as a cure for chronic dyspepsia and fell dead in a severe convulsion.

(b) A patient suffered from twitchings after taking 2 doses of a tonic mixture containing strychnine and quinine. The remainder of the mixture showed that there was nearly one grain of strychnine in the 6 ounces of the mixture, that is, 2 drachms (instead of half a drachm as prescribed) of the B. P. Liquor Strychnice must have been added to the mixture by the compounder.

(c) A pregnant woman took some drug, apparently with view to cause abortion, suffered from twitchings and died.

19. *Tobacco.*—Snuff was the cause of poisoning in two women who were persuaded to follow a man under a false pretext and to share a meal with him.

20. The following information is tabulated at the request of Government:—

TABLE III.—Human Cases—Class B.

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

District received from.	Number of cases.	Number of cases in which poison was detected.	Number of analyses.	Poisons.												
				Inorganic.						Organic.						
				Arsenious oxide.	Arsenious oxide, ganjah and croton seeds.	Arsenious oxide and mercuric salt.	Mercuric salt.	Opium.	Kaalgar.	Assafetida.	Atropine.	Calotropis gigantea.	Datura.	Datura and nux vomica.	Ganjah.	Ganjah and plumbagin.
Anantapur	1	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..
Arcot, North	1	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..
Bellary	3	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..
Chingleput	1	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..
Coimbatore	3	1	4	..	..	..	..	..	..	..	1	..	1	..	..	..
Cuddapah	2	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..
Ganjam	2	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..
Godavari	2	1	5	..	..	..	1	..	..	..	..	..	..	1	..	..
Kistna	4	1	11	..	..	..	..	..	..	..	..	..	..	..	..	..
Kurnool	5	4	10	1	..	1	1	..	..	..	..	..	..	..	..	1
Madras	1	1	2	1	..	..	..	..	..	..	..	..	..	..	..	..
Madura	1	..	4	..	..	..	..	..	..	..	..	..	1	..	..	..
Malabar	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Salem	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Tanjore	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Trichinopoly	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..
Tinnevely	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..
Total for the year 1892.	29	13	56	3	..	1	2	1	1	1	2	1	3	1	1	1
" " 1891.	33	15	69	4	1	..	1	1	1	1	1	1	..	..	1	..

5. The following Table III (a) is added at the request of Government and shows the proportion of detections to cases examined for two years:—

TABLE III (a).

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.
1891	83	46	55.42	33	15	45.45	116	61	52.58
1892	107	67	62.61	29	13	44.82	136	80	58.82

6. Of 136 cases examined, poison was detected in 80, leaving 56 cases in which the chemical examination did not reveal the presence of any poison. Information regarding these 56 cases may be summarised under—

Group I—consisting of 21 cases in which no fatal result ensued, but in which suspicious circumstances rendered a chemical investigation advisable; and under

Group II—consisting of 35 cases attended with fatal result under suspicion of poisoning.

Group I.—In 6 out of the 21 cases, clothes, or earth tainted with evacuations were sent for examination; and in the remaining 15 only suspected food, vessels in which food was cooked, or other suspected articles were forwarded. The usual nature of these cases may be judged from the following examples:—

(a) A man who was subject to fits swooned immediately after drinking some broth, so the broth was sent for examination.

(b) Potted ham and toast was rejected from the table and the chockera suffered from vomiting a few hours afterwards. The cook was accused of drugging the ham “to gain master’s favour”—I suppose on the principle of a love-philter.

(c) Some food was handed to the police because it was the gift of an enemy.

(d) Two pieces of a reptile’s skeleton were discovered in the food during a meal. An enemy was accused of putting them into the food with intent to kill, such reptiles having a reputation in the district for being poisonous when swallowed. They turned out to be two skeletons of the scorpion, the soft parts having been separated from the bones probably in the cooking. No ill effects were complained of, though the party ate a good deal of the food.

(e) As an extreme case, the following is noteworthy illustrating the anxiety with which articles are sometimes hurried off to the Chemical Examiner:—A “pot of dhol,” which it is surmised was suspected of being poisoned, was received here under unbroken seals and when opened and examined was found to consist “principally of cow-dung, earth, &c.”

Group II.—In the 35 cases under this class, 40 persons were affected, of whom 36 died; and from the available information regarding them (i.e., from the police reports, *post-mortem* examination notes, and the judgment in some cases), they may be arranged in 3 classes:—

(a) Cases in which evidence in favour of a disease cause of death preponderates:—

Cerebral abscess	1
" " apoplexy	2
Chronic abscess	1
Consequences of abortion	6
Drowning	2
Hanging	2
Heat apoplexy	1
Hydrophobia	1
Injury	1
Pneumonia	1
Puerperal eclampsia	1
Rupture of spleen	1
Snake-bite	2
Total	22

(b) Cases in which there is insufficient evidence in favour of either poison or disease as the cause of death. Fourteen persons were affected, of whom 11 died:—

- (1) Two brothers, who were on a pilgrimage, rested and ate their food, and in 2 hours both suffered from vomiting, giddiness, tingling of throat, and one of them died.
- (2) Two women and their two sons were seized with vomiting some time after a meal; one woman and one son died.
- (3) A person was suddenly seized with vomiting and purging, he was treated by a native quack for irritant poisoning and died.
- (4) Two persons were seized with vomiting, purging and abdominal cramps after eating a cake; one of them died after 7 days.
- (5) A young female was missed from home and her corpse was found in the river.

TABLE No. I.

		Number of cases investigated.		Number of articles examined.	
		1892.	1891.	1892.	1891.
A.—Medico-legal investigations.	I. Cases of suspected human poisoning	136	116	674	499
	II. Blood stains, &c.	37	44	143	172
	III. Seminal stains	4	3	6	7
	IV. Cases of suspected cattle-poisoning	77	84	211	214
	Total ..	254	247	1,034	892
B.—Miscellaneous analyses.	For Government Departments and Municipalities..	697	745	697	745
	For private parties and firms	46	26	46	26
	Spirits tested for obscured strength for the Customs Department	692	1,136	692	1,136
	Total ..	1,435	1,907	1,435	1,907
	Grand Total ..	1,689	2,154	2,469	2,799

3. The total number of analyses appears less than in the year immediately preceding on account of the transfer to the Custom House of the spirit-testing work which was undertaken by desire of Government tentatively for a year. Excluding the number of spirit-testings from the figures for the period affected by them, there is, as usual, an increase of work performed by the regular establishment, which has remained unaltered in strength while the work has doubled in the past decade.

