



Thermology Co., Ltd.

96/177-96/178 Moo 6, T. La-harn, A. Bangbuahtong, Nonthaburi 11110
Tel : 0 2191 6479 Fax : 0 2191 6480 website : www.thermology.co



CALIBRATION CERTIFICATE

Date of Issue

Jun 24, 2024

Site Calibration

Cert No.

24/2304

Order No.

24060319

Results (without adjustment)

Cal Point (°C)	UUC Setting (°C)	UUC Reading (°C)	Reference Thermometer (°C)	Stability \pm (°C)	Uniformity (°C)	Uncertainty \pm (°C)
20.0	20.0	20.0	Position 1	20.119	0.379	0.44
			Position 2	20.074		
			Position 3	20.241		
			Position 4	20.238		
			Position 5	20.042		
			Position 6	20.148		
			Position 7	19.933		
			Position 8	20.090		
			Position 9	20.144		

The stability and uniformity was taken into account in the measurement uncertainty stated.

The above results are valid exclusively for calibration samples as mentioned in the report.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with ONAC requirements.

APPROVED SIGNATORY :

D.N.

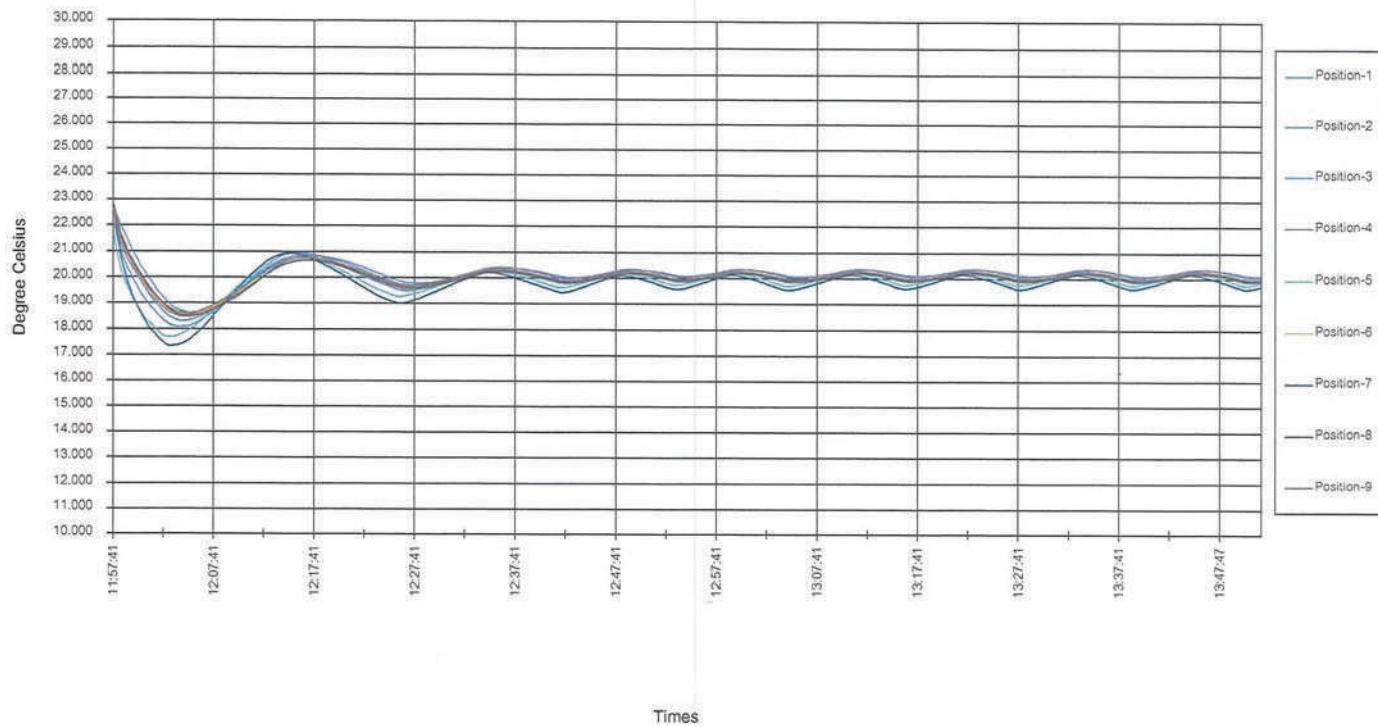
[] MR. PRAJUCKPETCH THONGSOOKCHOTE

[] MR. DAMRONG MULSING

[] MR. JATURAPAT THONGSOOKCHOTE

BOD Incubator
Model. ICP450 S/N. F721.0023 ID.No. I2022007

Cert.No. 24/2304



SGS (Thailand) limited

Automatic Mercury Analyzer
Model RA-4500
Preventive Maintenance Report

Serial No. : 14780131

Date : 31 January 2024

Next due date : 31 January 2025

PM by : 

Approved by :  (Kitichai S.)



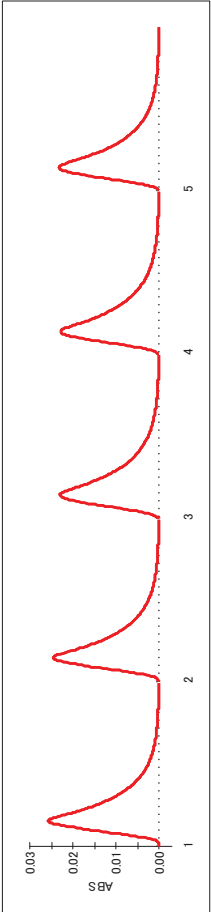
Coax Group Corporation Ltd.
1131/62,64,325-331 Nakornchaisri road,
Kwang ThanonNakornchaisri, Dusit, Bangkok 10300 Thailand
Tel. 02-2435263, 02-6682436 Fax. 02-2437386

Inspection result

ITEM	STANDARD	RESULT	JUDGE
1. Self Check	1.1 Heating	PASS	OK
	1.2 Cooling	PASS	OK
	1.3 Leak	PASS	OK
	1.4 Optical system	PASS	OK
	1.5 Drift	PASS	OK
2. Analytical curve inspection(AREA)			
	2.1 No Pretreatment (Low Conc.)	Correlation coefficient (r) ≥ 0.9990	0.9997 OK
3. Repeatability(AREA)			
	3.1 No Pretreatment 100ppb, n=5	1. 101.35 2. 98.67 3. 98.85 4. 96.42 5. 95.62 C.V. ≤ 5%	ppb ppb ppb ppb ppb 2.30% OK
4. Blank			
		Below 1.0(AREA)	0.1950 OK

Statistics

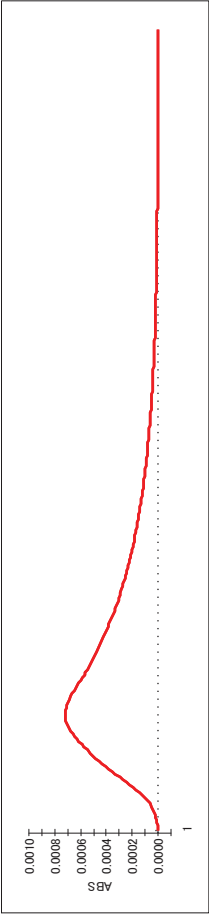
No.	NAME	TRY	AV [ug/L]	SD [ug/L]	Cv [%]
1	100ppb	5	98.1804	2.260182	2.30



Title : Preventive Maintenance RA-4500 SN14780131
Date : 1/31/2024
Name : Coax Group
Memo : Blank

SMP

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Note
1	blank				0.1950	-0.0036		



Self Check

Heat check:PASS!! (29.6degC[05:00] -> 33.6degC[02:51])
Sensor check:PASS!! (74- 23= 51)
Leak check:PASS!! (0.16L/min)
Signal check:PASS!! (Sig:4.07V, Ref:4.03V)
Drift check:PASS!! (-0.000090 - -0.000731 = 0.000641)



SERVICES REPORT

Service Order No. 33065
Service Confirmation No. 63272

Customer Details			
Contact Person: คุณสายใจ	Company Name: บริษัท เอสซีเอส (ประเทศไทย) จำกัด		
Email: sajai.ruangsawat@sgs.com	Site Address: 1/209, 1/211 หมู่ 1 ตำบลบ้านฉาง อำเภอบ้านฉาง จังหวัดระยอง 21130		
Phone No.: +66 (99) 1020033			
Instrument Details			
Model	Serial	Brand	
FP-8200	SNC020461448	JAS	
Incident Category			
Service Category :Service	Service Organization : MT-SLSV-SV		
Incident Category : Contract	Service Execution Team : MT-SLSV-SV		
Incident Description			
PM 1/1 เครื่อง FP-8200			
Work Description			
PM 1/1_ FP-8200 SNC020461448			
Clean holder , clean optics			
Spare Parts			
No.	Product ID	Qty.	Description
Remark Description			

Job Status:	<input checked="" type="checkbox"/> Complete	<input type="checkbox"/> Incomplete	<input type="checkbox"/> Charge	<input checked="" type="checkbox"/> Free of Charge
Arrival Time:	2024-07-05 11:00	Engineer Name:	Chaiyapat Chaisupharat	
Departure Time:	2024-07-05 15:00	Mobile No.:		
Total Time:	3 Hour(s)	Email:	chaiyapat@sa-maptaphut.com	
F-SER-01 R00				

Cus	Sign	Date

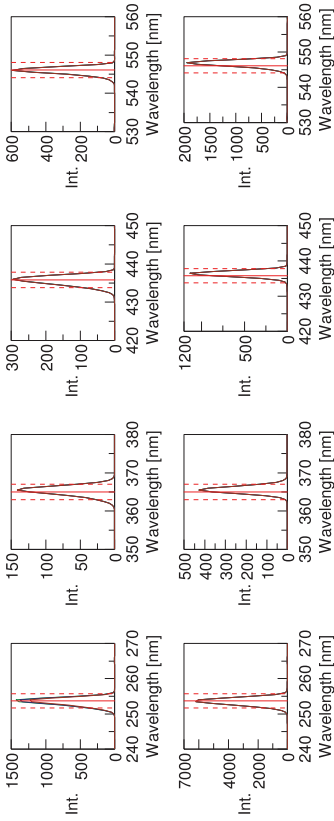
Spectrofluorometer Inspection Report			
Apparatus	:	Spectrofluorometer	
Model	:	JASCO FP-8200	
Serial No.	:	D020461448	
Check Date	:	5 July,2024	
Standard Materials	:	DI Water, Air	
Items Test			
Wavelength Repeatability of Ex/Em	Conclusion	:	<input checked="" type="checkbox"/> Passed <input type="checkbox"/> Fail
Wavelength Accuracy of Ex/Em	Conclusion	:	<input checked="" type="checkbox"/> Passed <input type="checkbox"/> Fail
Resolution of Ex/Em	Conclusion	:	<input checked="" type="checkbox"/> Passed <input type="checkbox"/> Fail
Sensitivity	Conclusion	:	<input checked="" type="checkbox"/> Passed <input type="checkbox"/> Fail
Photometric Stability	Conclusion	:	<input checked="" type="checkbox"/> Passed <input type="checkbox"/> Fail
Rescription		Taxot. Doc.	Approve By
Sign			
Date			

Inspection Sheet

Date 5 กรกฎาคม 2567
Model name JASCO
Serial No. C020461448
Temperature 25 C
Humidity 50 %
Operator Apiwat
Comprehensive inspection

Creation
Review
Approval

Pass



Wavelength Accuracy Pass/Fail : Pass

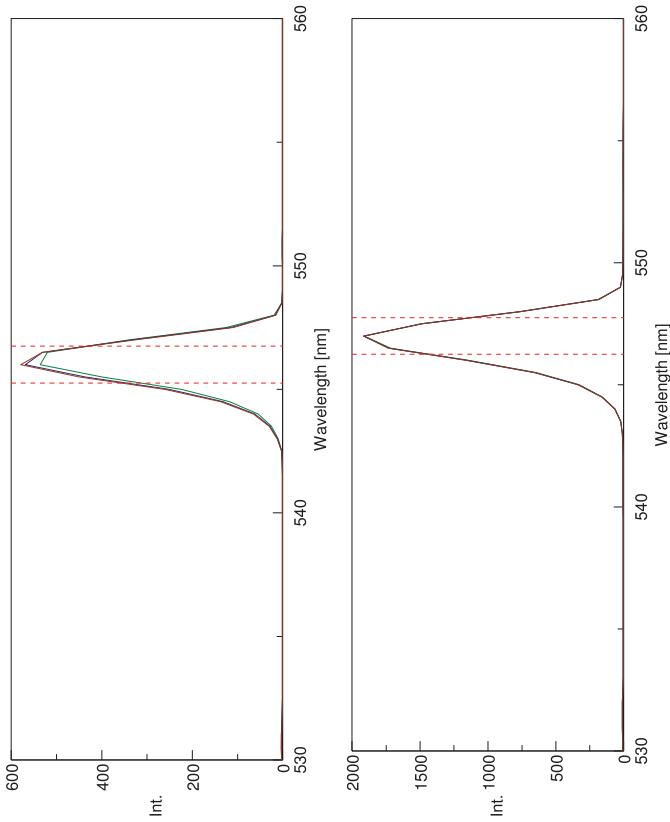
[Excitation]
Standard 253.7 nm Criteria +/- 2.0 nm
Average 254.00 nm, difference from standard 0.30 nm, Pass
1: 254.0 nm, 2: 254.0 nm, 3: 254.0 nm
Standard 365.0 nm Criteria +/- 2.0 nm
Average 365.50 nm, difference from standard 0.50 nm, Pass
1: 365.5 nm, 2: 365.5 nm, 3: 365.5 nm
Standard 435.8 nm Criteria +/- 2.0 nm
Average 436.00 nm, difference from standard 0.20 nm, Pass
1: 436.0 nm, 2: 436.0 nm, 3: 436.0 nm
Standard 546.1 nm Criteria +/- 2.0 nm
Average 546.00 nm, difference from standard -0.10 nm, Pass
1: 546.0 nm, 2: 546.0 nm, 3: 546.0 nm

[Emission]
Standard 253.7 nm Criteria +/- 2.0 nm
Average 253.50 nm, difference from standard -0.20 nm, Pass
1: 253.5 nm, 2: 253.5 nm, 3: 253.5 nm
Standard 365.0 nm Criteria +/- 2.0 nm
Average 365.50 nm, difference from standard 0.50 nm, Pass
1: 365.5 nm, 2: 365.5 nm, 3: 365.5 nm
Standard 435.8 nm Criteria +/- 2.0 nm
Average 436.50 nm, difference from standard 0.70 nm, Pass
1: 436.5 nm, 2: 436.5 nm, 3: 436.5 nm
Standard 546.1 nm Criteria +/- 2.0 nm
Average 547.00 nm, difference from standard 0.90 nm, Pass
1: 547.0 nm, 2: 547.0 nm, 3: 547.0 nm

Inspection Sheet

Date 5 กรกฎาคม 2567
Model name JASCO
Serial No. C020461448
Temperature 25 C
Humidity 50 %
Operator Apiwat
Comprehensive inspection

