

A N N U A L R E P O R T , 1 9 5 9 .

D E P A R T M E N T O F T H E G O V E R N M E N T A N A L Y S T .

To the Honourable Minister,
Ministry of Labour, Health and Housing.

I have the honour to submit for the information of His Excellency the Governor my report on the work of the Analyst Department for the year 1959.

GENERAL:

2. During the year under review the department carried out the following analyses:-

	<u>Number of Articles</u>	
<u>A. For Criminal Investigations:</u>		784
<u>B. Customs and Excise:</u>		
(a) For Customs and Excise duties:	1,990	
(b) For Certification under the Spirits Ordinance:	131	
(c) For Breaches of the Spirits Ordinance, the Intoxicating Liquors Licensing Ordinance and the Customs Ordinance:	264	2,385
<u>C. Health, Trade and Industry:</u>		
(a) Under the Food and Drug Ordinance:	894	
(b) Under the Coconut Products (Control) Ordinance:	173	
(c) Under the Soap Ordinance:	34	
(d) For Industrial and Commercial Concerns:	99	
(e) For Potable Water Supplies:	51	1,251
<u>D. For Miscellaneous Surveys and Problems of Government Departments:</u>	454	454
	TOTAL:	4,874

These articles were submitted by the following agencies:-

(a) <u>Agencies of the Central Government:</u>		
Agriculture:	28	
Central Tender Board:	4	
Currency Commissioners:	12	
Customs and Excise:	2,139	
Drainage and Irrigation:	161	
Education:	3	
Geological:	16	
Lands and Mines:	2	
Medical:	379	
Police:	1,460	
Post Office (Telecommunications):	2	
Prisons:	1	
Pure Water Supply Scheme:	27	
Rice Development Company:	5	
Rural Electrification Scheme:	1	
Supplies and Prices:	174	
Transport and Harbours:	1	4,415
(b) <u>Local Authorities:</u>		
Georgetown Municipality:	77	
New Amsterdam Municipality:	127	204
(c) <u>Non-Governmental Sources:</u>		
Merchants, manufacturers and small traders:	255	255
	<u>TOTAL:</u>	<u>4,874</u>

A not inconsiderable demand on the services of the department was also made in respect of the drafting of food regulations arising from the activities of the Committee appointed to revise the Food and Drug Ordinance, and the department has continued to provide advice on a diversity of matters to various inquirers, the extent of which is not reflected in the actual analytical work carried out during the year.

3. Renovation and improvement works were continued on the building and fixtures of the department. These operations naturally cause dislocation or disruption of services and it is hoped that the position will be corrected in due course.

TOXICOLOGICAL AND DRUG ANALYSES.

4. There was a resumption of the upward trend since 1954 of the number of exhibits submitted in cases of suspected poisons and poisoning as the following sequence shows:-

Year	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>
<u>No. of exhibits</u>	82	133	176	217	255	139	275

Of the total of 275 exhibits from 152 productions, 229 were submitted by the Police, 30 were submitted by the Public Hospital, Georgetown, and 16 by the Department of Agriculture. Poisons were found in 128 exhibits from 79 productions while none was found in 73 other cases totalling 147 exhibits.

5. Ten exhibits contained alcohol, 14 contained arsenic, 1 atropine sulphate, 1 a barbiturate, 1 carbon monoxide, 10 chlorinated hydrocarbons, 32 cresols, 22 formaldehyde, 3 a mixture of formaldehyde and lysol, 1 formic acid, 2 mercuric chloride, 1 mercurochrome, 1 a mixture of mercurochrome and formaldehyde, 1 methyl salicylate, 1 oil of chenopodium, 2 phenol, 4 phosphorus, 19 potassium cyanide and 2 potassium permanganate.

6. The articles examined for poisons included:-

Mixed organs	18
Stomachs	38
Hearts	4
Kidneys	11
Livers	12
Lungs	6
Spleens	4
Brains	2
Gall Bladders	1
Skins	2
Stomach Contents	39
Vomited Matter	3
Stomach Washes	4
Intestinal Contents	2
Urine	3
Blood	2
Food	12
Solids	25
Liquids	57
Clothing and Utensils	26
Plant Materials	

275

7. Examinations in four cases of suspected criminal abortion required the analysis of eight exhibits. Four were found to contain respectively stilboestrol, phenolphthalein, Fersolate tablets and a mixture of apiol and oil of pennyroyal, two a mixture of alcohol and saccharin and no drug was found in two of the exhibits.