A.—MEDICO-LEGAL INVESTIGATIONS.

I.—CASES OF SUSPECTED HUMAN POISONING.

4. The usual information regarding these cases is given in the two following statements:—

TABLE II.—*Human Cases—Class A:*

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

District 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 sulphur.	Arsenious oxide and orpiment.	Arsenious oxide, orpiment and calomel.	Copper.	Mercuric salt.	Aconite.	Atropine.	Calotropis gigantea.	Cannabis Indica (ganjah).	Camphor.	Colocyth.	Oleander.	Opium.	Santonine.	Strychnine.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Anantapur..	1	..	1	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Arcot, North	3	2	4	2	4	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Arcot, South	7	6	16	8	38	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bellary ..	9	4	13	8	112	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Canara, South	2	1	4	3	16	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chingleput ..	5	4	18	6	27	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Coimbatore	3	2	3	2	18	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cuddapah ..	8	6	11	5	41	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ganjam ..	4	1	4	4	18	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Godavari ..	2	2	3	2	5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kistna ..	13	11	19	12	72	7	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kurnool ..	6	6	14	6	27	3	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Madras ..	6	6	6	6	38	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Madura ..	6	4	9	4	27	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mahabar ..	4	1	8	6	15	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nellore ..	3	1	6	2	12	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nilgiris ..	2	..	1	1	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nilgiris ..	1	..	1	1	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Salen ..	1	1	1	1	7	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tanjore ..	9	4	12	8	57	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Trichinopoly	7	6	13	6	34	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tinnevely ..	5	1	6	2	18	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Vizagapatam	3	..	4	3	16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hyderabad ..	1	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total for the year 1892 ..	107	67	175	93	618	35	4	1	1	1	1	8	3	4	..	2	1	1	..	2	4	2	1
" " " 1891 ..	83	46	158	62	430	25	1	..	..	..	..	6	4	..	1	..	..	..	..	..	..	3	..

1893.

From

THE CHEMICAL EXAMINER,

MADRAS,

To

THE *Chief Secretary*,
to Government
of Madras
Public Department
Fort St. George.

No.

Dated *21st* } *March 1893*
Received }

ENCLOSURE.

Subject.

Submitting the Annual
Report of the Chemical
Examiner's Department
for the year 1892.

3
Pub

944

By 27 March 93
N-298

29 TH APRIL 1893, No. 2, PUBLIC.

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

READ—the following papers:—

From Surgeon-Major-General W. F. DEFABECK, M.D., Surgeon-General with the Government of Madras, to the Chief Secretary to Government, dated Madras, 27th March 1893, No. 298.

I have the honour to forward the annual report of the Chemical Examiner for 1892.

2. The total number of analyses performed during the year was less than in 1891, but the decrease is due to the transfer to the Customs House of the spirit testing work as explained by the Chemical Examiner. Excluding this, the work performed by the regular establishment is reported to show an increase as usual.

3. With reference to paragraph 22 of the report, I have to state, for the information of Government, that several medical subordinates were heavily punished during the year on account of carelessness in transmitting suspected articles to the Chemical Examiner and every publicity given to these cases.

4. Every complaint from the Chemical Examiner is carefully enquired into, and though large numbers of articles are transmitted, yet, considering the class of subordinates in the rank of 3rd-grade hospital assistants and the defective training they undergo in these matters during their collegiate course, the number of complaints cannot be considered excessive. As teaching becomes more complete and hospital assistants' actions in these cases are more supervised, the number of these complaints must decrease.

From Surgeon-Major J. L. VANGHEYZEL, M.B., C.M., F.C.S., F.I.C., Chemical Examiner, Madras, to the Chief Secretary to Government, dated Madras, 21st March 1893, No. 253.

I have the honour to submit the annual report on the work of the Chemical Examiner's department for the year 1892. The charge of the office was held till the 9th May by Dr. Pope, who was succeeded by Dr. Allison. I resumed charge, on my return from furlough, on the 3rd October. The First Assistant, Mr. Goolab Roy, acted temporarily during the greater part of the year in the appointment of Assistant Chemical Examiner until M.R.Ry. C. Krishnan joined on 10th November. The Special Assistant appointed to carry out testing of spirits was transferred to the Customs department on 16th May under the orders of Government.

2. A numerical estimate of the total work performed during the year is shown in the table below:—

I have the honor to be,

Sir,

Your most obedient servant.

Waulgryn, M.D.C.M.F.C.S.

Off. J. C.

Surgeon Major.

Chemical Examiner

Annual Statement for the year.

Nature of work

Nature of work							Poisons																											Fet. of S. e of or
	Total number of Cases	Total No. of articles received for examination	Total No. of cases in which poison was detected	Total No. of cases in which blood was detected	Total No. of cases in which semen was detected	Inorganic										Organic																		
						Arsenious oxide.	Arsenious oxide and mercuric salt.	Arsenious oxide and Sulphur	Arsenious oxide and opium.	Arsenious oxide, opium and Calomel.	Arsenious oxide, Gargal and croton seeds.	Mercuric salt.	Copper	Opium.	Realgar	Black alum	Lime (Chunam)	Acetic	Atropine	Asiatic acid	Calotropis gigantea	Campor	Colocynthis	Shakara	Shakara and bala	Gargal	Gargal and plumbeum	Alum	Opium	Santonine	Stychnine	Yodace		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33		
Human Cases { Class A.	107	618	67	-	-	35	4	1	1	1	-	8	1	-	-	-	-	3	4	-	-	1	1	-	-	2	-	-	2	-	2	1		
" B.	29	56	13	-	-	3	1	-	-	-	-	2	-	-	-	-	-	-	1	-	-	-	-	3	1	-	1	-	-	-	1	-		
Blood Stains	37	143	-	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Seminal Stains	4	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Cattle Cases { Class A.	53	184	43	-	-	40	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-		
" B.	24	27	23	-	-	22	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Examination for Government Case Department etc	1389	1389	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
" for private parties firms, etc	46	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Total for the year 1892	1689	2469	146	31	-	100	6	1	1	1	-	11	1	-	-	1	-	3	5	-	-	1	1	4	1	2	1	-	2	-	3	1		
" " 1891	2154	2799	126	31	-	92	1	-	-	-	1	6	-	1	1	-	1	4	2	1	3	-	-	-	-	1	-	2	6	1	3	-		

28. With reference to G. O. No: 969
dated 23rd May 1892, I beg to say
that the defaulter list is a long one
and that I am therefore submitting
it to Government under separate
Cover.