Pass



Wavelength Repeatability Pass/Fail : Pass

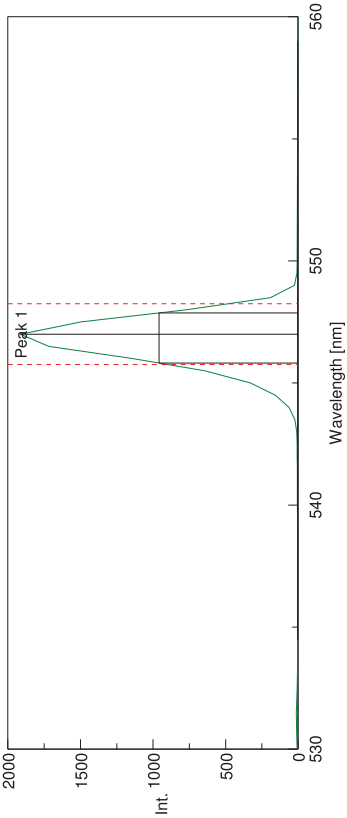
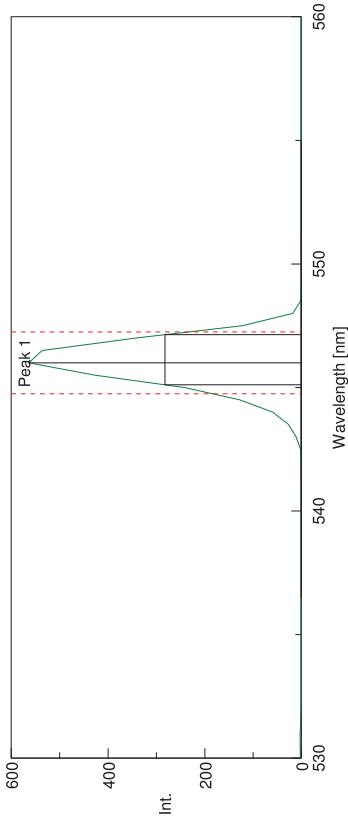
[Excitation]
Wavelength 546.1 nm Criteria +/- 1.5 nm
Minimum 546.0 nm, Maximum 546.0 nm, (Max.-Min.)/2 : 0.00 nm, Pass
1: 546.0 nm, 2: 546.0 nm, 3: 546.0 nm
[Emission]
Wavelength 546.1 nm Criteria +/- 1.5 nm
Minimum 547.0 nm, Maximum 547.0 nm, (Max.-Min.)/2 : 0.00 nm, Pass
1: 547.0 nm, 2: 547.0 nm, 3: 547.0 nm

Inspection Sheet

Date 5 กรกฎาคม 2567
Model name JASCO
Serial No. C020461448
Temperature 25 C
Humidity 50 %
Operator Apiwat
Comprehensive inspection

Creation
Review
Approval

Pass



Resolution

[Excitation]

Criteria : equal to or less than 2.5 nm

Peak at 546.1 nm, FWHM : 2.03 nm, Pass

[Emission]

Criteria : equal to or less than 2.5 nm

Peak at 546.1 nm, FWHM : 2.06 nm, Pass

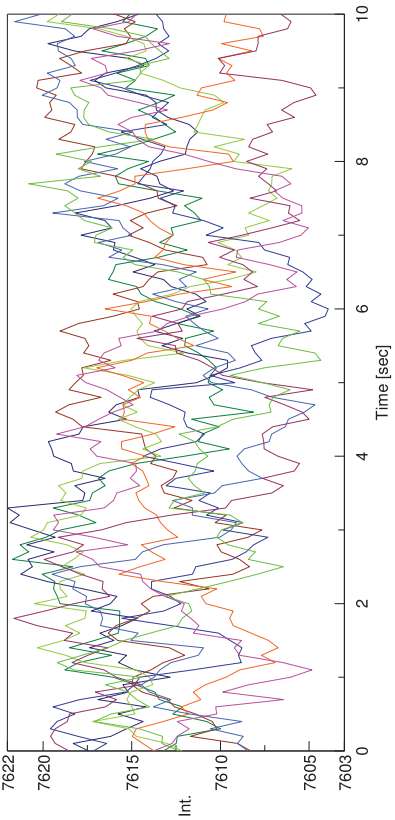
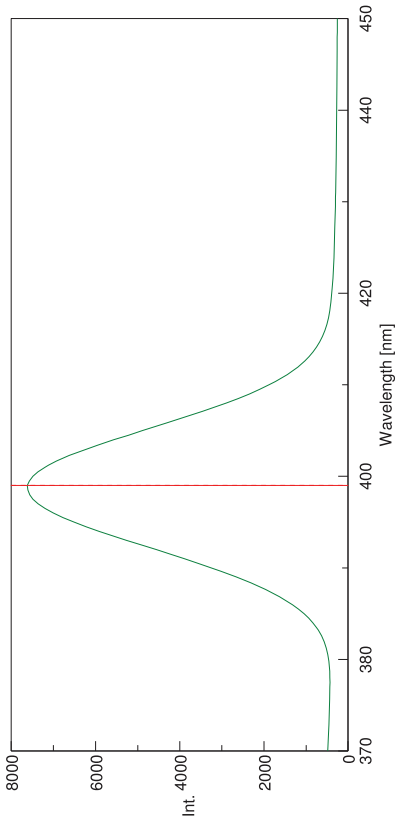
Pass/Fail : Pass

Inspection Sheet

Date 5 กรกฎาคม 2567
Model name JASCO
Serial No. C020461448
Temperature 25 C
Humidity 50 %
Operator Apiwat
Comprehensive inspection

Creation
Review
Approval

Pass



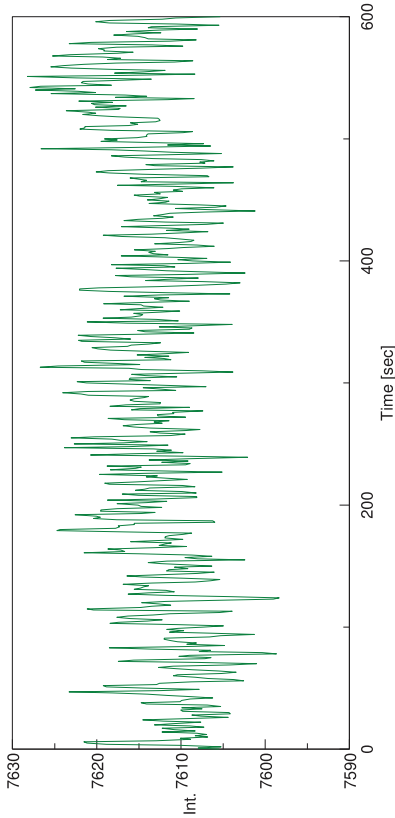
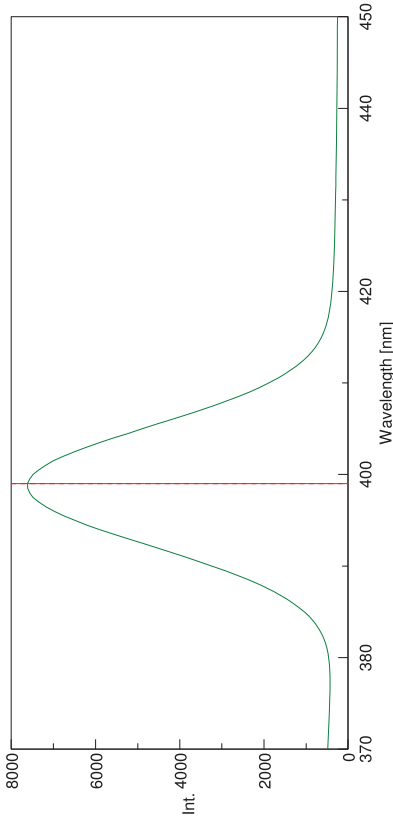
Sensitivity

Pass/Fail : Pass

Criteria : S/N ratio equal to or greater than 500, Measured : 510.2, Pass

Inspection Sheet

Date	5 มกราคม 2567	Creation	
Model name	JASCO	Review	
Serial No.	C020461448	Approval	
Temperature	25 C		
Humidity	50 %		
Operator	Apiwat		
Comprehensive inspection	Pass		



Photometric Stability

Pass/Fail : Pass

Criteria : within 2.0 %, Measured : 0.44 %, Pass



Certificate of Calibration 5835759

Date : 19-Mar-2024

Page 1 of 5

Client : SGS (Thailand) Limited - Laboratory (Bangkok)
10,10/1 - 4 and 12 Soi Rama III S. 59,
Chong Nonsi, Yan Nawa, Bangkok 10120 Thailand

Equipment : INCUBATOR
Reference No. : 6143626
Lab Owner : MI LAB
Manufacturer : Memmert
Model : IF 750
Serial Number : D818.0369
Resolution : 0.1 Degree C
Identification Number : I2019002
Calibration Date : 15-Mar-2024
Ambient Temperature : (23.9 to 25.4) Degree C
Humidity : (50 to 63) %RH
Line Voltage : (220 to 221) VAC
Place of Calibration : SGS (Thailand) Limited
: MI Lab
: 10, 10/1-4 and 12 Soi Rama III S.59, Chong Nonsi, Yan Nawa, Bangkok 10120
Date Received : 15-Mar-2024

CALIBRATE RESULTS Please see the attached sheet.

Signed for and on behalf of
SGS (Thailand) Ltd.

Suttakorn
Asst. Tech. Manager

5537472

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request.
Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained herein reflects the Company's findings at the time of its issue and is not intended to constitute a warranty or representation of the Company's future performance. The Company's sole responsibility is to its Client and this document does not constitute a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.
Publication or advertisement of the result of this document is prohibited, unless prior written approval of the Company.
Unless otherwise stated the results shown in this document refer only to the equipment received.



Certificate of Calibration 5835759

Date : 19-Mar-2024

Page 2 of 5

CALIBRATE RESULTS

Calibration Method

Calibration were conducted according to direct measurement method with datalogger which connected with nine sensors and performed using documented calibration procedure number TLAS G-20.
The temperature scale used was based on ITS-90.

Reference Standard Instrument

This certification is traceable to International System of Units (SI) through the certificate as follow

Instrument	Id.No.	Cert. No.	Due Date	Traceability
Data Acquisition with RTD	D2016011	5766396	26-Dec-2024	SGS (Calibration No. 0100)
Digital Thermo - Hygrometer	T2015003	23H1554	11-Jul-2024	TPA (Calibration No. 0008)
Digital Multimeter	E2022007	23E1336	20-Apr-2024	TPA (Calibration No. 0008)

Probe Installation Detail (Pic. 1)

a = 5.0 cm
b = 5.0 cm
c = 5.0 cm

Dimension of Chamber (Pic. 1)

D = 0.60 m
W = 1.04 m
H = 1.20 m

Capacity of Chamber = 0.75 cubic meter

Parameter of Calibration

Cal 1 35.0 C : 0.0 k
Cal 2 40.0 C : -0.1 k
Cal 3 70.0 C : 0.0 k

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request.

Attention is drawn to the limitations of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Publish or advertisement of the result of this document is prohibited, unless prior written approval of the Company.

Unless otherwise stated the results shown in this document refer only to the equipment received.

5637472



Certificate of Calibration 5835759

Date : 19-Mar-2024

Page 3 of 5

CALIBRATE RESULTS

Calibration Data (Without Adjustment)

Calibration Point : 35.0 Degree C

UUC* Setting (degree C)	UUC* Reading (degree C)	Position (point)	Average* Reference Reading (degree C)
35.0	35.0	1	35.14
35.0	35.0	2	35.07
35.0	35.0	3	35.07
35.0	35.0	4	35.07
35.0	35.0	5	35.11
35.0	35.0	6	35.10
35.0	35.0	7	34.94
35.0	35.0	8	35.02
35.0	35.0	9	35.00

UUC* : Unit Under Calibration.

Average* : The average of 180 value in each position.

Uniformity : 0.16 degree C (The maximum difference of measured temperatures between of any probes and the measured temperature at the reference location (Probe No. 9) at the same time).

Stability : 0.02 degree C (Maximum of [Maximum temperature value - Minimum temperature value /2]) in each position.

Overall Variation : 0.23 degree C (Maximum Temperature Value - Minimum Temperature Value) all data.

Uncertainty of measurement was +/- 0.30 degree C.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request.

Attention is drawn to the limitations of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Publish or advertisement of the result of this document is prohibited, unless prior written approval of the Company.

Unless otherwise stated the results shown in this document refer only to the equipment received.

CALIBRATE RESULTS

Calibration Data (Without Adjustment)
Calibration Point : 36.0 Degree C

UUC* Setting (degree C)	UUC* Reading (degree C)	Position (point)	Average* Reference Reading (degree C)
36.0	36.0	1	36.18
36.0	36.0	2	36.10
36.0	36.0	3	36.11
36.0	36.0	4	36.11
36.0	36.0	5	36.15
36.0	36.0	6	36.13
36.0	36.0	7	35.98
36.0	36.0	8	36.06
36.0	36.0	9	36.04

UUC* : Unit Under Calibration.

Average* : The average of 180 value in each position.

Uniformity : 0.16 degree C (The maximum difference of measured temperatures between of any probes and the measured temperature at the reference location (Probe No. 9) at the same time).

Stability : 0.02 degree C {Maximum of [Maximum temperature value - Minimum temperature value]/2]} in each position.

Overall Variation : 0.22 degree C (Maximum Temperature Value - Minimum Temperature Value) all data.

Uncertainty of measurement was +/- 0.30 degree C.

- Fan Speed : 100%
- Condition of calibrated item : Good
- The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%.
- The above results of calibration were found as shown on date and place of calibration only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request.

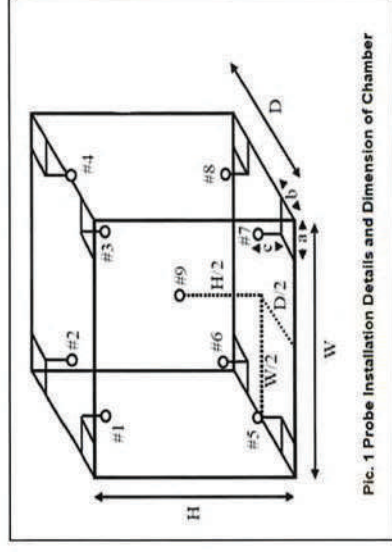
Attention is drawn to the fact that the Company is not responsible for the accuracy of the results of the calibration. Any holder of this document is advised that the information contained herein reflects the Company's findings at the time of the calibration and is not a guarantee of the accuracy of the results. The Company's sole responsibility is to its Client and this document does not constitute part of a transaction from servicing all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Publication or advertisement of the result of this document is prohibited, unless prior written approval of the Company.

Unless otherwise stated the results shown in this document refer only to the equipment received.

5537472

SAMPLE/ATTACHMENT PICTURE



Pic. 1 Probe Installation Details and Dimension of Chamber

***** End of Report *****

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request.