8. Submissions from the Government Pharmacy included one sample of atropine sulphate ampoules and one of sulphathiazole tablets to be tested for conformity with the pharmacopoeial standards and a sample of vitamin and mineral capsules to be tested for the vitamin C content. A local manufacturer submitted three batches of a codeine-containing tablet to be tested for conformity with his formulation.

9. There was no call for analyses in respect of violations of the Dangerous Drugs Ordinance or the Pharmacy and Poisons Ordinance.

FRAUD.

10. A total of three hundred and seventy-two exhibits was submitted. One hundred and forty of these from nineteen submissions were examined in respect of falsification of accounts and two hundred and thirty-two in respect of forged currency notes and counterfeit coins. Documents were examined to ascertain the nature of the alterations made and, where possible, to discover the original entries. In regard to money examined, thirteen currency notes were found to be forgeries, ten other notes though genuine, bore evidence of having been used in making forged notes; and thirty-nine coins were found to be counterfeit. Twenty-three exhibits consisting of appliances, paper and chemicals were examined to ascertain the connection of suspects with forged notes found, and fourteen items consisting of appliances, chemicals and alloys were examined to discover their significance in the making of counterfeit coins. The distribution of forged and treated notes and of counterfeit coins is shown in the table below:-

	Treated genuine Currency Notes					Forged Currency Notes			Counterfeit Coins		
	\$1	\$2	\$5	\$10	\$20	\$1	\$5	\$20	10¢	25¢	50¢
Currency Commissioners	-	-	1	-	1	-	-	1	-	-	-
Police Department	3	1	1	2	1	2	3	7	13	8	18
Total	3	1	2	2	2	2	3	8	13	8	18

Thirty-two other notes and one hundred and one coins were found to be genuine.

LARCENY, AND UNLAWFUL POSSESSION.

11. Twenty-one exhibits were examined in this category. These included fifteen bicycles, one licence, one typewriter and two batteries, in which cases it was important to ascertain the original serial numbers removed by filing, and two diesel oils for comparison.

FIRES.

12. Seventy-three items from nineteen submissions by the police were examined for the presence of inflammable substances. Thirteen exhibits were found to contain inflammable substances.

MISCELLANEOUS IDENTIFICATIONS.

13. Eighty-one exhibits have been examined for identification purposes in regard to sundry crimes including murder, rape, unnatural acts, malicious injury of persons, etc. The articles examined included firearms, cartridges, bullets, rope, stains, hairs, clothing and various liquid and solid objects.

REVENUE WORK.

14. Two thousand, three hundred and eighty-five samples were examined in this category. One thousand, nine hundred and ninety were submitted for the purposes of taxation and three hundred and ninety-five samples for the enforcement of various provisions of the Spirits Ordinance, the Intoxicating Liquors Licensing Ordinance and the Customs Ordinance.

15. Samples examined for the assessment of Customs and Excise duties included:-

Bay Rum	14
Citronlone	2
Cocktail	1
Coloured Rum	189
Cured Rum	1295
Denatured Alcohol	4
Detergent	1
Feints	2
Falernum	1
Glust Bond	1
Gum Resins	4
Limacol	53
Malt Liquor	1
Methylated Spirit	8
Pantene	14
Preserves	7
Rubber	1
Shrub	1
Sweets	92
T-emulsion	1
Tinctures	173
Tobacco	38
Wash	1
Wines	29
Wines (Local)	57

Total:1990

16. Spirit dealers submitted one hundred and twenty-nine hydrometers and the Comptroller of Customs and Excise two for calibration with the standard hydrometer of the Analyst Department, in accordance with the provisions of the Spirits Ordinance. In addition, the Police Department submitted 92 samples in the investigation of breaches of the Spirits Ordinance: 86 of these samples were found to be bush rum, one was a mixture of alcohol and kerosene oil and five samples were found to be wash.

17. A total of one hundred and sixty-seven samples were submitted in respect of breaches of the Intoxicating Liquors Licensing Ordinance. One hundred and forty-two were submitted by the Customs and Excise Department and twenty-five by the Police Department. The various items submitted are shown in the table hereunder:-

	Police Dept.	Customs & Excise Dept.
Ales	-	1
Beers	5	19
Stouts	-	3
Wines	-	6
Rums	15	113
Whiskies	3	-
High Wines	2	-
Total:	25	142

18. Five samples of gasolene were also submitted by the Customs and Excise Department in respect of breaches of the Customs Ordinance.