29. The Service books of the
Establishments are up to date.

30. A general Statement including
the figures shown in the separate
Tables is appended.

Table IX

Analyses of Madras Rain - Water - Monthly Results. 1892.

	June	July	August	September	October	November	December	Total
Rainfall	5.57	5.85	8.19	6.79	6.48	1.06	4.61	38.55
Total combined Nitrogen as (NH ₃) lbs per acre	0.339	0.358	0.339	0.328	0.324	0.046	0.234	1.968
Chlorine (as NaCl)	5.527	7.423	9.304	6.651	5.773	1.265	6.187	42.130
Solids	19.715	15.881	27.825	23.040	26.061	4.795	15.643	132.960
Ash	6.696	9.263	13.912	10.870	8.924	2.397	10.428	62.490

Analyses of samples of soil and of irrigation water are being conducted and the results will shortly be reported.

27. The periodical analyses of rain water have been kept up and the results for the year are shown below:-

Analyses of Madras Rain-water.

25. Salt. There were 332 examina
-tions during ^{the year} and the work was
very heavy owing to the principal
Salt Assistant having to perform
the duties of Assistant-Chemical
Examiner.

26. Efflorescence on Soil.

The black Cotton lands under
the Kurnool, - Cuddapah, Canal
when irrigated are said to throw
up for the first 4 or 5 years a
saline efflorescence to which is
attributed poor out-turn of crops;
and the ryots therefore avoid
irrigating these lands, while some
parts of land in ^{these} parts of
the district ^{have} no such defect.

To ascertain the cause of this,
Analyses

Examinations made for Government Departments &c. Cont.

Received from	Nature of Substance	No. of examinations	Total No. of examinations for the year
Private Parties and Firms	Castor oil	2	2
	Country Brack	1	
	Dynamite	8	2
	Blasting Gelatine	2	
	Gelignite	2	1
	Bees wax	1	
	Engine ashes	1	1
	Grease	1	
	Linseed oil	2	46
	Mourra Poonae	1	
	Ground nut meal	1	2
	Poonae	1	
	Soda water	2	1
	Ellupia Poonae	1	
	Sherry wine	1	1
	Salt petre	1	
	Quicksilver	2	12
	Water	12	
	Whiskey	1	1
	Urine	1	
Total -		1435	1435

Examinations made for Government Departments &c - Cont:

Received from	Nature of Substance	No. of Examinations	Total of Examinations for the year
Principal, Agricultural College Saidapet	Butter	4	10
	Buffalo Milk	1	
	Cow's Milk	3	
	Skimmed Milk	1	
Principal Medical Officer, Madras	Fresh cream	1	3
" " " "	Raggi	2	
" " " "	Rice	1	1
Presidency Post Office, Madras	Water	1	
Physician, (Second) General Hospital Madras	Suspected Powder	1	1
Residency Surgeon, Bangalore	Soda water	9	9
Superintendent of Stationery, Madras	Inks	10	10
" Ophthalmic Hospital Madras	Cocaine Solution	2	2
" Lunatic Asylum, Madras	Water	6	6
" Public Works, Pempas Div.	Earth	3	3
Surgeon, (Second) Genl. Hosp'tl. Madras	Chloroform	1	1
" to H. C. the Governor	Butter	1	2
" " " "	Water	1	
Sub. Asst. Suptt. of Telegraph Stns. Madras	Bichromate of Potash	1	1
Sub. Magistrate, Guntur	Opium	1	1
" " Adoni	Opium	1	1
Private Parties and Firms	Carbolic Disinfecting Powder	1	1
	Cholera pills	1	

Examinations made for Government Departments &c - Cont.

Received from	Nature of Substance	No. of Examinations	Total No. of Examinations for the year
Magistrate, Second Class, Civil and Military Station, Bangalore	Ghee	1	1
Medical Officer, Samalkotta	Water	1	1
" " Station Hospital	Water	1	1
" " St. Thomas Mount			
" " 26 th Regiment M. I.	Water	1	1
Secunderabad			
" " Station	Suspected confection	1	1
Municipalities	Coimbatore	2	
	Coimbatore (Thro' Sanitary Engineer)	1	
	Cuddalore	2	
	Kurnool (Thro' Sanitary Engineer)	3	
	Madras	8	
	Shrirangam	6	
	Ganjam	2	
Officer in charge Telegraph Stores Madras	Sulphate of Copper	1	1
" Commanding 19 th Field Battery R. A. Bangalore	Bracket of a gun Carriage	1	1
Ordnance Officer, Arsenal, Bellary	Antimony	1	
" " " "	Antimony Sulphide	1	2
Principal, Medical Storekeeper Madras	Cocaine	1	
	Carbolic disinfecting Powder	3	
	Drugs	6	
	Rectified Spirit	1	

Examinations made for Government Departments &c - cont:

Received from	Nature of Substance	No. of Examinations	Total No. of Examinations for the year	
Collector of Bellary { Nandyal	Earth	6	39	
" " "	Saline efflorescence	1		
Collector of North Arcot	Caoutchoucine	1	1	
" " South Arcot	Caoutchoucine	6	7	
" " " "	Wood Oil under Petroleum Act	1		
Conservator of Forests Southern Circle Coimbatore	Earth	1	1	
Conservator of Forests Central Circle Madras	Lake Seedlings and Grubs	2	2	
District Magistrate, Saidapet	Crackers	1	1	
District Medical Officer North Arcot	Opium	2	2	
" " " Anantapur	Water	1	1	24
Ex: Engineer, Military Works, Madras	Water	3	3	
" " " Bangalore	Water	2	2	
" " " East Coast Ry. Chingle	Water	5	5	
" " " South Arcot	Water	1	1	1
" " " Krishna	Quartzite	7	7	1
(Medical Officer Her Majesty's Penitentiary, Madras)	Water	11	21	
" " Dist: Jail Vizagapatnam	Water	1		2
Supdt: Hill Jail Parvathipur	Water	1		
" Jail, Bellary	Water	2		
" Central Jail Vellore	Water	3		
" " " Salem	Water	3		

Examinations made for Government Departments &c - cont.