Attention is drawn to the fact that the Company is not responsible for the accuracy of the results of the calibration. Any holder of this document is advised that the information contained herein reflects the Company's findings at the time of the calibration and is not a guarantee of the accuracy of the results. The Company's sole responsibility is to its Client and this document does not constitute part of a transaction from servicing all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Publication or advertisement of the result of this document is prohibited, unless prior written approval of the Company.

Unless otherwise stated the results shown in this document refer only to the equipment received.

Evaluation of Calibration/Verification Certificate

Equipment Name : INCUBATOR
Equipment ID : I2019002
Manufacturer : Memmert
Certificate No. : 5835759
Function : Temperature (°C)

Serial No : D818.0369
Model : IF 750
Resolution : 0.1 °C
Calibration Date : 15-Mar-2024
Tolerance Type : ±

Cal. Position (°C) (1)	Tolerance/ Specification ± (°C) (2)	Reference Standard Reading (°C) (3)	Cal. Point (°C) (4)	Uncertainty +/- (°C) (5)	Error (°C) (6)	Status Pass Fail (7) (8)
1	0.5	35.14	35.0	0.30	-0.14	✓
2	0.5	35.07	35.0	0.30	-0.07	✓
3	0.5	35.07	35.0	0.30	-0.07	✓
4	0.5	35.07	35.0	0.30	-0.07	✓
5	0.5	35.11	35.0	0.30	-0.11	✓
6	0.5	35.10	35.0	0.30	-0.10	✓
7	0.5	34.94	35.0	0.30	0.06	✓
8	0.5	35.02	35.0	0.30	-0.02	✓
9	0.5	35.00	35.0	0.30	0.00	✓

Conclusion : Pass Evaluation of the significance : Do not need the action taken

Action Taken :
(If failed)

Remark : ที่อุณหภูมิ 35 +/- 0.5 °C ค่า Reference reading = 35.06 °C
ค่า Correction = + 0.06 °C

Note : Tolerance type (±)
Error (6) = (4) - (3)
Pass (7) = (5) + ABS(6) ≤ (2)
Fail (8) = (5) + ABS(6) > (2)

Tolerance type (MIN Limit)
Pass (7) = (3)+(5) ≤ (2)+(4) and (3)-(5) ≥ (4)
Fail (8) = (3)+(5) > (2)+(4) or (3)-(5) < (4)

Verified By :
Approved By :
Verified Date :
Approved date :

Confidential - Not to be photocopied except by permission of the Laboratory Quality Manager or nominee.

Evaluation of Calibration/Verification Certificate

Equipment Name : INCUBATOR
Equipment ID : I2019002
Manufacturer : Memmert
Certificate No. : 5835759
Function : Temperature (°C)

Serial No : D818.0369
Model : IF 750
Resolution : 0.1 °C
Calibration Date : 15-Mar-2024
Tolerance Type : ±

Cal. Position (°C) (1)	Tolerance/ Specification ± (°C) (2)	Reference Standard Reading (°C) (3)	Cal. Point (°C) (4)	Uncertainty +/- (°C) (5)	Error (°C) (6)	Status Pass Fail (7) (8)
1	1.0	36.18	36.0	0.30	-0.18	✓
2	1.0	36.10	36.0	0.30	-0.10	✓
3	1.0	36.11	36.0	0.30	-0.11	✓
4	1.0	36.11	36.0	0.30	-0.11	✓
5	1.0	36.15	36.0	0.30	-0.15	✓
6	1.0	36.13	36.0	0.30	-0.13	✓
7	1.0	35.98	36.0	0.30	0.02	✓
8	1.0	36.06	36.0	0.30	-0.06	✓
9	1.0	36.04	36.0	0.30	-0.04	✓

Conclusion : Pass Evaluation of the significance : Do not need the action taken

Action Taken :
(If failed)

Remark : ที่อุณหภูมิ 36 +/- 1 °C ค่า Reference reading = 36.10 °C
ค่า Correction = + 0.10 °C

Note : Tolerance type (±)
Error (6) = (4) - (3)
Pass (7) = (5) + ABS(6) ≤ (2)
Fail (8) = (5) + ABS(6) > (2)

Tolerance type (MAX Limit)
Pass (7) = (3)+(5) ≤ (2)+(4) and (3)-(5) ≥ (4)
Fail (8) = (3)+(5) > (2)+(4) or (3)-(5) < (4)

Verified By :
Approved By :
Verified Date :
Approved date :

Confidential - Not to be photocopied except by permission of the Laboratory Quality Manager or nominee.

ภาคผนวก ช

สำเนาหนังสืออนุญาตขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1	Water	- Cadmium 0.002 mg/L to 0.1 mg/L - Copper 0.01 mg/L to 1.0 mg/L - Lead 0.01 mg/L to 1.0 mg/L - Manganese 0.1 mg/L to 4.0 mg/L - Nickel 0.01 mg/L to 1.0 mg/L - Zinc 0.01 mg/L to 1.0 mg/L - Arsenic 0.02 mg/L to 0.008 mg/L	In - house method : LBEN-05119 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 3120 B, 3030 F In - house method : LBEN-05119 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 3114 C

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation



Ref No. : 0303/17005

CERTIFICATE OF TESTING LABORATORY ACCREDITATION

This is to certify that

SGS (Thailand) Limited, Laboratory Services

10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

has successfully undergone assessment according to ISO/IEC 17025 : 2017
 and under the Bureau of Laboratory Accreditation, Department of Science Service
 for the requirements, regulations and criteria for the competence of testing laboratories

LABORATORY ACCREDITATION
 Accreditation Number TESTING - 0017

BLA-DSS

The scope of accreditation is as annexed hereto

Issue date : 7th November 2022Expired date : 6th November 2026

Signature :

(Mrs. Pochaman Tagheen)

Director of Bureau of Laboratory Accreditation

Bureau of Laboratory Accreditation, Department of Science Service,
 Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	- Antimony 0.63 µg/L to 12.5 µg/L - Arsenic 0.63 µg/L to 6.25 µg/L - Cadmium 0.63 µg/L to 6.25 µg/L - Chromium 0.63 µg/L to 12.5 µg/L - Cobalt 1.25 µg/L to 62.5 µg/L - Copper 0.63 µg/L to 6.25 µg/L - Lead 0.63 µg/L to 6.25 µg/L - Manganese 0.63 µg/L to 6.25 µg/L	In - house method : LBEN-14004 based on United States Environmental Protection Agency, 2014, EPA Method 6020B, Revision 2

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	- Nickel 0.63 µg/L to 6.25 µg/L - Silver 2.5 µg/L to 62.5 µg/L - Zinc 2.5 µg/L to 62.5 µg/L - Mercury 0.5 µg/L to 8.0 µg/L - Hexavalent chromium 1.0 µg/L to 6.25 µg/L	In - house method : LBEN-14004 based on United States Environmental Protection Agency, 2014, EPA Method 6020B, Revision 2 In - house method : LBEN-08145 based on United States Environmental Protection Agency, 1994, EPA Method 245.1, Revision 3.0 ISO 18412 : 2005

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	- pH 6.0 to 10.0	In - house method : LBEN-09152 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - H ⁺ B
		- Ammonia - Nitrogen 0.10 mg/L to 10.0 mg/L	In-house method : LBEN-19003 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - NH ₃ -F
		- Total phosphorus 0.10 mg/L to 10.0 mg/L	In - house method : LBEN-19002 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500-P J

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	- Oil and Grease 0.50 mg/L to 100.0 mg/L	In - house method : LBEN-18005 based on United States Environmental Protection Agency, 2010, EPA, Method 1664, Revision B
		- Color 0.10 m ⁻¹ to 10.00 m ⁻¹	ISO 7887 : 2011, method B
		- Phenol 0.001 mg/L to 0.10 mg/L	In - house method : LBEN-15007 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5530 B, C
		- Cyanide 0.01 mg/L to 0.50 mg/L	In - house method : LBEN-97018 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500-CN C, E

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	- Navy Blue 1.0 mg/L to 7.5 mg/L	In - house method : LBLC-19004 based on United States Environmental Protection Agency, 2007, EPA Method 8321 B
		Azo colorants - Aniline - n-Methylaniline - p-Toluidine - o-Toluidine - m-Toluidine - n-Ethylaniline - 2-Chloroaniline - 2,4-Xyldine - 2,6-Xyldine 0.10 µg/L to 3.00 µg/L	In - house method : SOP LBGC-18004 based on ISO 14362-1 : 2017

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Azo colorants - o-Anisidine - 4-Chloroaniline - n,n-diethylaniline - p-Cresidine - 2,4,5-Trimethylaniline - 4-Chloro-o-toluidine - 2,4-Toluenediamine - 2,4-Diaminoanisole - 2-Naphthylamine - 5-Nitro-o-toluidine - 5-Nitro-o-anisidine - 4-Aminobiphenyl - 4-Aminoazobenzene - 4,4'-Oxydianiline 0.10 µg/L to 3.00 µg/L	In - house method : SOP LBGC-18004 based on ISO 14362-1 : 2017

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Azo colorants - Benzidine - 4,4'-Thiodianiline - o-Aminoazotoluene - 3,3'-Dimethyl-4,4'-diaminodiphenylmethane - 3,3'-Dimethylbenzidine - 4,4'-Thiodianiline - 3,3'-Dichlorobenzidine - 4,4'-Methylene-bis- (2-chloro aniline) - 3,3'-Dimethoxybenzidine 0.10 µg/L to 3.00 µg/L	In - house method : SOP LBGC-18004 based on ISO 14362-1 : 2017

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Organotin Compounds - Trimethyltin(TMT) - Dimethyltin(DMT) - Dipropyltin-dichloride(DPrOT) - Monobutyltin(MBT) - Tripropyltin(TPrT) - Dibutyltin(DBT) - Tributyltin(TBT) - Monoctyltin(MOT) - Tetra-butyltin(TeBT) - Diphenyltin(DPhT) - Dioctyltin(DOT) - Triphenyltin(TPhT) - Tri-cyclohexyltin(TCyT) - Tri-n-octyltin(TOT) 0.05 µg/L to 2.0 µg/L	In - house method : SOP LBGC-18006 based on ISO 17353 : 2004

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Polycyclic Aromatic Hydrocarbons (PAHs) - Naphthalene - 2-Methylphthalene - 1-Methylphthalene - Acenaphthylene - Acenaphthene - Fluorene - Phenanthrene - Anthracene - Fluoranthene - Pyrene - Cyclopenta (c,d) pyrene - Benzo(a) Anthracene - Chrysene 0.01 µg/L to 2.0 µg/L	In - house method : SOP LBGC-18008 based on DIN 38407-39 : 2011

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Polycyclic Aromatic Hydrocarbons (PAHs) - Benzo (b) Fluoranthene - Benzo (j) Fluoranthene - Benzo (k) Fluoranthene - Benzo (e) pyrene - Benzo (a) pyrene - Indenol (1,2,3-cd) pyrene - Dibenzo (ah) anthracene - Benzo (ghi) perylene 0.01 µg/L to 2.0 µg/L	In - house method : SOP LBGC-18008 based on DIN 38407-39 : 2011

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III S.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Chlorophenol - 4-Chloro-3-methylphenol - 2-Chlorophenol - 3-Chlorophenol - 4-Chlorophenol - 2,4-Dichlorophenol - 2,5-Dichlorophenol - 2,6-Dichlorophenol - 3,5-Dichlorophenol - 2,3-Dichlorophenol - 3,4-Dichlorophenol - Pentachlorophenol - 2,3,4,6-Tetrachlorophenol 0.5 µg/L to 20.0 µg/L	In - house method : SOP LBGC-18003 based on ISO 17070 : 2015

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III S.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Chlorophenol - 2,4,5-Trichlorophenol - 2,4,6-Trichlorophenol - 2,3,4-Trichlorophenol - 2,3,5-Trichlorophenol - 3,4,5-Trichlorophenol - 2,3,4,5-Tetrachlorophenol - 2,3,5,6-Tetrachlorophenol - 2,3,6-Trichlorophenol 0.5 µg/L to 20.0 µg/L	In - house method : SOP LBGC-18003 based on ISO 17070 : 2015
		Phthalates - Dimethyl phthalate - Diethyl phthalate - Di-iso-butyl phthalate - Benzyl buthyl phthalate 5 µg/L to 30 µg/L	In - house method : SOP LBGC-18007 based on ISO 18856 : 2004

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Phthalates - Di-butyl phthalate - Di-2-ethyl hexyl phthalate - Di-isononyl phthalate - Bis-methylglycol ester phthalate - Di-isoheptyl phthalate - Bis cyclohexyl phthalate - Di-n-octyl phthalate - Bis-(2-propylheptyl) phthalate - Bis-nonyl phthalate - Bis-propyl phthalate - Bis-iso-pentyl phthalate - n-pentyl-iso-pentyl phthalate - Bis-n-pentyl phthalate - Di-n-hexyl phthalate - Bis-iso-octyl phthalate - Di-isodecyl phthalate 5 µg/L to 30 µg/L	In - house method : SOP LBGC-18007 based on ISO 18856 : 2004

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Volatile Organic Compound - Methylene Chloride - Benzene - 1,2-Dichloroethane - Trichloroethylene - Tetrachloroethylene - Total Xylene 5 µg/L to 20 µg/L - p- Cresol - o- Cresol - m- Cresol 5 µg/L to 25 µg/L	In - house method : SOP LBGC-18009 based on United States Environmental Protection Agency, 1996, EPA, Method 8260B, Revision 2.0 In - house method : SOP LBGC-18010 based on United States Environmental Protection Agency, 1996, EPA, Method 8260 B, Revision 2.0

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

:Testing - 0017

☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	<p>Flame retardants</p> <ul style="list-style-type: none"> - Polybrominated biphenyls ethers - Polybrominated diphenyl ethers <p>0.25 µg/L to 1.5 µg/L</p> <p>Disperse dyes</p> <ul style="list-style-type: none"> - Basic violet 1 - Basic violet 3 - Disperse Blue 1 - Disperse Blue 7 - Disperse Brown 1 - Disperse Orange 1 - Disperse Orange 3 - Disperse Orange 11 - Disperse Orange 37/76 - Disperse Red 1 <p>10.0 µg/L to 50.0 µg/L</p>	<p>In - house method : LBGC-18005</p> <p>based on United States Environmental Protection Agency, 2005, EPA, Method 527, Revision 1.0</p> <p>In - house method : LBLC-18002</p> <p>based on Journal of Chromatographic Science 2015, 53 : page 1257-1264</p>

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Disperse dyes - Disperse Violet 1 - Disperse Yellow 1 - Disperse Yellow 9 - Disperse Yellow 39 - Disperse Yellow 54 - Solvent Yellow 1 - Solvent Yellow 2 - Solvent Yellow 3 - Solvent Yellow 14 10.0 µg/L to 50.0 µg/L	In - house method : LBLC-18002 based on Journal of Chromatographic Science 2015, 53 : page 1257-1264