THE FOOD AND DRUG ORDINANCE:

19. The Food Laboratory remained closed for a further four months at the beginning of the year on account of renovation and improvement works. Analytical work was resumed in May and fume disposal facilities were finally installed at the end of the year. Eight hundred and ninety-four samples were submitted under the ordinance and one hundred and seventy-three samples were submitted under the Coconut Products (Control) Ordinance.

20. Samples were received from the following sources:-

(a) <u>Under the Food & Drug Ordinance</u>	Police Dept.	Medical Dept.	City Public Health Dept.	New Amsterdam Public Health Dept.	Vendors	Total
Butter	-	1	5	-	-	6
Cheese	-	3	-	-	-	3
Coffee	20	9	6	-	-	35
Condensed Milk	3	6	-	-	-	9
Evaporated Milk	1	-	-	-	-	1
Ghi	7	3	-	-	-	10
Honey	3	2	-	-	-	5
Lard	8	2	1	-	-	11
Margarine	11	6	4	-	-	21
Milk	307	201	35	118	27	688
Olive Oil	11	11	-	-	-	22
Phalkaghi	-	1	-	-	-	1
Powdered Milk (full-cream)	-	1	-	-	-	1
Powdered Milk (skimmed)	1	1	-	-	-	2
Sugar	7	7	-	-	-	14
Vinegar	44	19	2	-	-	65
Total:	423	273	53	118	27	894

(b) <u>Under the Coconut Products (Control) Ord.</u>	Police Dept.	Medical Dept.	City Public Health Dept.	N/A Public Health Dept.	Vendors	Total
Deodorised Coconut Oil	83	56	-	9	-	148
Lard Substitute	19	6	-	-	-	25
Total:	102	62	-	9	-	173

The results of these examinations are shown in the following table:-

Samples	No. of Samples submitted	No. of Samples in violation of the legal requirements
<u>Food & Drug Ordinance</u>		
Butter	6	-
Cheese	3	-
Coffee	35	2
Condensed Milk	9	9
Evaporated Milk	1	1
Ghi	10	9
Honey	5	-
Lard	11	-
Margarine	21	1
Milk	688	146
Olive Oil	22	-
Phalkaghi	1	-
Powdered Milk (full-cream)	1	-
Powdered Milk (skimmed)	2	-
Sugar	14	-
Vinegar	65	1
Total:	894	169
<u>Coconut Products Ordinance</u>		
Deodorised Coconut Oil	148	41
Lard Substitute	25	-
Total:	1067	210

POTABLE WATER SUPPLIES:

21. Fifty-one samples of water were submitted from the two potable water supplies. General analyses were carried out on twenty-four samples of the Georgetown Water Supply submitted by the City Public Health Department and on twelve samples of well waters from the rural areas submitted by the Pure Water Supply Scheme. Fifteen other samples submitted by the Pure Water Supply Scheme were analysed for their salt and iron content.

MISCELLANEOUS CONSULTING ANALYSES:

22. Reports have been required from the department in respect of the following:-

A. From Industrial and Commercial Concerns:

Baking Powder	1
Coffee Beans	1
Copra Meal	1
Coloured Rum	2
Cured Rum	8
Concrete Mixes	3
Corrosion Scrapings	1
Fabrics	5
Ferrol Compound	1
Gases from Ships	17
Gold Bar	1
Gold Bangles	4
Human Milk	1
Lead Alloys	2
Lip-stick	1
Molasses	16
Methylated Spirits	3
Meat Extracts	2
Milk	3
Hair-straighteners and ingredients	5
Rosewood Oil	1
Shrub	1
Soap Powder	1
Tablets PAK	3
Vinegar	1
Waters	14
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	99
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These examinations were required for sundry reasons such as process control, ascertaining sources of trouble in manufacturing operations, examining the suitability of some natural waters for use in the paper pulp industry, insurance claims, trade disputes, safety precautions or certification. As the staff situation improves it is hoped that more assistance will be available for this type of work.

B. From Government Departments:

(a) The British Guiana Rice Development Company submitted one sample of boiler scales and four samples of water to ascertain the cause of an abnormal deposit of scales on their boiler.

(b) The Supplies and Prices Department submitted ninety-six samples of deodorised coconut oil, sixty-six samples of soya bean oil and twelve samples of undesignated edible oil to be tested for rancidity.