Received from	Nature of substance	No. of Exam. - nature	Establs. of Exam. - nature for the year
Collector of Sea Customs	Potable Spirits	2	727
	Quinine Tonic Essence	1	
	Sacramental wine	1	
	Sherry wine	1	
	Absinthe extract	1	
	Table Vinegar	1	
	Unfermented wine	1	
	Varnish	4	
	Vinde. Chal	1	
	Zolakhone	1	
	Spirits for obsecration	692	
Collector of Bellary	Earth	5	799
	Bellary { Water	4	
	Saline efflorescences	1	
	Kadiri { Water	2	
	Water	1	
	Pradatur { Earth	3	
	Saline efflorescences	2	
	Servel { Earth	4	
	Jammala Madugu { Earth	6	
	Cuddapah { Earth	2	
	Water	2	

Examinations made for Government departments &c - Contd.

Received from	Nature of Substance	No. of Examinations	Total No. of Examinations for the year
Collector of Sea Customs.	Cylinder oil	4	62
	Carth oil	2	
	Engine oil	1	
	Heavy Mineral oil	1	
	Kerosene oil	42	
	Lubricating oil	4	
	Paints	5	
	Rangoon oil	1	
	Spindle oil	1	
	Turpentine	1	
	Caoutchoucine	4	
	Damar oil	1	
	Essences	4	
	Essence of Gum	1	
	French Polish	2	
	Havanabrain	1	
	Kola wine	1	
	Ham	1	
	Lemon Squash	1	
	Methylated Spirit	2	
	Port wine	1	
	Patent Medicine	2	

Examinations made for Government Departments &c.

Received from	Nature of Substance	Number of Examinations	Total Number of Examinations for the year
Assistant Engineer, South Indian Railway, Vellore	Water	3	3
	Salt	332	
	Beer	18	
	Bombay Beedi (cigarettes)	1	
	Cured fish	6	
	"Liebfraumilch"	1	
	"Majum"	1	
Board of Revenue	Opium	1	374
	Spirits	10	
	"Soute Mundu"	1	
	Plant found in toddy	1	
	Toddy	1	
	"Vin-de-Vaal"	1	
Chemical Laboratory	Rain. water	17	
	Butter	1	18
Commissionariat Department	Condensed milk	2	
	Jay's Disinfecting Powder	1	7
	Kerosine oil	3	
	Acid	1	
Collector of Sea Customs	Blasting gelatine	3	
	Dynamite	5	
	"Fuze"	1	10
	Conite	1	

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B. Miscellaneous Analyses

24 The work performed under
this section is as usual tabulated
below: -

Examinations made for Government
departments &c.

4
8
7
10

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 in which poison was detected	Number of Analyses	Nature of Poisons			
					Arsenious oxide and mercuric iodide	Platospis gigantea	Shatura	Mercuric iodide	Arsenious oxide			Potash alum	Lead (Chunam)		
Anantapur	10	10	8	27	8										
Arcoi, South	2	2	1	14	1					1	1	1	1		
Bellary	2	2	2	6	2					1		1			
Chingleput	1	2	1	6	1										
Coimbatore	9	10	9	28	9					1	1	1	1		
Cuddapah	3	3	3	8	3					2	2	2	2		
Ganjam	1	1	1	1				1							
Godavari	1	1	1	6	1					4	4	5	4		
Kistna	4	5	2	13	1				1	4	4	4	3	1	
Kurnool	5	6	2	17	2										
Madras	1	1	1	4	1					1	1	1	1		
Madura	3	5	3	13						1	1	1	1		
Nellore	4	4	4	14						1	1	1	1		
Nilgiris	1	1		1											
Salem	2	2	1	8						3	3	3	3		
Tanjore	1	2	1	7											
Tirichinopoly	1	1	1	5						2	2	2	2		
Tinnevely	2	2	2	6		1				1	1	2	1		
Vizagapatam										2	2	3	2		
Total for the year 1892	53	60	43	184		1		1	1	24	23	27	22	1	
" " " 1891	55	71	42	183			1			29	23	31	22		1

rolled up into a bundle, and sent
by parcel post.

Two of the cases related to the offence
of rape, and another to sodomy. The
fourth comprised the offences of
kidnapping a woman to seduce
her to illicit intercourse and of
murder: the accused being sentenced
for the former offence to the
maximum punishment of 10 years
rigorous imprisonment.

IV. Cases of Suspected Cattle poisoning

23. The percentage of detection
to cases examined was 85.7, while arsenic
alone contributing 80 per cent.

Table VIII

22. In none of these Cases were Spermia detected. Forwarding officers entirely disregard the instructions regarding the Care with which Suspected Spermatheic Stains should be packed, and do not appreciate what has been insisted on before that the very slightest pressure or friction is sufficient to crush beyond any hope of recognition, these minute objects upon whose detection alone the presence of the Spermatheic fluid in any Stains can be established. Instead of Carefully, cutting out the Suspected Stains and packing them in a soft material like Cotton wool, the whole cloth is invariably —
rolled

III. Spermatie Stasis.

Table VII

Districts received from	Number of cases	Number of cases in which semen was detected	Number of examina- tions.
Chingleput	2	-	3
Madura	1	-	1
Tanjore	1	-	2
Total for the year 1892	4	-	6
" " " 1891	3	-	7

Table VI.

Localities secured from	Number of cases	Number of cases in which blood examination was detected	Number of inoculations
Anantapur	2	2	9
Arrol, North	7	6	27
Bellary	5	4	26
Channarayana	2	1	4
Channarayana	5	4	14
Gangam	1	-	3
Krishna	3	3	20
Kurnool	2	2	5
Madras	1	1	3
Malabar	3	2	12
Nilgiris	1	1	1
Salem	4	4	11
Tinnevely	1	1	8
Total for the year 1892	37	31	143
" " " 1891	44	31	172

41

II Blood Stains

21. Out of the 31 cases in which the suspected stains were proved to contain blood, in 24 mammalian blood was detected. In 3 cases the examination included also identification of bones, nails, hair & involving decisions upon questions of identity, age and mode of death.