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Flame retardant - Tris (2,3-dibromopropyl) phosphate - Bis (2,3-dibromopropyl) phosphate 1.00 µg/L to 4.00 µg/L - Glycol 20 µg/L to 100 µg/L In - house method : LBGC-18012 based on United States Environmental Protection Agency, 2014, EPA, Method 600/R-14/008	In - house method : LBLC-18001 based on ISO 18857-2 : 2009

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III 5.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	- Conductivity 147 µS/cm to 12 880 µS/cm	In - house method : LBEN-02110 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2510 B
		- Total solids dried at 103 °C to 105 °C 50 mg/L to 20 000 mg/L	In - house method : LBEN-09150 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2540 B
		- Total suspended solids dried at 103 °C to 105 °C 5 mg/L to 10 000 mg/L	In - house method : LBEN-97042 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2540 D

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III 5.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	- Total dissolved solids dried at 180 °C 50 mg/L to 20 000 mg/L	In - house method : LBEN-00106 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2540 C
		- Total hardness (calculates as CaCO ₃) 1 mg/L to 300 mg/L	In - house method : LBEN-00098 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2340 C
		- BOD 2 mg/L to 2 100 mg/L	In - house method : LBEN-97006 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5210 B

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	- COD 10 mg/L to 300 mg/L	In - house method : LBEN-97010 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5220 C
		- COD 10 mg/L to 400 mg/L	In - house method : LBEN-12161 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5220 D
		- pH 4.0 to 9.2	In - house method : LBEN-21001 based on United States Environmental Protection Agency, Editorial Revision 1978, 1982, EPA Method 150.1

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	- Nitrate 0.02 mg/L to 6.0 mg/L	In - house method : LBEN-97029 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - NO ₃ ⁻ E
		- Nitrite 0.02 mg/L to 1.0 mg/L	In - house method : LBEN-97049 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - NO ₂ ⁻ B
		- Sulfate 2.0 mg/L to 100.0 mg/L	In - house method : LBEN-14003 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - SO ₄ ²⁻ E

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III 5.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	- Total organic carbon 0.5 mg/L to 10.0 mg/L	In - house method : LBEN-09149 based on United States Environmental Protection Agency, 2004, EPA Method 9060 A, Revision 1.0
		Perfluorocarbons (PFCs) : - PFPeA - PFBS - PFHxS - PFHpS - PF-3,7-DMOA - PFDA - PFOS - PFUnA - PFDoA - PFDS 0.05 µg/L to 0.3 µg/L	In - house method : LBLC-17014 based on DIN 38407-42 : 2011-03 and analysis with HPLC-MS

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III 5.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Perfluorocarbons (PFCs) : - PFTriA - PFTeA - PFOSA 0.05 µg/L to 0.3 µg/L	In - house method : LBLC-17014 based on DIN 38407-42 : 2011-03 and analysis with HPLC-MS
		Alkyl phenol ethoxylate : - OPEO - NPEO 1 µg/L to 10 µg/L	In - house method : LBLC-17013 based on ISO 18857-2 : 2009 and analysis with HPLC-MS
		Chlorobenzenes and Chlorotoluenes (COCs) : - Chlorobenzene - 2-Chlorotoluene - 3-Chlorotoluene - 4-Chlorotoluene 0.20 µg/L to 5.00 µg/L	In - house method : LBGC-21010 based on United States Environmental Protection Agency, 2014, EPA Method 8270

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Chlorobenzenes and Chlorotoluenes (COCs) : - 1,3-Dichlorobenzene - 1,4-Dichlorobenzene - 1,2-Dichlorobenzene - 3,5-Dichlorotoluene - 2,4-Dichlorotoluene - 2,5-Dichlorotoluene - 2,6-Dichlorotoluene - 1,3,5-Trichlorobenzene - 2,3-Dichlorotoluene - 3,4-Dichlorotoluene - 1,2,4-Trichlorobenzene - 1,2,3-Trichlorobenzene 0.20 µg/L to 5.00 µg/L	In – house method : LBGC-21010 based on United States Environmental Protection Agency, 2014, EPA Method 8270

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Chlorobenzenes and Chlorotoluenes (COCs) : - 2,4,6-Trichlorotoluene - 2,4,5 -Trichlorotoluene - 2,3,6-Trichlorotoluene - 1,2,3,5-Tetrachlorobenzene - 3,4,5-Trichlorotoluene - 1,2,4,5-Tetrachlorobenzene - 2,3,4-Trichlorotoluene - 1,2,3,4-Tetrachlorobenzene - 2,3,4,6-Tetrachlorotoluene - 2,3,5,6-Tetrachlorotoluene - 2,3,4,5-Tetrachlorotoluene - Pentachlorobenzene - 2,3,4,5,6-Pentachlorotoluene - Hexachlorobenzene 0.20 µg/L to 5.00 µg/L	In – house method : LBGC-21010 based on United States Environmental Protection Agency, 2014, EPA Method 8270

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
1 (cont.)	Water	Alkylphenol (AP) : - Nonylphenol (NP) - 4-n-Nonyl phenol (4-n-NP) - 4-n-Octylphenol (4-n-OP) - Octylphenol (4-tert-OP) 1.0 µg/L to 10.0 µg/L - Carbon disulfide 0.05 mg/L to 1 mg/L	In – house method : LBLC-17013 based on ISO 18857-2: 2009 In – house method : LBGC-2007 based on United States Environmental Protection Agency, 2017, EPA Method 8260D

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2	Wastewater	- Mercury 0.5 µg/L to 8.0 µg/L - pH 4.0 to 10.0 - Total solids dried at 103 °C to 105 °C 50 mg/L to 20 000 mg/L	In - house method : LBEN-08145 based on United States Environmental Protection Agency, 1994, EPA Method 245.1, Revision 3.0 In - house method : LBEN-09152 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - H ⁺ B In - house method : LBEN-09150 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2540 B

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	- Total suspended solids dried at 103 °C to 105 °C 5 mg/L to 10 000 mg/L	In - house method : LBEN-97042 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2540 D
		- Total dissolved solids dried at 180 °C 50 mg/L to 20 000 mg/L	In - house method : LBEN-00106 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2540 C
		- Conductivity 147 µS/cm to 12 880 µS/cm	In - house method : LBEN-02110 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2510 B

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	- Total hardness (calculates as CaCO ₃) 2 mg/L to 500 mg/L	In - house method : LBEN-00098 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2340 C
		- BOD 2 mg/L to 2 100 mg/L	In - house method : LBEN-97006 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5210 B
		- COD 10 mg/L to 3 000 mg/L	In - house method : LBEN-97010 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5220 C

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	- COD 10 mg/L to 500 mg/L	In - house method : LBEN-12161 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5220 D
		- pH 4.0 to 9.2	In - house method : LBEN-21001 based on United States Environmental Protection Agency, Editorial Revision 1978, 1982, EPA Method 150.1
		- Nitrate 0.02 mg/L to 15.0 mg/L	In - house method : LBEN-97029 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - NO ₃ E

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	- Nitrite 0.02 mg/L to 1.0 mg/L	In - house method : LBEN-97049 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - NO ₂ B
		- Sulfate 2.0 mg/L to 100.0 mg/L	In - house method : LBEN-14003 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - SO ₄ E
		- Total organic carbon 0.5 mg/L to 10.0 mg/L	In - house method : LBEN-09149 based on United States Environmental Protection Agency, 2004, EPA Method 9060 A, Revision 1.0

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	- Ammonia-Nitrogen 0.02 mg/L to 20 mg/L	In - house method : LBEN-11158 based on ASTM D1426-08
		- Total phosphorus 0.01 mg/L to 40 mg/L	In - house method : LBEN-97037 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - P B4, E
		- Dissolved phosphorus 0.005 mg/L to 20 mg/L	In - house method : LBEN-97037 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - P B1, E

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	- Glycol 20 µg/L to 200 µg/L	In - house method : LBGC-18012 based on United States Environmental Protection Agency, 2014, EPA, Method 600/R-14/008
		- Ammonia-Nitrogen 0.10 mg/L to 10.0 mg/L	In - house method : LBEN-19003 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - NH ₃ -F
		- Total phosphorus 0.10 mg/L to 10.0 mg/L	In - house method : LBEN -19002 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500-P J

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III S.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	- Chloride 1.0 mg/L to 20 000 mg/L	In - house method : LBEN-11157 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500-Cl D
		- Navy Blue 1.0 mg/L to 7.5 mg/L	In - house method : LBLC-19004 based on United States Environmental Protection Agency, 2007, EPA, Method 8321B

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III S.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Perfluorocarbons (PFCs) : - PFPeA - PFBS - PFHxS - PFHpS - PF-3,7-DMOA - PFDA - PFOS - PFUnA - PFDoA - PFDS - PFTrA - PFTeA - PFOSA 0.05 µg/L to 0.3 µg/L	In - house method : LBLC-17014 based on DIN 38407-42 : 2011-03 and analysis with HPLC-MS

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Alkyl phenol ethoxylate :	In - house method : LBLC-17013
		- OPEO	based on ISO 18857-2 : 2009
		- NPEO	and analysis with HPLC-MS
		1 µg/L to 10 µg/L	
		- Phenol	In - house method : LBEN-15007
		0.001 mg/L to 0.1 mg/L	based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5530 B, C
		- Cyanide	In - house method : LBEN-97018
		0.05 mg/L to 0.2 mg/L	based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - CN ⁻ C, E

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	- Oil and Grease	In - house method : LBEN-97031
		1 mg/L to 100 mg/L	based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5520 B
		- Oil and Grease	In - house method : LBEN-18005
		0.5 mg/L to 100 mg/L	based on United States Environmental Protection Agency, 2010, EPA, Method 1664, Revision B
		- Sulfide	In - house method : LBEN-97045
		0.01 mg/L to 1.0 mg/L	based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500-S ²⁻ -D

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	- Sulfite 0.75 mg/L to 3.0 mg/L	In - house method : LBEN-18006 based on United States Environmental Protection Agency, 1978, EPA, Method 377.1
		- Total kjeldahl nitrogen 2 mg/L to 200 mg/L	In - house method : LBAG-18002 based on ISO 5663 : 1984
		- Color 0.10 m ⁻¹ to 10.00 m ⁻¹	ISO 7887 : 2011, Method B

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	- Arsenic 0.63 µg/L to 6.25 µg/L	In - house method : LBEN-14004 based on United States Environmental Protection Agency, 2014, EPA, Method 6020B, Revision 2
		- Lead 0.63 µg/L to 6.25 µg/L	
		- Cadmium 0.63 µg/L to 6.25 µg/L	
		- Copper 0.63 µg/L to 6.25 µg/L	
		- Manganese 0.63 µg/L to 6.25 µg/L	
		- Nickel 0.63 µg/L to 6.25 µg/L	
		- Zinc 2.5 µg/L to 62.5 µg/L	
		- Silver 2.5 µg/L to 62.5 µg/L	

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	- Chromium 0.63 µg/L to 12.5 µg/L - Antimony 0.63 µg/L to 12.5 µg/L - Cobalt 1.25 µg/L to 62.5 µg/L - Hexavalent chromium 1.0 µg/L to 5.0 µg/L Flame retardant - Tris (2,3-dibromopropyl) phosphate - Bis (2,3-dibromopropyl) phosphate - 2,2 Bis (bromomethyl)-1,3-propanediol 1.00 µg/L to 4.00 µg/L	In - house method : LBEN-14004 based on United States Environmental Protection Agency, 2014, EPA, Method 6020B, Revision 2 ISO 18412 : 2005 In - house method : LBLC-18001 based on ISO 18857-2 : 2009

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Disperse dyes - Disperse Blue 1 - Disperse Blue 7 - Disperse Brown 1 - Disperse Orange 1 - Disperse Orange 3 - Disperse Orange 11 - Disperse Orange 37/76 - Disperse Red 1 - Disperse Yellow 1 - Disperse Yellow 9 - Disperse Yellow 39 - Basic violet 3 - Solvent Yellow 1 - Solvent Yellow 2 - Solvent Yellow 3 10.0 µg/L to 50.0 µg/L	In - house method : LBLC-18002 based on Journal of Chromatographic Science 2015,53 : page 1257-1264

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Disperse dyes - Basic violet 1 - Solvent Yellow 14 - Disperse Yellow 54 - Disperse Violet 1 10.0 µg/L to 50.0 µg/L	In - house method : LBLC-18002 based on Journal of Chromatographic Science 2015,53 : page 1257-1264
		Azo colorants - Aniline - n-Methylaniline - p-Toluidine - o-Toluidine - m-Toluidine - n-Ethylaniline - 2-Chloroaniline - 2,4-Xyldine 2,6-Xyldine 0.5 µg/L to 3.0 µg/L	In - house method : SOP LBGC-18004 based on ISO 14362-1 : 2017

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Azo colorants - o-Anisidine - 4-Chloroaniline - n,n-diethylaniline - p-Cresidine - 2,4,5-Trimethylaniline - 4-Chloro-o-toluidine - 2,4-Toluenediamine - 2,4-Diaminoanisole - 2-Naphthylamine - 5-Nitro-o-toluidine - 5-Nitro-o-anisidine - 4-Aminobiphenyl - 4-Aminoazobenzene - 4,4'-Oxydianiline - Benzidine 0.5 µg/L to 3.0 µg/L	In - house method : SOP LBGC-18004 based on ISO 14362-1 : 2017

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Azo colorants - 4,4'-Thiodianiline - O-Aminoazotoluene - 3,3'-Dimethyl-4,4'-diaminodiphenylmethane - 3,3'-Dimethylbenzidine - 4,4'-Thiodianiline - 3,3'-Dichlorobenzidine - 4,4'-Methylenebis (2-Chloroaniline) - 3,3'-Dimethoxybenzidine 0.5 µg/L to 3.0 µg/L	In - house method : SOP LBG-18004 based on ISO 14362-1 : 2017

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Flame retardants - 2,2-bis(bromomethyl)-1,3-propane-diol - Tris (2-chloroethyl) phosphate - Tris (1,3-dichloro-isopropyl) phosphate - Hexabromocyclododecane 5 µg/L to 25 µg/L - Polybrominated biphenyls ether - polybrominated diphenyl ethers 0.25 µg/L to 1.5 µg/L	In - house method : LBG-18005 based on United States Environmental Protection Agency, 2005, EPA, Method 527, Revision 1.0

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Organotin compounds - Trimethyltin(TMT) - Dimethyltin(DMT) - Dipropyltin-dichloride(DPrOT) - Monobutyltin(MBT) - Tripropyltin(TPrT) - Dibutyltin(DBT) - Tributyltin(TBT) - Monoethyltin(MOT) - Tetraethyltin(TeBT) - Diphenyltin(DPhT) - Diethyltin(DOT) - Triphenyltin(TPhT) - Tri-cyclohexyltin(TCyT) - Tri-n-octyltin(TOT) 0.05 µg/L to 1.0 µg/L	In - house method : SOP LBGC-18006 based on ISO 17353 : 2004