- (c) The Drainage and Irrigation Department submitted one hundred and sixty one samples of water during the course of their investigations of the distances sea water advanced up the creeks during the year and the deposits of silt on the fore-shore.
- (d) The Geological Survey Department submitted four samples of water for a complete mineral analysis and twelve samples for the contents of salt and iron.
- (e) The Milk Pasteurisation Plant submitted ten samples of milk one of caustic soda and one of butterfat.
- (f) The Mosquito Control Service submitted ten samples of water to be tested for their pH. and for contamination with DDT.
- (g) The Lands and Mines Department submitted two samples of sulphonamide tablets to be characterised and re-labelled.
- (h) The Education Department submitted one sample of biscuits, one of food yeast and one of flour to check on the conformity of the biscuits with the contract specification.
- (i) The Transport and Harbours Department submitted one sample of water to be tested for its silt content.
- (j) The Prisons Department submitted one sample of an ointment to be tested for irritants.
- (k) The Rural Electrification Scheme submitted one insulator to be tested for saline deposits.
- (l) The Telecommunications Department submitted two samples of distilled water to be tested for conformity with the standard specifications.
- (m) The Central Tender Board submitted four samples of soap to be compared in regard to quality.

STAFF:

23. Mr. J.E. Ho-Yen, the Government Analyst, proceeded on 100 days' leave on July 3rd, 1959. During this leave a study was made of the organisation and methods of the United States Food and Drug Administration and the Canadian Food and Drug Directorate. Visits were also paid to the laboratories at the F.B.I., at New Scotland Yard, at the Government Chemists Departments of England, Jamaica and Trinidad and at a number of research organisations in the United Kingdom. He resumed duty on November 21st., 1959.

24. Mr. M. Ramasamy, an Assistant Analyst in the Analyst Department of Ceylon, was appointed Senior Assistant Government Analyst, British Guiana, on secondment for three years commencing 12th January, 1959. This was altered to a secondment of one year soon after his assumption of duty in the Colony on April 15th., 1959, after a six weeks' attachment at the laboratories of the Government Chemist and New Scotland Yard, London, England, under the Colony's In-Service Training Scheme. Mr. Ramasamy acted as Government Analyst from July 3rd to November 20th., 1959.

25. Dr. J. Paul, an Imperial Chemical Industries Research Fellow, joined the department as a Temporary Scientific Officer with effect from November 3rd., 1959.

26. Mr. N.C. Jain was appointed a Scientific Officer on contract for three years with effect from July 12th., 1959.

27. Mr. R.B. Woo-Ming, Scientific Officer, proceeded to the United Kingdom on September 8th., 1959, on a Government 3-year Conditional Scholarship to pursue a post-graduate course in Foods, Drugs and Waters.

28. The following staff movements occurred in the Technical Assistant Grade:-

- (a) Mr. C. McWatt, a Grade A Technical Assistant, resumed duty on March 5th., 1959, after six months' vacation leave.
- (b) Miss U.F. Amin was appointed a Grade B Technical Assistant on December 15th., 1959.
- (c) Mr. W. Sue-Hoe, a Science student attending the University College of the West Indies acted as a Grade B Technical Assistant during his summer vacation from July 9th to September 30th., 1959.
- (d) Mr. A. Dwarka joined the department as a Grade C Technical Assistant on June 26th., 1959, and resigned on December 31st., 1959.
- (e) Miss R. McKinnon was appointed a Temporary Grade C Technical Assistant on July 16th., 1959.

29. The Clerical Establishment was examined during the year by the Organisation and Methods Advisory Service and proposals have been put up to Government to improve the situation. The following changes occurred during the year:-

- (a) Mr. H.R. Mitchell, Class II Clerk, was transferred to the department from the Prisons Department on February 10th., 1959. He was promoted to the Class I grade with effect from December 4th., 1959, and remained in the department on secondment.

- (b) Miss S.M. Benjamin, Senior Clerical Assistant, proceeded on six months' vacation leave with effect from November 15th, 1959.
- (c) Miss M.C. Latchman, a Clerical Assistant, was seconded to the department from the Customs and Excise Department on November 14th., 1959, and was transferred to the Audit Department on November 30th., 1959.
- (d) Miss S.Y. Allen, a Clerical Assistant, was seconded to the department from the Agriculture Department with effect from November 30th., 1959.

EXPENDITURE:

30. The total vote passed for the year 1959 amounted to \$55,092 including a supplementary vote of \$200 on sub-head 3 - Chemicals and Apparatus. The actual expenditure amounted to \$49,774, and the actual saving on the whole head was \$5,318, this being due mainly to the late recruitment of officers to fill vacancies.

(Sgd) J.E. HO-YEN
Government Analyst.