Table VI.

Table Va

Year	Number of cases detected	Inorganic poison	Organic poison	Percentage of column 3 to column 2
1	2	3	4	5
1892	80	57	23	71.25
1891	61	39	22	63.93
1890	76	59	17	77.63
1889	90	49	41	54.40
1888	73	41	32	56.20

37

of the B. P. Liqueur *strychnia* must have been added to the mixture by the Compounder.

(C) A pregnant woman took some drug, apparently with view to cause abortion, suffered from twitchings and died.

19. Tobacco - Snuff was the cause of poisoning in two women who were persuaded to follow ^{a man} under a false pretext and to share a meal with him.

20. The following information is tabulated at the request of Government -

Table Va.

41.
which is not usually appreciated during the treatment of these cases.

The sudden rise of temperature before death is a curious feature of this case.

18. Strychnine - was detected in 3 cases.

(a) A woman took some powdered root given by her brother as a cure for Chronic Dyspepsia and fell dead in a severe convulsion.

(b) A patient suffered from twitching after taking 2 doses of a tonic mixture containing Strychnine and Quinine. The remainder of the mixture showed that there was nearly one gram of Strychnine in the 6 oz. of the mixture, that is 2 drachms (instead of $\frac{1}{2}$ drachm as prescribed) of

from strong general convulsions
(except trismus) with unconsciousness and
dilatation of pupils. Temperature
ran up to 107° Fahrenheit before
death. The occurrence of convulsions
in man, after Coma has set in,
is rare; in the lower animals the
paralysing effect on the brain of
large doses of Opium is followed
by increased irritability of the
Spinal Cord. In opium poisoning
the pupils are markedly contracted
but ^{sometimes} ~~sometimes~~ dilate just before
death as in this case: like in
the late stages of Chloroform
poisoning. In Comatose states
as in Opium poisoning, there is
always a tendency to rapid loss
of body heat and this is a point -
which

bandy driver was found dead on
his part from the effects of the drug and
some of which was found on his
person in the form of a Confection; -
in the other case 3 persons who - in
procured a special strength-giving
and venereal-curing preparation the
from Bombay died from the effects
of this poison. This drug was
also found together ^{with} Phumbagin
in an electuary which caused
giddiness vomiting, twitchings
of muscles, dilatation of pupil, partial
unconsciousness, and Collapse.

17. Opium - was detected in the Stomach
of an infant which died from the
effects of overdosing for diarrhoea; and
also in the viscera of a lad who
was taken to Hospital suffering
from

15. Colocynth - A boy was reported to have died of Cholera and to clear the doubt - a Chemical examination was required. In searching the contents of the Stomach at the laboratory 10 seeds of the Colocynth fruit were found; and from the mixed material was extracted a substance which gave the Chemical reactions of Colocynthia. The Post-mortem examination revealed intense irritation of the rectum, the portion of the alimentary canal upon which this drug specially acts.

16. Gangah - was detected alone in 2 cases. In one of these a
bandy

the number of recorded cases are very few. A bottle containing Camphor and Chloral was found together with other drugs in the room where the deceased was found, and though a most careful search was made for Chloral in the viscera none was detected. This drug is said to undergo decomposition in the body into Chloroform which being volatile might escape during the post-mortem examination, but though the Chemical Examination of the organs &c was directed to the detection of Chloroform ~~at~~ first, in case of its presence as a decomposition product of Chloral, none was found.

they were taken out of the body but no alcohol was found in them; An alkaloid resembling atropine physiologically was detected.

(d) A party of pilgrims was joined by a stranger who after accompanying them sometime treated them with sweet-meats in which datura seeds were found at the Chemical examination. The persons who ate this fortunately only suffered from vomiting.

14. Camphor was detected in a case in which at the inquest a verdict of suicidal death by Camphor and Chloral was given. Fatal poisoning by Camphor is of extremely rare occurrence, and the

... but
were identified among articles sent
for examination: and in the remainder
a mydriatic alkaloid was extracted
from them.

(A) A woman who was boarding
with a family poisoned their food,
and while they were drugged she
abstracted their money and jewellery
and stealthily left the house. She
was sentenced to 5 years rigorous
imprisonment.

(B) A man seeing a pot of toddy
in his path drank some, became
comatose and died.

(C) A man was found dead in
the streets suspected to have
died of alcoholic poisoning.
The viscera were sent up just as
they

10-0
List
21.

12. Aconite was detected in 3 cases, in one of which only excretions mixed with ashes were available; and in another the suspected food and vomited matter of 8 persons were sent. In the 3rd Case earth from 3 different parts of the grave with the bones found therein (Skull and 9 ribs.) were sent for examination but no poison could be detected in them. a piece of "bark" with which it was alleged that deceased ~~had~~ been poisoned was identified as portion of the Aconite plant.

13. Atropine and Datura were detected in 8 Cases, in 3 of which portions of the Datura plant were

Table II.

	1892	1891	1890	1889	1888
Cases included in Class A.	16	15	14	33	20
" " " B.	7	7	3	8	12
Number of individuals affected in A and B.	33	42	28	59	51
" " deaths in A and B.	13	13	7	28	17

of feeling unwell and his friends administered something with lime juice. He was soon seized with vomiting and purging, had jaundice, but recovered. In the vomited and purged matters the presence of Copper was detected equivalent to nearly $5\frac{1}{2}$ grams of crystalline Copper Sulphate.

II. Organic Poisons.

There were 23 cases in which this class of poisons was detected, and the following table shows the number of such cases for 5 years past:

Table V

to making her endear herself to a certain man who wished to marry her. She suffered from irritant poisoning ^{by} ~~of~~ Corrosive Sublimat but recovered.

(C) Three persons noticed a peculiar taste in the beet root served at tiffin. and 2 of them were seized with vomiting. The pieces sent for examination contained over one grain of Corrosive Sublimat.

(d) A female who was accused of theft was given some flour to eat as a test of innocence. She was soon seized with vomiting and bloody stools but fortunately, came through the ordeal alive.