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Polycyclic Aromatic Hydrocarbons (PAH) - Naphthalene - 2-Methylphtalene - 1-Methylphtalene - Acenaphthylene - Acenaphthene - Fluorene - Phenanthrene - Anthracene - Fluoranthene - Pyrene - Cyclopenta (c,d) pyrene - Benzo(a) Anthracene - Chrysene 1.0 µg/L to 20.0 µg/L	In - house method : LBGC-18008 based on DIN 38407-39 : 2011

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III S.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Polycyclic Aromatic Hydrocarbons (PAH) - Benzo(b) Fluoranthene - Benzo(j) Fluoranthene - Benzo(k) Fluoranthene - Benzo(e) Pyrene - Benzo(a) Pyrene - Indeno(1,2,3-cd) Pyrene - Dibenzo (ah) Anthracene - Benzo (ghi) perylene 1.0 µg/L to 20.0 µg/L	In - house method : LBGC-18008 based on DIN 38407-39 : 2011

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III S.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Chlorophenol - 4-Chloro-3-methylphenol - 2-Chlorophenol - 3-Chlorophenol - 4-Chlorophenol - 2,4-Dichlorophenol - 2,5-Dichlorophenol - 2,6-Dichlorophenol - 3,5-Dichlorophenol - 2,3-Dichlorophenol - 3,4-Dichlorophenol - Pentachlorophenol - 2,3,4,6-Tetrachlorophenol - 2,4,5-Trichlorophenol - 2,4,6-Trichlorophenol - 2,3,4-Trichlorophenol 0.5 µg/L to 20.0 µg/L	In - house method : SOP LBGC-18003 based on ISO 17070 : 2015

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status

☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Phthalates - Di-isoheptyl phthalate - Bis cyclohexyl phthalate - Di-n-octyl phthalate - Bis (2-propylheptyl) phthalate - Bis-nonyl phthalate - Bis-propyl phthalate - Bis-iso-pentyl phthalate - n-pentyl-iso-pentyl phthalate - Bis-n-pentyl phthalate - Di-n-hexyl phthalate - Bis-iso-octyl phthalate - Di-isodecyl phthalate 5 µg/L to 30 µg/L	In - house method : LBGC-18007 based on ISO 18856 : 2004

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III 5.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Volatile organic compounds - Methylene Chloride - Benzene - 1,2-Dichloroethane - Trichloroethylene - Tetrachloroethylene - Total Xylene 5 µg/L to 20 µg/L - p- Cresol - o- Cresol - m- Cresol 5 µg/L to 25 µg/L	In - house method : SOP LBGC-18009 based on United States Environmental Protection Agency, 1996, EPA, Method 8260B, Revision 2.0 In - house method : LBGC-18010 based on United States Environmental Protection Agency, 1996, EPA, Method 8260B, Revision 2.0

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III 5.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Perfluorocarbons (PFCs) : - 6:2 FTOH - 8:2 FTOH - 10:2 FTOH - 6:2 FTA - 8:2 FTA - 10:2 FTA 5 µg/L to 25 µg/L Chlorobenzenes and Chlorotoluenes (COCs) : - Chlorobenzene - 2-Chlorotoluene - 3-Chlorotoluene - 4-Chlorotoluene 0.20 µg/L to 5.00 µg/L	In - house method : LBGC-18011 based on DIN 38407-42 : 2011 In - house method : LBGC-21010 based on United States Environmental Protection Agency, 2014, EPA Method 8270

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III S.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Chlorobenzenes and Chlorotoluenes (COCs) : - 1,3-Dichlorobenzene - 1,4-Dichlorobenzene - 1,2-Dichlorobenzene - 3,5-Dichlorotoluene - 2,4-Dichlorotoluene - 2,5 Dichlorotoluene - 2,6-Dichlorotoluene - 1,3,5-Trichlorobenzene - 2,3-Dichlorotoluene - 3,4-Dichlorotoluene - 1,2,4-Trichlorobenzene - 1,2,3-Trichlorobenzene - 2,4,6-Trichlorotoluene - 2,4,5 -Trichlorotoluene 0.20 µg/L to 5.00 µg/L	In - house method : LBGC-21010 based on United States Environmental Protection Agency, 2014, EPA Method 8270

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III S.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Chlorobenzenes and Chlorotoluenes (COCs) : - 1,2,3,5-Tetrachlorobenzene - 3,4,5-Trichlorotoluene - 1,2,4,5-Tetrachlorobenzene - 2,3,4-Trichlorotoluene - 1,2,3,4-Tetrachlorobenzene - 2,3,4,6-Tetrachlorotoluene - 2,3,5,6-Tetrachlorotoluene - 2,3,4,5-Tetrachlorotoluene - Pentachlorobenzene - 2,3,4,5,6-Pentachlorotoluene - Hexachlorobenzene 0.20 µg/L to 5.00 µg/L	In - house method : LBGC-21010 based on United States Environmental Protection Agency, 2014, EPA Method 8270

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III 5.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	Alkylphenol (AP) : - Nonylphenol (NP) - 4-n-Nonyl phenol (4-n-NP) - 4-n-Octylphenol (4-n-OP) - Octylphenol (4-tert-OP) 1.0 µg/L to 10.0 µg/L - Carbon disulfide 0.05 mg/L to 1 mg/L - Hydrocarbon 1.0 mg/L to 50 mg/L	In - house method : LBLC-17013 based on ISO 18857-2: 2009 In - house method : LBGC-20007 based on United States Environmental Protection Agency, 2017, EPA Method 8260D In - house method : LBEN 21002 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5220B, 5520F

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III 5.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017
 Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
2 (cont.)	Wastewater	- Coliforms MPN/100 mL Detected or Not detected/ 100 mL - Coliforms cfu/100 mL - <i>E.coli</i> MPN/100 mL Detected or Not detected/100 mL	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed, 2017, part 9221 B ISO 9308 -1: 2014 / Amd.1: 2016 Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed, 2017, part 9221B, 9221C, 9221F and FDA BAM Online, 2020 (Chapter 4)

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III 5.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
3	Surface water	- Ammonia-Nitrogen 0.02 mg/L to 20 mg/L	In - house method : LBEN-11158 based on ASTM D1426-08
		- Chloride 1 mg/L to 20 000 mg/L	In - house method : LBEN-11157 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - Cl ⁻ D
		- Total phosphorus 0.01 mg/L to 40 mg/L	In - house method : LBEN-97037 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - P B4, E

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III 5.59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017

Laboratory Status : <input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Site <input type="checkbox"/> Temporary <input type="checkbox"/> Mobile			
Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
3 (cont.)	Surface water	- Dissolved phosphorus 0.005 mg/L to 20 mg/L	In - house method : LBEN-97037 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500 - P B1, E
4	Sludge	- Mercury 0.1 mg/kg to 4.0 mg/kg	In - house method : LBEN-18008 based on United States Environmental Protection Agency, 2007, EPA, Method 7473, Revision 0
		- Hexavalent chromium 1.0 mg/kg to 40.0 mg/kg	In - house method : LBEN 18003 based on United States Environmental Protection Agency, 1992, EPA, Method 7196A, Revision 1

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
4 (cont.)	Sludge	- Arsenic 0.50 mg/kg to 5.00 mg/kg - Cadmium 0.50 mg/kg to 5.00 mg/kg - Lead 0.50 mg/kg to 5.00 mg/kg - Zinc 1.00 mg/kg to 5.00 mg/kg - Nickel 1.00 mg/kg to 5.00 mg/kg - Copper 1.00 mg/kg to 5.00 mg/kg	In - house method : LBEN 18007 based on United States Environmental Protection Agency, 2014, EPA, Method 6020B, Revision 2

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
4 (cont.)	Sludge	- Cadmium 10 mg/kg to 1 000 mg/kg - Lead 10 mg/kg to 1 000 mg/kg - Cyanide 0.50 mg/kg to 10.0 mg/kg	In - house method : LBEN 18007 based on United States Environmental Protection Agency, 2007, EPA Method 6010C, Revision 3 In - house method : SOP LBEN-19001 based on ISO 11262 : 2011
5	Sludge Waste	Chlorophenol : - 4-Chloro-3-methylphenol - 2-Chlorophenol - 3-Chlorophenol - 4-Chlorophenol 0.05 mg/kg to 1.00 mg/kg	In - house method SOP LBGC-20004 based on ISO 14154 : 2005

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Banekok 10120

Accreditation Number : Testing - 0017

: ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	<p>Chlorophenol : - 2,3,4,5-Tetrachlorophenol - 2,3,4,6-Tetrachlorophenol - 2,3,5,6-Tetrachlorophenol 0.05 mg/kg to 1.00 mg/kg</p> <p>Polycyclic Aromatic Hydrocarbons (PAHs) : - Naphthalene - 2-Methylphthalene - 1-Methylphthalene - Acenaphthylene - Acenaphthene - Fluorene - Phenanthrene 0.0025 mg/kg to 0.1 mg/kg</p>	<p>In - house method SOP LBGC-20004 based on ISO 14154 : 2005</p> <p>In - house method : SOP LBGC-20005 based on DIN 38407-39 : 2011</p>

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Accreditation Number : Testing - 0017

☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test Item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	Polycyclic Aromatic Hydrocarbons (PAHs) : - Anthracene - Fluoranthene - Pyrene - Cyclopenta (c,d) pyrene - Benzo(a) anthracene - Chrysene - Benzo(k) fluoranthene - Benzo(b) fluoranthene - Benzo(j) fluoranthene - Benzo(e) pyrene - Benzo(a) pyrene - Indeno(1,2,3-cd) pyrene - Dibenzo (ah) anthracene - Benzo (ghi) perylene 0.0025 mg/kg to 0.1 mg/kg	In - house method : SOP LBGC-20005 based on DIN 38407-39:2011

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

LA-F-31-9/11-19

page 66/83

Scope of Laboratory Accreditation

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	<p>Glycol :</p> <ul style="list-style-type: none"> - 2-Methoxyethanol - 2-Ethoxyethyl acetate - Bis(2-methoxyethyl)ether - 2-Ethoxyethanol - 2-Methoxypropylacetate - 2-Methoxyethylacetate - Triethylene glycol dimethyl ether - Ethylene glycol dimethyl ether <p>0.50 mg/kg to 5.00 mg/kg</p> <p>Organotin Compounds :</p> <ul style="list-style-type: none"> - Trimethyltin (TMT) - Dimethyltin (DMT) - Monomethyltin(MMT) - Dipropyltin-dichloride (DProT) <p>0.50 mg/kg to 2.00 mg/kg</p>	<p>In - house method : SOP LBGC-20006 based on ISO 22892:2006</p> <p>In - house method : SOP LBGC-21011 based on ISO 23161:2018</p>

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	Organotin Compounds : - Monobutyltin (MBT) - Tripropyltin (TPtT) - Dibutyltin (DBT) - Monophenyltin (MPhT) - Tributyltin (TBT) - Monooctyltin (MOT) - Tetraethyltin (TeBT) - Diphenyltin (DPHT) - Dioctyltin (DOT) - Tri-cyclohexyltin (TCyT) - Triphenyltin (TPHT) - Tri-n-octyltin (TOT) 0.50 mg/kg to 2.00 mg/kg	In - house method : SOP LBGC-21011 based on ISO 23161:2018

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	Disperse dyes : - Acid Violet 49 - Basic Blue 26 - Basic Green 4 - Basic Red 9 - Basic Violet 1 - Basic Violet 3 - Disperse Blue 1 - Disperse Blue 3 - Disperse Blue 7 - Disperse Blue 106 - Disperse Yellow 1 - Disperse Yellow 3 - Disperse Yellow 9 - Disperse Red 17 - Solvent Yellow 1 - Solvent Yellow 3 1.00 mg/kg to 4.00 mg/kg	In - house method : SOP LBGC-21006 based on ISO 16373-3: 2014

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III 5,59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test Item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	Chlorobenzenes and Chlorotoluenes (COCs) : - Chlorobenzene - 2-Chlorotoluene - 3-Chlorotoluene - 4-Chlorotoluene - 1,3-Dichlorobenzene - 1,4-Dichlorobenzene - 1,2-Dichlorobenzene - 2,4-Dichlorotoluene - 2,5-Dichlorotoluene - 2,6-Dichlorotoluene - 1,3,5-Trichlorobenzene - 2,3-Dichlorotoluene - 3,4-Dichlorotoluene 0.025 mg/kg to 0.50 mg/kg	In - house method : LBG-21014 based on United States Environmental Protection Agency, 2014, EPA Method 8270D

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services
 Address : 10, 10/1-4 and 12 Soi Rama III 5,59,
 Chong Nonsi, Yan Nawa, Bangkok 10120
 Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test Item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	Chlorobenzenes and Chlorotoluenes (COCs) : - 1,2,4-Trichlorobenzene - 1,2,3-Trichlorobenzene - 2,4,6-Trichlorotoluene - 2,4,5 -Trichlorotoluene - 2,3,6-Trichlorotoluene - 1,2,3,5-Tetrachlorobenzene - 3,4,5-Trichlorotoluene - 1,2,4,5-Tetrachlorobenzene - 2,3,4-Tetrachlorotoluene - 1,2,3,4-Tetrachlorobenzene - 2,3,4,6-Tetrachlorotoluene - 2,3,5,6-Tetrachlorotoluene - 2,3,4,5-Tetrachlorotoluene 0.025 mg/kg to 0.50 mg/kg	In - house method : LBG-21014 based on United States Environmental Protection Agency, 2014, EPA Method 8270D

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	Chlorobenzenes and Chlorotoluenes (COCs) : - Pentachlorobenzene - 2,3,4,5,6-Pentachlorotoluene - Hexachlorobenzene 0.025 mg/kg to 0.50 mg/kg	In - house method : LBGC-21014 based on United States Environmental Protection Agency, 2014, EPA Method 8270D
		Azo dyes : - Aniline (62-53-3) - n-methylaniline (100-61-8) - p-Toluidine (106-49-0) - o-Toluidine (95-53-4) - m-Toluidine (108-44-1) - n-ethylaniline (103-69-5) - 2-Chloroaniline (95-51-2) 0.20 mg/kg to 1.50 mg/kg	In - house method : LBGC-21019 based on ISO 14362-1 and 3: 2017

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	Azo dyes : - 2,4-Xyldine (95-68-1) - 2,6-Xyldine (87-62-7) - o-Anisidine (90-04-0) - 4-Chloroaniline (106-47-8) - n,n-Diethylaniline (91-66-7) - p-Cresidine (120-71-8) - 2,4,5 - Trimethylaniline (137-17-7) - 4-Chloro-o-toluidine (95-69-2) - 2,4-Toluenediamine (95-80-7) - 2,4 - Diaminoanisole (615-05-4) - 2-Naphtylamine (91-59-8) - 3,3'-dimethybenzidine (119-90-4) - 3,3'-dimethybenzidine (119-93-7) 0.20 mg/kg to 1.50 mg/kg	In - house method : LBGC-21019 based on ISO 14362-1 and 3: 2017