Copper Salt.

A man had been complaining
of

to be generally understood.

Mercurial Compounds

(a) A hospital servant having been dismissed for misconduct drank off some Corrosive Sublimate lotion and died from the effects of gastro-intestinal irritation. Although the organs were separately removed and examined separately in the Laboratory, the poison was found only in the stomach, colon and urine, none being found in the Small Intestines or Kidneys. The curious distribution of the poison is noteworthy and a not unlikely explanation may be found in the diffusibility of crystalline poisons introduced into the body.

(b) A girl, at 15 years, was given something in her food with a view

of what is implied when the Chemical Examiner certifies that the "Sample of Spirit" is free from poison. The Sample of the Spirit used for preserving the viscera &c and sent in a separate phial is all that is covered by this Statement in the Certificate; and if arsenic had been introduced into the bottles containing the viscera not only the Spirit but also the contained viscera would have been tainted with arsenic, there being no means of ascertaining by Chemical Examination whether or not the arsenic had been absorbed into the tissues during life. I refer to this as it appears to be a matter which might assume greater importance in some future case, and deserves

despatching the box containing
the articles to be examined, gave
the person the seal with which the
box and articles had been sealed
in order that he might put the
Railway receipt in an envelope and
seal the same before posting it.

This act of negligence has been noticed
by the Surgeon General; but the
Judge remarked that "the Chemical
"Examiner's report that the Spirit
"was right and that he extracted
" (sic) Arsenic shows that no Arsenic
" could have been put in after death,
" only the living organs could absorb
" the Arsenic into their tissues and
" Arsenic put into the bottles would
" be absorbed by the Spirit." These
remarks are based upon a misconception
of

by chemical physiological and botanical tests is scarcely evident from the brief statement of results embodied in a Certificate. The accused was a native quack and the whole of his drug stores was sent up for examination, and it was found to include the following articles amongst others of less interest: Sulphur, Castor oil, Ferric Chloride, Cinnamon, mustard powder, benzoic acid, Calomel, Arsenious oxide, oil of onium, Opium, a mercurial Compound, quartz, Alum, Croton Seeds, Aloes, Turpentine.

10. In one of the arsenical cases it was suggested that the box might have been tampered with since the Medical Subordinate, in despatching

and one of them died. It was proved that accused had been making engines as to where he could obtain arsenic, that he had meddled with this meal while it was cooking, and that he had contrary to custom refused to partake of it himself. He was sentenced to death.

(7) A boy who was heir to property, and was about to leave his step-mother and to live separately, died suddenly and suspicion fell upon her since Arsenic was found in his viscera.

The case is unique in that it necessitated the separate examination and identification of 56 different articles in addition to the viscera.

The amount of work involved in accurately identifying such articles by

with the object of regaining her affection.
Unfortunately for him the new paramour
at the first, was taken ill and
died.

(i) A long lost uncle turned up at the
house of his nephew with all his movable
property including 5 buffaloes. The
nephew took him in, fed him and
looked after his cattle. The old man
was dissatisfied with the treatment
he received and one day disappeared
with his own and some of his nephew's
buffaloes; but was discovered and
brought back. The old man vowed
vengeance and said he would
"see the family reduced to ashes,"
but the threat was not regarded
seriously. One day 5 of the family
were suddenly seized with vomiting
and purging soon after a meal

and

and went out to work; on his return
home he found a white powder in the
food and took it to the munsiff. A fowl
was given some of the food by way of
an experiment and it died. The remnant
of the food which was sent for examination
contained $125\frac{1}{2}$ grains of white Arsenic.

(g.) A woman entrusted her jewellery
to her paramour who subsequently denied
having received the same. One night
he gave her a philter and she was
immediately seized with vomiting
and purging and died in 40 hours.

(h.) A man whose concubine
deserted him traced her to the house
of her new paramour, visited the
house with their consent, and contrived
to introduce something into the food
with

mississippi injury resulted in a verdict
of death from Cholera. At the
instance of her brother the viscera
were sent for examination which
resulted in the detection of Arsenic.
(d). A child was pounding grain
and a stranger passing by asked
for a light for his cigar. When the
child returned the stranger was
pounding the grain. Three persons
who ate the food, cooked of this
flour, suffered from vomiting and
purging and 2 of them died.

(e). A native quack threw down
a piece of plantain and 4 children
who were following him ate it and
suffered from vomiting and purging.
One of them died and in his viscera
Arsenic was found.

(f). A man put his food on the fireplace
and

9. A few of the noteworthy cases of poisoning by Inorganic substances is given below:-

Compounds of Arsenic

(a) A woman was given an abortifacient by her paramour and she is reported to have died without vomiting or purging having occurred. Arsenic was found in the viscera, and at the post-mortem examination 2 small pieces of brass bangle were found among the contents of the Intestines.

(b) Ten children partook of gram and jaggery (mixed with a white substance) which an insane woman gave them and they were all seized with symptoms of instant poisoning resulting in the death of one.

(c) A woman was suddenly taken ill and died; and the village

mansiff!

and

Table IV.

	1892	1891	1890	1889	1888
Cases included in Class A.					
" " " B.	51	31	52	36	31
Number of individuals affected in A and B.	6	8	7	13	10
" " deaths in A and B.	102	105	159	98	76
	45	26	47	25	21

25, 6, 11, 11

6 6 0 6 8

remainder by organic poisons. 9.

Inorganic Poisons

8. There were 57 cases of poisoning under this class and the table below shows the number of cases during the past 5 years.

Table IV.

And that she died from the effects of a drug. The body was exhumed 10 days after, but no poison could be detected in the viscera. The post-mortem examination was so carelessly performed that the uterus was not examined nor was even the identity of the individual proved. The Surgeon-General has taken notice of the Conduct of this Subordinate.

(4) A person suffering from fever was administered ~~some~~ juice of the *Calotropis gigantea*, was seized with symptoms of irritant-poisoning, and died. Only the ashes from the burning ground were available for Chemical Examination.