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	Azo dyes : - 4,4'-Thiodianiline (139-65-1) - 3,3'-Dichlorobenzidine (91-94-1) - 4,4'-Methylene bis(2-chloroaniline) (101-14-4) - 4-Aminobiphenyl (92-67-1) - 4,4'-Oxydianiline (101-80-4) - Benzidine (92-87-5) - 4,4'-Thiodianiline (101-77-9) - 3,3'-Dimethy- 4,4'-diaminodiphenylmethane (838-88-0) 0.20 mg/kg to 1.50 mg/kg	In - house method : LBG-21019 based on ISO 14362-1 and 3: 2017

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	Perfluorinated/Polyfluorinated (PFCs) : - 1H,1H,2H,2H-Tridecafluoro-1-n-octanol (6:2 FTOH) - 1H,1H,2H,2H-Heptadecafluoro-1-decanol (8:2 FTOH) - 1H,1H,2H,2H-Perfluoro-1-dodecanol (10:2 FTOH) - 1H,1H,2H,2H-Perfluorooctyl acrylate (6:2 FTA) - 1H,1H,2H,2H-Heptadecafluorodecyl Acrylate (8:2 FTA) - 1H,1H,2H,2H-Perfluorododecyl acrylate (10:2 FTA) 0.25 mg/kg to 1.5 mg/kg	In - house method : LBG-21023 based on DIN 38407-42: 2011

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120
: Testing - 0017

☒ Permanent
 ☐ Site
 ☐ Temporary
 ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	<p>Flame retardant :</p> <ul style="list-style-type: none"> - Tris(2,3-dibromopropyl) phosphate - Bis(2,3-dibromopropyl) phosphate - 2,2'-Bis(bromomethyl)-1,3-propanediol <p>0.5 mg/kg to 2 mg/kg</p> <p>Alkylphenol (AP) :</p> <ul style="list-style-type: none"> - Nonylphenol (NP) - 4-n-Nonyl phenol (4-n-NP) - 4-n-Octylphenol (4-n-OP) - Octylphenol (4-tert-OP) <p>0.5 mg/kg to 5 mg/kg</p> <p>Alkylphenol Ethoxylates (APEOs) :</p> <ul style="list-style-type: none"> - Nonylphenol ethoxylates (NPEO) - Octylphenol ethoxylates (OPEO) <p>0.1 mg/kg to 2 mg/kg</p>	<p>In - house method : LBLC-18001 based on ISO 22032: 2006</p> <p>In - house method : LBLC-17013 based on ISO 18857-2: 2009</p> <p>In - house method : LBLC-17013 based on ISO 18857-2: 2009</p>

Issue Number 13

Initial Issue Date 22nd June 2007

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	Volatile Organic compound (Halogenated solvent) : - Methylene chloride - Benzene - 1,2-Dichloroethane - Trichloroethylene - tetrachloroethylene - p,m Xylene - o-xylene 0.02 mg/kg to 0.20 mg/kg	In - house method : LBGC-21024 based on United States Environmental Protection Agency, 2014, EPA Method 5021

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	Phthalates : - Dimethyl phthalate (DMP) - Bis-iso-butyl ester Phthalate (DIBP) - Di-butyl Phthalate (DBP) - Benzyl Butyl Phthalate (BBP) - Di-2-Ethyl Hexyl Phthalate (DEHP) - Di-n-octyl Phthalate (DNOP) - Bis-ethyl phthalate (DEP) - Bis-methylglycol ester Phthalate (DMEP) - Bis-iso-pentyl ester Phthalate (DiPP) - n-Pentyl-iso-Pentyl phthalate (PnPP) - Bis-n-pentyl ester Phthalate (DnPP) - Di-n-hexyl Phthalate (DnHP/DnHXP) - Bis-cyclohexyl phthalate (DCHP) - Bis-(2-Propylheptyl) phthalate (DPHP) 0.05 mg/kg to 1.5 mg/kg	In - house method : LBGC-21021 based on ISO 18856: 2004

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	Phthalates : - Bis-propyl phthalate (DPrP) - Bis-n-heptyl phthalate (DHpP/DnHpP) - Bis-phenylphthalate(DIPHENYL/ DPhP) - Bis-benzyl phthalate (DBzP) - Bis-nonyl phthalate (DNP) - Didecyl Phthalate (DDP) - Diundecyl phthalate(DUDP) 0.05 mg/kg to 1.5 mg/kg - Diisononyl Phthalate (DINP) - Diisodecyl Phthalate (DIDP) - Dihexyl Phthalate (DHP) - Bis-iso-octyl phthalate (DIOP) - Diisoheptyl phthalate (DIH-P/DIHpp) 0.20 mg/kg to 6.0 mg/kg	In – house method : LBGC-21021 based on ISO 18856: 2004

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III 5.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test item / Range of Testing	Test Method / Technique Used
5 (cont.)	Sludge Waste	Volatile Organic compound (Cresol) : - o-cresol - m-cresol - p-cresol 0.25 mg/kg to 1.5 mg/kg	In - house method : LBGC-21022 based on United States Environmental Protection Agency, 2017, EPA Method 8260D
6	Chemical fertilizer	- Water soluble potassium (Calculated as K ₂ O) 1.0 g/100 g to 60.4 g/100 g - Total Nitrogen 1.0 g/100 g to 46.5 g/100 g	In - house method : SOP LBCH-99246 based on Notification of Ministry of Agriculture and Cooperatives Re: Prescribing the methods of analysis of chemical fertilizers, B.E. 2559, method 1.12.02 In - house method : SOP LBAG-12276 based on Notification of Ministry of Agriculture and Cooperatives Re: Prescribing the methods of analysis of chemical fertilizers, B.E. 2559, method 1.05.01

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test Item / Range of Testing	Test Method / Technique Used
6 (cont.)	Chemical fertilizer	- Total phosphorus (Calculated P_2O_5) 2.00 g/100 g to 61.68 g/100 g	In - house method : SOP LBAG-00106 based on Notification of Ministry of Agriculture and Cooperatives Re: Prescribing the methods of analysis of chemical fertilizers, B.E. 2559, method 1.09.01
		- Calcium oxide (Calculated from total calcium) 0.02 g/100 g to 51.8 g/100 g	In - house method : SOP LBCH-16010 based on Notification of Ministry of Agriculture and Cooperatives Re: Prescribing the methods of analysis of chemical fertilizers, B.E. 2559, method 1.13.01
		- Magnesium oxide (Calculated from total magnesium) 0.02 g/100 g to 81.04 g/100 g	In - house method : SOP LBCH-16010 based on Notification of Ministry of Agriculture and Cooperatives Re: Prescribing the methods of analysis of chemical fertilizers, B.E. 2559, method 1.14.01

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation

Scope of Laboratory Accreditation

Laboratory Name : SGS (Thailand) Limited, Laboratory Services

Address : 10, 10/1-4 and 12 Soi Rama III S.59,

Chong Nonsi, Yan Nawa, Bangkok 10120

Accreditation Number : Testing - 0017

Laboratory Status : ☒ Permanent ☐ Site ☐ Temporary ☐ Mobile

Item Number	Test Material / Product	Test Item / Range of Testing	Test Method / Technique Used
6 (cont.)	Chemical fertilizer	- Total sulfur 0.02 g/100 g to 32.76 g/100 g	In - house method : SOP LBCH-16010 based on Notification of Ministry of Agriculture and Cooperatives Re: Prescribing the methods of analysis of chemical fertilizers, B.E. 2559, method 1.15.01

Issue Date : 7th November 2022

Signature :

(Mrs

Director of Bureau of Laboratory Accreditation

Initial Issue Date 22nd June 2007

Issue Number 13

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation



แบบ กสม./สมอ.๒
Form NSC/TISI 2

ใบรับรองเลขที่ 23-LB0119
(Certificate No.)

ใบรับรองระบบงาน

(Certificate of Accreditation)

อาศัยอำนาจตามความในพระราชบัญญัติการมาตรฐานแห่งชาติ พ.ศ. ๒๕๕๑
(By Virtue of National Standardization Act B.E. 2551 (2008))

เลขที่การสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Secretary-General, Thai Industrial Standards Institute)

ออกใบรับรองฉบับนี้ให้
(Issues this certificate to)

บริษัท เอสซีเอส (ประเทศไทย) จำกัด ห้องปฏิบัติการทดสอบสิ่งแวดล้อม (สาขาระยอง)
(SGS (Thailand) Limited, Environmental Laboratory (Rayong Branch))

ตั้งอยู่เลขที่
(Address)

๑/๒๐๙ และ ๑/๒๑๑ หมู่ที่ ๑ ตำบลบ้านฉาง อำเภอบ้านฉาง จังหวัดระยอง
1/209 and 1/211 Moo 1, Ban Chang, Ban Chang, Rayong

ได้รับการรับรองความสามารถ
(Certificate of competence)

ตามมาตรฐานเลขที่ มอก. ๑๗๐๒๕ - ๒๕๖๑
(Standard No. TIS 17025-2561 (2018) (ISO/IEC 17025:2017))

ข้อกำหนดทั่วไปว่าด้วยความสามารถของ ห้องปฏิบัติการทดสอบและห้องปฏิบัติการสอบเทียบ
General requirements for the competence of testing and calibration laboratories

หมายเลขการรับรองที่ ทดสอบ ๐๔๓๐
(Accreditation No.: Testing 0470)

โดยมีรายละเอียดสาขาและขอบข่ายที่ได้ใบรับรอง แสดงไว้ใน QR CODE และ www.tisi.go.th
(Details of the scheme and scope of the certificate are shown in QR CODE and www.tisi.go.th)

ออกให้ ณ วันที่ ๒๐ กุมภาพันธ์ พ.ศ. ๒๕๖๖
(Issue date : 20 February B.E. 2566 (2023))



Signed by สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม (สมอ.)
Thai Industrial Standards Institute (TISI)
Date: 2023-02-20T16:10:46.366+07:00

08351606C

กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Ministry of Industry, Thailand, Thai Industrial Standards Institute)



รองเลขาธิการสำนักงานมาตรฐานแห่งชาติอุตสาหกรรม
ปฏิบัติราชการแทน

เลขที่การสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0119

(Certification No. 23-LB0119)

ชื่อห้องปฏิบัติการ
(Laboratory Name)

หมายเลขการรับรองที่

(Accreditation No.)

ฉบับที่ 03

(Issue No. 03)

สถานภาพห้องปฏิบัติการ

(Laboratory status)

☒ ถาวร (Permanent)

☐ ชั่วคราว (Temporary)

สถานที่ (Site)

ออกให้ตั้งแต่วันที่ 25 ธันวาคม พ.ศ. 2566

(Valid from (25 December B.E. 2566 (2023)))

ถึงวันที่ 10 พฤศจิกายน พ.ศ. 2570

(Until (10 November B.E. 2570 (2027)))

☐ เคลื่อนที่ (Mobile)

☐ หลายสถานที่ (Multisite)

วิธีการทดสอบ (Test Method)

- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 3120 B and part 3030 K

0

กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Ministry of Industry, Thai Industrial Standards Institute)

หน้าที่ 1/4

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0119

(Certification No. 23-LB0119)

ฉบับที่ 03

(Issue No. 03)

ออกให้ตั้งแต่วันที่ 25 ธันวาคม พ.ศ. 2566

(Valid from) (25 December B.E. 2566 (2023))

สถานภาพห้องปฏิบัติการ

☒ ถาวร

☐ ชั่วคราว

(Permanent) (Site)

(Temporary)

(Mobile)

(Multisite)

ถึงวันที่ 10 พฤศจิกายน พ.ศ. 2570

(Until) (10 November B.E. 2570 (2027))

☐ เคลื่อนที่

☐ หลายสถานที่

(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
สาขาสิ่งแวดล้อม (Environmental field) 1. น้ำและน้ำเสีย (ต่อ) (Water and wastewater) ((Cont.))	- Biochemical oxygen demand (BOD) 2 mg/L to 5 000 mg/L - Chemical oxygen demand (COD) 40 mg/L to 10 000 mg/L - Chloride (Cl) 1 mg/L to 10 000 mg/L - Chromium hexavalent (Cr(VI)) 0.01 mg/L to 2.00 mg/L - Oil and grease 2 mg/L to 100 mg/L - pH 2.0 to 10.0 - Phenol 0.01 mg/L to 1.00 mg/L	- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 5210 B and part 4500-O G - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 5220 C - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 4500-Cl D - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3500-Cr B - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 5520 B - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 4500-H ⁺ B - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 5530 D

กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Ministry of Industry, Thai Industrial Standards Institute)

หน้าที่ 2/4

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0119

(Certification No. 23-LB0119)

ฉบับที่ 03

(Issue No. 03)

ออกให้ตั้งแต่วันที่ 25 ธันวาคม พ.ศ. 2566

(Valid from) (25 December B.E. 2566 (2023))

สถานภาพห้องปฏิบัติการ

☒ ถาวร

☐ ชั่วคราว

(Permanent) (Site)

(Temporary)

(Mobile)

(Multisite)

ถึงวันที่ 10 พฤศจิกายน พ.ศ. 2570

(Until) (10 November B.E. 2570 (2027))

☐ เคลื่อนที่

☐ หลายสถานที่

(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
สาขาสิ่งแวดล้อม (Environmental field) 1. น้ำและน้ำเสีย (ต่อ) (Water and wastewater) ((Cont.))	- Sulfate (SO ₄ ²⁻) 1 mg/L to 40 mg/L - Total hardness 1 mg/L to 1 000 mg/L (expressed as CaCO ₃) - Total solids (TS) 2.5 mg/L to 10 000 mg/L - Total dissolved solids (TDS) 2.5 mg/L to 20 000 mg/L - Total suspended solids (TSS) 2.5 mg/L to 10 000 mg/L	- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 4500-SO ₄ ²⁻ E Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 2340 C - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 2540 B - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 2540 C - ENWA-10243 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 2540 C (dried at 103 - 105 °C) - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 2540 D

กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Ministry of Industry, Thai Industrial Standards Institute)

หน้าที่ 3/4

ABS Quality Evaluations

Certificate Of Conformance

This is to certify that the Quality Management System of:

SGS (Thailand) Ltd.
100 Nanglinchee Road
Chongnonsee, Yannawa
Bangkok 10120
Thailand

has been assessed by ABS Quality Evaluations, Inc. and found to be in conformance with the requirements set forth by:
ISO 9001:2015

The Quality Management System is applicable to:

PROVISION OF PHYSICAL INSPECTION, FUMIGATION, PEST CONTROL AND LABORATORY TESTING AND CALIBRATION

This certificate may be found on the ABS QE Website (www.abs-qe.com). For certificates issued in the People's Republic of China information may also be verified on the CNCA website (www.cnca.gov.cn).

Certificate No: 52229
Certification Date: 30 July 2015
Effective Date: 14 July 2023
Expiration Date: 24 July 2026
Revision Date: 20 July 2023



Validity of this certificate is based on the successful completion of the periodic surveillance audits of the management system defined by the above scope and is contingent upon prompt written notification to ABS Quality Evaluations, Inc. of significant changes to the management system or components thereof.

ABS Quality Evaluations, Inc. 1701 City Plaza Drive, Spring, TX 77389, U.S.A.
Validity of this certificate may be confirmed at www.abs-qe.com/cert_validation.

Copyright 2011-2023 ABS Quality Evaluations, Inc. All rights reserved.

รายละเอียดสาขาและขอเข้าใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0119

(Certification No. 23-LB0119)

ออกให้ตั้งแต่วันที่ 25 ธันวาคม พ.ศ. 2566

(Valid from) (25 December B.E. 2566 (2023))

ถาวร ☐ นอกระบบ ☐ ชั่วคราว

(Permanent) (Site) (Temporary)

ถึงวันที่ 10 พฤศจิกายน พ.ศ. 2570

(Until) (10 November B.E. 2570 (2027))

เคลื่อนที่ ☐ หลายสถานที่ ☐

(Mobile) (Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
สิ่งแวดล้อม (Environmental field)	- Hydrogen chloride (HCl) 1.54 µg/sample to 257.00 µg/sample	- US EPA, Code of Federal Regulations, 40 CFR 60 appendix A Method 26, 30 May 2023 (Exclude sampling)
อากาศที่ระบายออก (Emission air)	- Hydrogen chloride (HCl) 15.42 µg/sample to 2 570.00 µg/sample	- US EPA, Code of Federal Regulations, 40 CFR 60 appendix A Method 26A, 7 October 2020 (Exclude sampling)
	- Hydrogen fluoride (HF) 1.05 µg/sample to 263.25 µg/sample	- US EPA, Code of Federal Regulations, 40 CFR 60 appendix A Method 26, 30 May 2023 (Exclude sampling)
	- Hydrogen fluoride (HF) 10.53 µg/sample to 2 632.50 µg/sample	- US EPA, Code of Federal Regulations, 40 CFR 60 appendix A Method 26A, 7 October 2020 (Exclude sampling)
3. บรรยากาศของสถานที่ทำงาน (Workplace air)	- Benzene 1 µg/tube to 20 µg/tube	- NIOSH Manual of Analytical Method (NMAM), 4 th edition, method 1501, Issue 3, 15 March 2003 (Exclude sampling)
	- Ethylbenzene 1 µg/tube to 20 µg/tube	- NIOSH Manual of Analytical Method (NMAM), 4 th edition, method 1501, Issue 3, 15 March 2003 (Exclude sampling)

กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Ministry of Industry, Thai Industrial Standards Institute)

หน้าที่ 4/4

ABS Quality Evaluations

ISO 9001:2015 Certificate Of Conformance ANNEX

Certificate No: 52229

SGS (Thailand) Ltd. At Below Facilities:

Facility:	100 Nanglinchee Road, Chongnorse, Yamawa, Bangkok 10120 Thailand	Facility:	Rayong Branch 1/209 and 1/211 Moo 1 T. Ban Chang, A. Ban Chang, Rayong 21130 Thailand
Activity:	Management of QMS, Inspection Service	Activity:	Inspection & Testing.
Facility:	Siracha Office 144, 146 Siracha Nakorn 1 Road, T. Siracha, A. Siracha, Chonburi 20110 Thailand	Facility:	Nakornratchasima Office 1340/46 Suranari Road., T. Nakh Muang, A. Muang Nakornratchasima, 30000 Thailand
Activity:	Inspection, Fumigation & Pest Control.	Activity:	Inspection & Fumigation.
Facility:	Hat Yai Branch 57, 59 and 61 Soi 10 Phetkasem Road, T. Hat Yai, A. Hat Yai, Songkhla 90110 Thailand	Facility:	Rama III Branch, Laboratory Services 10,101-4, 12 Rama III Road, Soi 59, Chongnorse, Yamawa, Bangkok 10120 Thailand
Activity:	Inspection, Fumigation, Pest Control & Testing.	Activity:	Testing



ABS Quality Evaluations

ISO 9001:2015 Certificate Of Conformance ANNEX

Certificate No: 52229

SGS (Thailand) Ltd. At Below Facilities:

Facility:	SGS (Cambodia) Limited No.1076 A-D Street 371 Plum Tea II Sangkat Steung Meanchey, Khan Meanchey, Phnom Penh, Cambodia	Facility:	Rama III Branch - Soft Line & Hard goods Laboratory Services 1025/1 Soi Rama III 61, Rama III Road Chongnorse, Yamawa Bangkok 10120 Thailand
Activity:	Inspection.	Activity:	Testing





แบบ กสม./สมอ.๒
Form NSC/TISI 2

ใบรับรองเลขที่ 23-LB0119
(Certificate No.)

ใบรับรองระบบงาน

(Certificate of Accreditation)

อาศัยอำนาจตามความในพระราชบัญญัติการมาตรฐานแห่งชาติ พ.ศ. ๒๕๕๑
(By Virtue of National Standardization Act B.E. 2551 (2008))

เลขที่การสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Secretary-General, Thai Industrial Standards Institute)

ออกใบรับรองฉบับนี้ให้
(Issues this certificate to)

บริษัท เอสจีเอส (ประเทศไทย) จำกัด ห้องปฏิบัติการทดสอบสิ่งแวดล้อม (สาขาระยอง)
(SGS (Thailand) Limited, Environmental Laboratory (Rayong Branch))

ตั้งอยู่เลขที่
(Address)

๑/๒๐๙ และ ๑/๒๑๑ หมู่ที่ ๑ ตำบลบ้านฉาง อำเภอบ้านฉาง จังหวัดระยอง
1/209 and 1/211 Moo 1, Ban Chang, Ban Chang, Rayong

ได้รับการรับรองความสามารถ
(Certificate of competence)

ตามมาตรฐานเลขที่ มอก. ๑๗๐๒๕ - ๒๕๖๑
(Standard No. TIS 17025:2561 (2018) (ISO/IEC 17025:2017))

ข้อกำหนดทั่วไปว่าด้วยความสามารถของ ห้องปฏิบัติการทดสอบและห้องปฏิบัติการสอบเทียบ
General requirements for the competence of testing and calibration laboratories

หมายเลขการรับรองที่ ทดสอบ ๐๔๓๐
(Accreditation No. Testing 0470)

โดยมีรายละเอียดสาขาและขอบข่ายที่ได้ใบรับรอง แสดงไว้ใน QR CODE และ www.tisi.go.th
(Details of the scheme and scope of the certificate are shown in QR CODE and www.tisi.go.th)

ออกให้ ณ วันที่ ๒๐ กุมภาพันธ์ พ.ศ. ๒๕๖๖
(Issue date : 20 February B.E. 2566 (2023))



(นายเอกนิติ รมยานนท์)

รองเลขาธิการสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
ปฏิบัติราชการแทน

เลขที่การสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม



กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Ministry of Industry, Thai Industrial Standards Institute)

หน้าที่ 1/4



รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ (Scope of Accreditation for Testing) ใบรับรองเลขที่ 23-LB0119 (Certification No. 23-LB0119)

ชื่อห้องปฏิบัติการ
(Laboratory Name)
หมายเลขการรับรองที่
(Accreditation No.)
ฉบับที่ 03
(Issue No. 03)
สถานภาพห้องปฏิบัติการ
(Laboratory status)

บริษัท เอสจีเอส (ประเทศไทย) จำกัด ห้องปฏิบัติการทดสอบสิ่งแวดล้อม (สาขาระยอง)
(SGS (Thailand) Limited, Environmental Laboratory (Rayong Branch))
ทดสอบ 0470
(Testing 0470)
ออกให้ตั้งแต่วันที่ 25 ธันวาคม พ.ศ. 2566
(Valid from (25 December B.E. 2566 (2023)))
☒ ถาวร (Permanent)
☐ ชั่วคราว (Temporary)

ถึงวันที่ 10 พฤศจิกายน พ.ศ. 2570
(Until (10 November B.E. 2570))
☐ เคลื่อนที่ (Mobile)
☐ หลายสถานที่ (Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
สาขาสิ่งแวดล้อม (Environmental field) 1. น้ำและน้ำเสีย (Water and wastewater)	- Arsenic (As) 0.01 mg/L to 0.50 mg/L - Barium (Ba) 0.01 mg/L to 10 mg/L - Cadmium (Cd) 0.002 mg/L to 10 mg/L - Chromium (Cr) 0.01 mg/L to 10 mg/L - Copper (Cu) 0.01 mg/L to 10 mg/L - Iron (Fe) 0.02 mg/L to 10 mg/L - Lead (Pb) 0.01 mg/L to 10 mg/L - Manganese (Mn) 0.01 mg/L to 5 mg/L - Nickel (Ni) 0.004 mg/L to 10 mg/L - Selenium (Se) 0.01 mg/L to 0.50 mg/L - Silver (Ag) 0.01 mg/L to 10 mg/L - Zinc (Zn) 0.02 mg/L to 10 mg/L	- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3120 B and part 3030 K

กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Ministry of Industry, Thai Industrial Standards Institute)

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0119

(Certification No. 23-LB0119)

ฉบับที่ 03

(Issue No. 03)

ออกให้ตั้งแต่วันที่ 25 ธันวาคม พ.ศ. 2566

(Valid from) (25 December B.E. 2566 (2023))

สถานภาพห้องปฏิบัติการ

(Laboratory status)

☒ถาวร

(Permanent)

☐นอกสถานที่

(Site)

☐ชั่วคราว

(Temporary)

☐เคลื่อนที่

(Mobile)

☐หลายสถานที่

(Multisite)

ถึงวันที่ 10 พฤศจิกายน พ.ศ. 2570

(Until) (10 November B.E. 2570 (2027))

☐เคลื่อนที่

(Mobile)

☐หลายสถานที่

(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
สาขาสิ่งแวดล้อม (Environmental field) 1. น้ำและน้ำเสีย (ต่อ) (Water and wastewater) ((Cont.))	<ul style="list-style-type: none"> - Biochemical oxygen demand (BOD) 2 mg/L to 5 000 mg/L - Chemical oxygen demand (COD) 40 mg/L to 10 000 mg/L - Chloride (Cl) 1 mg/L to 10 000 mg/L - Chromium hexavalent (Cr(VI)) 0.01 mg/L to 2.00 mg/L - Oil and grease 2 mg/L to 100 mg/L - pH 2.0 to 10.0 - Phenol 0.01 mg/L to 1.00 mg/L 	<ul style="list-style-type: none"> - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, - part 5210 B and part 4500-O G - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 5220 C - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 4500-Cl D - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 3500-Cr B - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 5520 B - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 4500-H⁺ B - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 5530 D

กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Ministry of Industry, Thai Industrial Standards Institute)

หน้าที่ 2/4

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0119

(Certification No. 23-LB0119)

ฉบับที่ 03

(Issue No. 03)

ออกให้ตั้งแต่วันที่ 25 ธันวาคม พ.ศ. 2566

(Valid from) (25 December B.E. 2566 (2023))

สถานภาพห้องปฏิบัติการ

(Laboratory status)

☒ถาวร

(Permanent)

☐นอกสถานที่

(Site)

☐ชั่วคราว

(Temporary)

☐เคลื่อนที่

(Mobile)

☐หลายสถานที่

(Multisite)

ถึงวันที่ 10 พฤศจิกายน พ.ศ. 2570

(Until) (10 November B.E. 2570 (2027))

☐เคลื่อนที่

(Mobile)

☐หลายสถานที่

(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
สาขาสิ่งแวดล้อม (Environmental field) 1. น้ำและน้ำเสีย (ต่อ) (Water and wastewater) ((Cont.))	<ul style="list-style-type: none"> - Sulfate (SO₄²⁻) 1 mg/L to 40 mg/L - Total hardness 1 mg/L to 1 000 mg/L (expressed as CaCO₃) - Total solids (TS) 2.5 mg/L to 10 000 mg/L - Total dissolved solids (TDS) 2.5 mg/L to 20 000 mg/L - Total suspended solids (TSS) 2.5 mg/L to 10 000 mg/L 	<ul style="list-style-type: none"> - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 4500-SO₄²⁻ E - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 2340 C - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 2540 B - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 2540 C - ENWA-10243 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 2540 C (dried at 103 - 105 °C) - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 2540 D

กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Ministry of Industry, Thai Industrial Standards Institute)

หน้าที่ 3/4

ABS Quality Evaluations

Certificate Of Conformance

This is to certify that the Quality Management System of:

SGS (Thailand) Ltd.
100 Nanglinchee Road
Chongnonsee, Yannawa
Bangkok 10120
Thailand

has been assessed by ABS Quality Evaluations, Inc. and found to be in conformance with the requirements set forth by:
ISO 9001:2015

The Quality Management System is applicable to:

PROVISION OF PHYSICAL INSPECTION, FUMIGATION, PEST CONTROL AND LABORATORY TESTING AND CALIBRATION

This certificate may be found on the ABS QE Website (www.abs-qe.com). For certificates issued in the People's Republic of China information may also be verified on the CNCA website (www.cnca.gov.cn).

Certificate No: 52229
Certification Date: 30 July 2015
Effective Date: 14 July 2023
Expiration Date: 24 July 2026
Revision Date: 20 July 2023



Validity of this certificate is based on the successful completion of the periodic surveillance audits of the management system defined by the above scope and is contingent upon prompt written notification to ABS Quality Evaluations, Inc. of significant changes to the management system or components thereof.

ABS Quality Evaluations, Inc. 1701 City Plaza Drive, Spring, TX 77389, U.S.A.
Validity of this certificate may be confirmed at www.abs-qe.com/cert_validation.

Copyright 2011-2023 ABS Quality Evaluations, Inc. All rights reserved.