7. In the 80 cases in which poison was detected, there were in all 58 deaths, of which 45 were caused by inorganic poisons and the remainder

(C). - Cases in which the balance of evidence appears to be in favor of death by poison but in which no poison was detected. -

(1) A woman was given some medicine by a native quack which caused vomiting and purging. A week after she was admitted into hospital still suffering from mercurial poisoning and died in 2 days. The poison had no doubt been eliminated from the system.

(2) A woman poisoned herself with Oleander owing to a quarrel with her husband. No evidence of this or of other poison could be obtained from the materials sent for examination.

(3) A woman died suddenly and was buried; it turned out subsequently that she was pregnant and

(6) A woman, who was ill for about a week, was given some medicine by her paramour, and she was found dead next morning. Symptoms prior to death were unknown, and there was nothing noteworthy in the post-mortem notes except the remarkably small weight of the different viscera.

(7) A young married woman, aged 14 years, had her breakfast at 7. A.M. and died suddenly at 11. A.M., it is said of "Stomach ache". Post-mortem examination threw no light on the cause of death.

(8) A woman, aged about 60 years, was found dead on the roadside, body highly decomposed.

(9) Immediately after his meal a man was seen to go to a shallow channel of water, in which he was subsequently found dead.

(b). - Cases in which there is insufficient evidence in favor of either poison or disease as the Cause of death. - Fourteen persons were affected of whom 11 died:-

(1) Two brothers, who were on a pilgrimage, rested and ate their food, and in 2 hours both suffered from vomiting, giddiness, tingling of throat, and one of them died.

(2) Two women and their two sons were seized with vomiting sometime after a meal. one woman and one son died.

(3) A person was suddenly seized with vomiting and purging, ^{he} was treated by a native quack for instant poisoning, and died.

(4) Two persons were seized with vomiting, purging and abdominal cramps after eating a cake; one of them died after 7 days.

(5) A young female was missed from home and her Corpse was found in the river.

of whom 36 died, and from the available information regarding them (i.e. from the police reports, post-mortem examination notes, and the judgment in some cases) they may be arranged in 3 classes:-

(a).-Cases in which evidence in favor of a disease cause of death preponderates:-

Cerebral abscess	1
" Apoplexy	2
Chronic Abscess	1
Consequences of Abortion	6
Drowning	2
Hanging	2
Heat Apoplexy	1
Hydrophobia	1
Injury	1
Pneumonia	1
Puerperal eclampsia	1
Rupture of Spleen	1
Snake bite	2

Total 22

(b)

reptiles having a reputation in the district for being poisonous when swallowed. They turned out to be two skeletons of the Scorpion, the soft parts having been separated from the bones probably in the cooking. No ill effects were complained of though the party ate a good deal of the food.

(c) As an extreme case the following is noteworthy illustrating the anxiety with which articles are sometimes hurried off to the Chemical Examiner.

A "pot of dhol", which it is surmised was suspected of being poisoned, was received here under unbroken seals and when opened and examined was found to consist "principally of Cow dung, earth &c."

Group II. — In the 35 cases under this class 40 persons were affected of

were forwarded. The usual nature of these cases may be judged from the following examples:-

(a) A man who was subject to fits swooned immediately after drinking some broth, so the broth was sent for examination.

(b) Potted ham and toast was rejected from the table and the choctura suffered from vomiting a few hours afterwards. The cook was accused of drugging the ham "to gain master's favor". I suppose on the principle of a love-philter.

(c) Some food was handed to the Police because it was the gift of an enemy.

(d) Two pieces of a reptiles' skeleton were discovered in the food during a meal. An enemy was accused of putting them into the food with intent to kill, such

reptiles

6. Of 136 cases, examined poison was detected in 80, leaving 56 cases in which the Chemical Examination did not reveal the presence of any poison. Information regarding these 56 cases may be summarised under -

Group I - consisting of 21 cases in which no fatal result ensued, but in which suspicious circumstances rendered a Chemical investigation advisable; and under

Group II - Consisting of 35 cases attended with fatal result under suspicion of poisoning.

Group I - In six out of the 21 cases, clothes, or earth tainted with evacuations, were sent for examination; and in the remaining 15 only suspected food, vessels in which food was cooked; or other suspected articles were

Table III a

Year	A			B			Total		
	Cases in which prisoners or evacuations were examined			Cases in which only specified food, etc. was received for examination					
	Total number of cases	Number of cases in which persons were detained	Percentage of detentions	Total number of cases	Number of cases in which persons were detained	Percentage of detentions	Total number of cases	Number of cases in which persons were detained	Percentage of detentions
1891	83	46	55.42	33	15	45.45	116	61	52.58
1892	107	67	62.61	29	13	44.82	136	80	58.82

5. The following Table III (a) is added at the request of Government and shows the proportion of detections to cases examined for 2 years. -

Table III (a)

5.

The cell in Table III (a) is

Inorganic		Organic	
Aspirin			
Realgar			
Asbestos			
Atropine			
Calcium			
Gypsum			
Shale			
Shale and Limestone			
Gypsum			
Gypsum and Plaster			
Opium			
Thyroxine			

District received from	Number of Cases	Number of cases in which poison was detected	Number of Analyses	Inorganic			
				Arsonic oxide	Arsonic oxide Gaseous and Crystalline oxide	Arsonic oxide and Arsonic salt	Arsonic salt
Anantapur	1	"	1	-	-	-	-
Andhra Pradesh	1	1	3	-	-	-	-
Bellary	3	"	5	-	-	-	-
Chingleput	1	1	1	-	-	-	-
Cochin	-	-	-	-	-	-	-
Cuddapah	3	1	4	-	-	-	-
Ganjam	2	1	3	-	-	-	-
Godavari	2	-	3	-	-	-	-
Kistna	2	1	5	-	-	-	-
Kurnool	4	1	11	-	-	-	1
Madras	5	4	10	1	-	1	1
Madura	1	1	2	1	-	-	-
Malabar	1	"	4	-	-	-	-
Salem	1	1	1	-	-	-	-
Tanjore	1	1	1	1	-	-	-
Tiruchanopoly	-	-	-	-	-	-	-
Tinnevely	1	-	2	-	-	-	-
Total for the year 1892	29	13	56	3	-	1	2
" " 1891	33	15	69	4	1	-	1

District received from	Number of Cases	Number of Cases in which poison was detected	Number of individuals affected	Number of Deaths	Number of Analyses	Poisons												Organic							
						Inorganic												Organic							
						Arsenic oxide	Arsenic oxide in human salt	Arsenic oxide and sulphur	Arsenic oxide and opium	Arsenic oxide opium and Calomel	Copper	Mercuric salt	Aconite	Atropine	Colobopsis gigantea	Camphor	Camphor	Colocynth	Celandine	Opium	Santonine	Stychnine	Tobacco		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
Anantapur	1	-	1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Arcoi, North	3	2	4	2	10	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Arcoi, South	7	5	15	6	38	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bellary	9	4	13	8	113	2	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
Channarayana, South	2	1	4	3	15	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
Chingleput	5	4	18	5	27	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	
Coimbatore	3	2	3	2	18	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cuddapah	8	6	11	5	41	2	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1	-	-	
Ganjam	4	1	4	4	18	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Godavari	2	2	3	2	5	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Kistna	13	11	19	12	72	7	-	-	1	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	
Kurnool	6	6	14	5	27	3	-	-	-	1	-	-	-	1	1	-	-	-	-	-	-	-	-	-	
Madras	5	5	5	5	38	-	-	-	-	-	-	2	-	-	-	-	-	1	-	2	-	-	-	-	
Madura	6	4	9	4	27	1	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	1	-	
Malabar	4	1	8	6	15	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nellore	2	1	6	2	12	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nilgiris	1	-	1	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Salem	1	1	1	1	7	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tanjore	9	4	12	8	57	2	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
Trichinopoly	7	6	13	5	34	4	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	
Tinnevely	5	1	6	2	18	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
Vizagapatam	3	-	4	3	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hyderabad	1	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total for the year 1892	107	67	175	93	618	35	4	1	1	1	1	8	3	4	-	2	1	1	-	2	-	2	1	-	
" " " 1891	83	46	158	62	430	-	-	-	-	-	-	5	4	-	1	-	-	-	2	4	1	3	-	-	

appears less than in the year immediately preceding on account of the transfer to the Customs House of the Spirit testing work which was undertaken by desire of Government tentatively for a year. Excluding the number of Spirit testings from the figures for the period affected by them, there is as usual an increase of work performed by the regular Establishment which has remained unaltered in strength while the work has doubled in the past decade.

A. Medico-Legal Investigations

I. Cases of Suspected Human Poisoning.

4. The usual information regarding these cases is given in the two following statements:—

Table II and Table III.

Table No. I.

	Number of cases investigated		Number of articles examined	
	1892	1891	1892	1891
A. <u>Medico-Legal</u> <u>Investigations.</u>	I. Cases of suspected human poisoning			
	136	116	674	499
	II. Blood stains &c			
	37	44	143	172
	III. Venereal diseases			
	4	3	6	7
	IV. Cases of suspected cattle poisoning			
	77	84	211	214
Total		254	247	1034
B. <u>Miscellaneous</u> <u>Analyses</u>	V. For Government departments and municipal authorities			
	697	745	697	745
	VI. For private parties and firms			
	46	26	46	2
	VII. Samples taken for chemical analysis for the various departments			
	692	1136	692	1136
Total		1435	1907	1435
Grand Total		1689	2154	2469
				2

Assistant appointed to carry out testing
of Spirits was transferred to the Customs
Department on 16th May under the orders
of Government.

2. A numerical estimate of the
total work performed during the year
is shown in the table below:

Table No: I.

944
Public (1893) DEPARTMENT.

From

THE SURGEON-GENERAL WITH THE
GOVERNMENT OF MADRAS,
Fort St. George.

No. 298

Dated

Reed.

Enc: one

Subject.

Forwards with remarks
the Annual Report of
the Chemical Examiner
for 1892.

Pubg. 0 372 23 15 9
3169

From,

Surgeon Major J. L. Vaidyazhel M. B. C. M.
F. C. S. F. D. C.

Chemical Examiner,
Madras.

To,

The Chief Secretary,

To Govt. of Madras.
Public Department.

Fort St. George

Sir,
I have the honor to submit the
Annual Report on the work of the
Chemical Examiner's Department for
the year 1892. The charge of the Office
was held till the 9th May, by Dr. Pope,
who was succeeded by Dr. Allison.

I resumed charge, on my return from
furlough, on the 3rd October. The first
Assistant, Mr. Goolab Roy, acted temporarily
during the greater part of the year in
the appointment of Assistant-Chemical
Examiner until Mr. R. Raj C. Krishna

Medical subordinates were heavily
punished during the year on account
of carelessness in transmitting
suspected articles to the Chemical
Examiner and every publicity
given to these cases.

4 Every complaint from the
Chemical Examiner is carefully
enquired into and though large
numbers of articles are transmitted
yet considering the class of
subordinates in the rank of 3rd
Grade Hospital Assistants and the
defective training they undergo in
these matters during their collegiate
course, the number of Complaints
cannot be considered excessive. As
teaching becomes more complete and
Hospital Assistants' actions in these

From,

Surgeon Major J. L. Vaindygzel M. B. C. M.

Public (1893) DEPARTMENT.

944

Pubgo 372 231-5-9
3168 7-5-9

From

THE SURGEON-GENERAL WITH THE

GOVERNMENT OF MADRAS,

Fort St. George.

No. 298

Dated

Recd.

Enc: one

27 March 1893.

Subject.

Forwards with remarks
the Annual Report of
the Chemical Examiner
for 1892.

From,

Surgeon Major J. L. Vaidyazhel M. B. C. M.

5.92
9 1/2

OFFICE OF SURGEON-GENERAL

WITH THE GOVERNMENT OF MADRAS,

Madras, 27th March 1893.

No.

298

From

Surgeon Major Genl W. F. de Labeck D. O.

THE SURGEON-GENERAL WITH THE

GOVERNMENT OF MADRAS,

FORT ST. GEORGE,

To

Madras

THE CHIEF SECRETARY TO GOVERNMENT,

Public DEPARTMENT.

SIR,

I have the honor to forward the Annual Report of the Chemical Examiner for 1892.

2 - The total number of analyses performed during the year was less than in 1891 but the decrease is due to the transfer to the Customs House of the spirit testing work as explained by the Chemical Examiner. Excluding this the work done by the Revenue Establ. is