รายละเอียดสาขาและขอบข่ายในการรับรองปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0119

(Certification No. 23-LB0119)

ออกให้ตั้งแต่วันที่ 25 ธันวาคม พ.ศ. 2566

(Valid from) (25 December B.E. 2566 (2023))

ถาวร ☐ นอกระบบ ☐ ชั่วคราว

(Permanent) (Site) (Temporary)

ถึงวันที่ 10 พฤศจิกายน พ.ศ. 2570

(Until) (10 November B.E. 2570 (2027))

เคลื่อนที่ ☐ หลายสถานที่ ☐

(Mobile) (Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
สิ่งแวดล้อม (Environmental field)	- Hydrogen chloride (HCl) 1.54 µg/sample to 257.00 µg/sample	- US EPA, Code of Federal Regulations, 40 CFR 60 appendix A Method 26, 30 May 2023 (Exclude sampling)
2. อากาศที่ระบายออก (Emission air)	- Hydrogen chloride (HCl) 15.42 µg/sample to 2 570.00 µg/sample	- US EPA, Code of Federal Regulations, 40 CFR 60 appendix A Method 26A, 7 October 2020 (Exclude sampling)
	- Hydrogen fluoride (HF) 1.05 µg/sample to 263.25 µg/sample	- US EPA, Code of Federal Regulations, 40 CFR 60 appendix A Method 26, 30 May 2023 (Exclude sampling)
	- Hydrogen fluoride (HF) 10.53 µg/sample to 2 632.50 µg/sample	- US EPA, Code of Federal Regulations, 40 CFR 60 appendix A Method 26A, 7 October 2020 (Exclude sampling)
3. บรรยากาศของสถานที่ทำงาน (Workplace air)	- Benzene 1 µg/tube to 20 µg/tube	- NIOSH Manual of Analytical Method (NMAM), 4 th edition, method 1501, Issue 3, 15 March 2003 (Exclude sampling)
	- Ethylbenzene 1 µg/tube to 20 µg/tube	- NIOSH Manual of Analytical Method (NMAM), 4 th edition, method 1501, Issue 3, 15 March 2003 (Exclude sampling)

กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Ministry of Industry, Thai Industrial Standards Institute)

หน้าที่ 4/4

ABS Quality Evaluations

ISO 9001:2015 Certificate Of Conformance ANNEX

Certificate No: 52229

SGS (Thailand) Ltd. At Below Facilities:

Facility:	100 Nanglinchee Road, Chongnonsee, Yamawa, Bangkok 10120 Thailand	Facility:	Rayong Branch 1/209 and 1/211 Moo 1 T. Ban Chang, A. Ban Chang, Rayong 21130 Thailand
Activity:	Management of QMS, Inspection Service	Activity:	Inspection & Testing.
Facility:	Siracha Office 144, 146 Siracha Nakorn 1 Road, T. Siracha, A. Siracha, Chonburi 20110 Thailand	Facility:	Nakornratthasima Office 1340/46 Suranara Road., T. Nakh Muang, A. Muang Nakornratthasima, 30000 Thailand
Activity:	Inspection, Fumigation & Pest Control.	Activity:	Inspection & Fumigation.
Facility:	Hat Yai Branch 57, 59 and 61 Soi 10 Phetkasem Road, T. Hat Yai, A. Hat Yai, Songkhla 90110 Thailand	Facility:	Rama III Branch, Laboratory Services 10,101-4, 12 Rama III Road, Soi 59, Chongnonsee, Yamawa, Bangkok 10120 Thailand
Activity:	Inspection, Fumigation, Pest Control & Testing.	Activity:	Testing



ABS Quality Evaluations

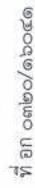
ISO 9001:2015 Certificate Of Conformance ANNEX

Certificate No: 52229

SGS (Thailand) Ltd. At Below Facilities:

Facility:	SGS (Cambodia) Limited No.1076 A-D Street 371 Plum Trea II Sangkat Steung Meanchey, Khan Meanchey, Phnom Penh, Cambodia	Facility:	Rama III Branch - Soft Line & Hard goods Laboratory Services 1025/1 Soi Rama III 61, Rama III Road Chongnonsee, Yamawa Bangkok 10120 Thailand
Activity:	Inspection.	Activity:	Testing





๑ พฤษภาคม ๒๕๖๕

เรื่อง ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
 เย็น กรรมการผู้จัดการ บริษัท เอสซีเอส (ประเทศไทย) จำกัด (สาขาของ)
 อ้างถึง คำขอต่ออายุของห้องปฏิบัติการวิเคราะห์เอกชน ลงวันที่ ๑๒ กันยายน ๒๕๖๕
 สิ่งส่งมาด้วย เอกสารแนบท้ายหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
 บริษัท เอสซีเอส (ประเทศไทย) จำกัด (สาขาของ) จำนวน ๒๒ แผ่น

ตามหนังสืออ้างอิง บริษัท เอสซีแอล จำกัด (มหาชน) ขอขอบคุณสื่อที่
 รับทမ်းเป็นเยี่ยงกับกิจกรรมการรณรงค์ ๑๖๗ ล้านที่ดื่มเหล้าที่ ๑/๒๐๑๙ และ ๑/๒๐๒๑ นี้
 ด้านบนงาน อำนาจอำนาจ จังหวัดระยอง ต่อกรมโรงงานอุตสาหกรรม

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้บริษัท เอสจีเอส (ประเทศไทย) จำกัด (สาขาकरणอง)
ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน โดยยังคงประกอบดังนี้

ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์

ทะเบียนเลขที่	จ-๑๔๗๙.ภ-๐๐๐๑
ทะเบียนเลขที่	จ-๑๔๗๙.ภ-๐๐๐๒
ทะเบียนเลขที่	จ-๑๔๗๙.ภ-๐๐๐๓
ทะเบียนเลขที่	จ-๑๔๗๙.ภ-๐๐๐๔
ทะเบียนเลขที่	จ-๑๔๗๙.ภ-๐๐๐๕
ทะเบียนเลขที่	จ-๑๔๗๙.จ-๐๐๐๑
ทะเบียนเลขที่	จ-๑๔๗๙.จ-๐๐๐๒
ทะเบียนเลขที่	จ-๑๔๗๙.จ-๐๐๐๓
ทะเบียนเลขที่	จ-๑๔๗๙.จ-๐๐๐๔
ทะเบียนเลขที่	จ-๑๔๗๙.จ-๐๐๐๕
ทะเบียนเลขที่	จ-๑๔๗๙.จ-๐๐๐๖
ทะเบียนเลขที่	จ-๑๔๗๙.จ-๐๐๐๗
ทะเบียนเลขที่	จ-๑๔๗๙.จ-๐๐๐๘
ทะเบียนเลขที่	จ-๑๔๗๙.จ-๐๐๐๙
ทะเบียนเลขที่	จ-๑๔๗๙.จ-๐๐๑๐
ทะเบียนเลขที่	จ-๑๔๗๙.จ-๐๐๑๑
ทะเบียนเลขที่	จ-๑๔๗๙.จ-๐๐๑๒

๑๓) นายเฉลียววุฒิ...

ป. วิเคราะห์

ทะเบียนเลขที่	จ-๑๕๗-จ-๐๐๐๑
ทะเบียนเลขที่	จ-๑๕๗-จ-๐๐๐๒
ทะเบียนเลขที่	จ-๑๕๗-จ-๐๐๐๓
ทะเบียนเลขที่	จ-๑๕๗-จ-๐๐๐๔
ทะเบียนเลขที่	จ-๑๕๗-จ-๐๐๐๕
ทะเบียนเลขที่	จ-๑๕๗-จ-๐๐๐๖
ทะเบียนเลขที่	จ-๑๕๗-จ-๐๐๐๗
ทะเบียนเลขที่	จ-๑๕๗-จ-๐๐๐๘
ทะเบียนเลขที่	จ-๑๕๗-จ-๐๐๐๙
ทะเบียนเลขที่	จ-๑๕๗-จ-๐๐๑๐
ทะเบียนเลขที่	จ-๑๕๗-จ-๐๐๑๑
ทะเบียนเลขที่	จ-๑๕๗-จ-๐๐๑๒

๑๓) นายเฉลียว...

[illegible]

ค. ขอบข่ายสารมลพิษที่ได้รับชดเชยนั้นให้ครอบคลุมทั้งน้ำเสีย จำนวน ๔๔ รายการ น้ำใต้ดิน จำนวน ๑๒๓ รายการ อากาศเสีย (ปล่องระเหย) จำนวน ๒๘ รายการ สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว จำนวน ๓๗ รายการ แลस्टิน จำนวน ๑๒๓ รายการ รวมทั้งสิ้นจำนวน ๓๔๔ รายการ ตามสิ่งที่ส่งมาด้วย

หนังสือฉบับนี้จะหมดอายุในวันที่ ๑๒ ตุลาคม ๒๕๖๘ หากประสงค์จะต้องอายุหนึ่งสัปดาห์เพื่อยื่นขอใบปฏิบัติการวิเคราะห์เอกซเรย์ ให้ยื่นคำขอต่อยุ่พร้อมเอกสารประกอบคำขอต่อกรมโรงงานอุตสาหกรรมภายใน ๓๐ วัน ก่อนวันสิ้นสุดอายุของหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกซเรย์ ซึ่งคำขอต่ออายุดังกล่าวจะได้รับได้ทั้งกรณีโรงงานอุตสาหกรรม ทั้งนี้ สามารถยื่นคำขอผ่านระบบอิเล็กทรอนิกส์ได้ทั้งนี้

รูปใช้ต่อกับโรงงานอุตสาหกรรม ตาม QR Code ที่แนบมาดังนี้

จึงเรียนมาเพื่อทราบ

ผู้อำนวยการศูนย์วิจัยและเตือนภัยแรงงานภาคตะวันออก
ปฏิบัติราชการแทนอธิบดีกรมโรงงานอุตสาหกรรม



ศูนย์วิจัยและพัฒนาทรัพยากรทางทะเลและชายฝั่ง
อ่าวไทยตอนบน กรมทรัพยากรทางทะเลและชายฝั่ง
โทร. ๐ ๓๓๓๓ ๖๐๕๕ ต่อ ๕๐๐๑-๒

ไปรษณีย์อิเล็กทรอนิกส์ eiw@diw.mail.go.th



Green Industry
SUSTAINABLE BUSINESS

“อุตสาหกรรมก้าวไกล ประเทศไทยก้าวหน้า ร่วมกันพัฒนา อุตสาหกรรมสีเขียว”

ยื่นคำขอผ่านระบบอิเล็กทรอนิกส์



เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
บริษัท เอสจีเอส (ประเทศไทย) จำกัด (สาขาระยอง) เลขทะเบียน ๖-๑๔๗
ที่ อก ๐๓๒๐/๑๖๐๔๑ ลงวันที่ ๑ พฤศจิกายน ๒๕๖๔

ขอขยายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๓๕๔ รายการ
น้ำเสีย จำนวน 44 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldrin	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
2	Arsenic	Digestion, Inductively Coupled Plasma Method ⁽⁴⁾
3	Barium	Digestion, Inductively Coupled Plasma Method ⁽⁴⁾
4	α -BHC	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
5	β -BHC	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
6	δ -BHC	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
7	γ -BHC	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
8	Biochemical Oxygen Demand	5-Day BOD Test, Membrane Electrode Method ⁽⁴⁾
9	Cadmium	Digestion, Inductively Coupled Plasma Method ⁽⁴⁾
10	Chemical Oxygen Demand	Closed Reflux, Titrimetric Method ⁽⁴⁾
11	Chlordane	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
12	Color	ADMI Weighted - Ordinate Spectrophotometric Method ⁽⁴⁾
13	Copper	Digestion, Inductively Coupled Plasma Method ⁽⁴⁾
14	Cyanide	Distillation, Colorimetric Method ⁽⁴⁾
15	p,p'-DDD	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
16	p,p'-DDE	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
17	o,p'-DDT	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
18	p,p'-DDT	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
19	Dieldrin	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾



20 Endosulfan I...

-๒-

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
20	Endosulfan I	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
21	Endosulfan II	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
22	Endosulfan Sulfate	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
23	Endrin	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
24	Endrin Aldehyde	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
25	Formaldehyde	Distillation, Colorimetric Method ⁽³⁾
26	Heptachlor	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
27	Heptachlor Epoxide	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
28	Hexavalent Chromium	Filtration, Colorimetric Method ⁽⁴⁾
29	Lead	Digestion, Inductively Coupled Plasma Method ⁽⁴⁾
30	Manganese	Digestion, Inductively Coupled Plasma Method ⁽⁴⁾
31	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ⁽⁴⁾
32	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic Method ⁽⁴⁾
33	Nickle	Digestion, Inductively Coupled Plasma Method ⁽⁴⁾
34	Oil and Grease	Liquid-Liquid, Partition-Gravimetric Method ⁽⁴⁾
35	pH	Electrometric Method ⁽⁴⁾
36	Phenols	Distillation, Direct Photometric Method ⁽⁴⁾
37	Selenium	Digestion, Inductively Coupled Plasma Method ⁽⁴⁾
38	Temperature	Field Method ⁽⁴⁾
39	Total Chromium	Digestion, Inductively Coupled Plasma Method ⁽⁴⁾
40	Total Dissolved Solids	Dried at 180 °C ⁽⁴⁾
41	Total Kjeldahl Nitrogen	Digestion, Distillation, Titrimetric Method ⁽⁴⁾
42	Total Suspended Solids	Dried at 103-105 °C ⁽⁴⁾
43	Trivalent Chromium	Digestion, Inductively Coupled Plasma Method; Filtration, Colorimetric Method, Calculation ⁽⁴⁾
44	Zinc	Digestion, Inductively Coupled Plasma Method ⁽⁴⁾



น้ำเต้าน...

น้ำได้ดิน จำนวน 123 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
2	Acetone	Purge and Trap Gas Chromatographic / Mass Spectrometric Method ^(a)
3	Aldrin	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
4	Anthracene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
5	Antimony	Digestion, Inductively Coupled Plasma Method ^(a)
6	Arsenic	Digestion, Inductively Coupled Plasma Method ^(a)
7	Atrazine	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
8	Barium	Digestion, Inductively Coupled Plasma Method ^(a)
9	Benzene	Purge and Trap Gas Chromatographic / Mass Spectrometric Method ^(a)
10	Benzo(a)anthracene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
11	Benzo(b)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
12	Benzo(k)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
13	Benzoic acid	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
14	Benzo(a)pyrene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
15	Benzo(g,h,i)perylene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
16	Beryllium	Digestion, Inductively Coupled Plasma Method ^(a)
17	Bis(2-chloroethyl)ether	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
18	Bis(2-Ethylhexyl)phthalate	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
19	Bromodichloromethane	Purge and Trap Gas Chromatographic / Mass Spectrometric Method ^(a)
20	Bromoform	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)

21 Butyl...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
21	Butyl benzyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
22	Cadmium	Digestion, Inductively Coupled Plasma Method ^(a)
23	Carbazole	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
24	Carbon disulfide	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
25	Carbon tetrachloride	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
26	Chlordane	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
27	p-Chloroaniline	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
28	Chlorobenzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
29	Chlorodibromomethane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
30	Chloroform	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
31	2-Chlorophenol	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
32	Chromium	Digestion, Inductively Coupled Plasma Method ^(a)
33	Chromium Hexavalent	Filtration, Colorimetric Method ^(a)
34	Chromium Trivalent	Digestion, Inductively Coupled Plasma Method ; Filtration, Colorimetric Method; Calculation ^(a)
35	Chrysene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
36	Cyanide	Distillation, Colorimetric Method
37	2,4-D	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
38	DDD	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
39	DDE	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
40	DTT	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)

41 Dibenz...

ลำดับที่	สารเคมี	วิธีวิเคราะห์
41	Dibenz(a,h)anthracene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
42	Di-n-Butyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
43	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
44	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
45	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
46	3,3-Dichlorobenzidine	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
47	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
48	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
49	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
50	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
51	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
52	2,4-Dichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
53	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
54	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
55	1,3-Dichloropropene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
56	Dieldrin	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
57	Diethyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
58	2,4-Dimethylphenol	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)

ลำดับที่	สารเคมี	วิธีวิเคราะห์
59	2,4-Dinitrophenol	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
60	2,4-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
61	2,6-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
62	Di-n-octyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
63	Endosulfan	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
64	Endrin	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
65	Ethylbenzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
66	Fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
67	Fluorene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
68	Heptachlor	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
69	Heptachlor epoxide	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
70	Hexachlorobenzene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
71	Hexachloro-1,3-butadiene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
72	α -HCH	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
73	β -HCH	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
74	γ -HCH	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
75	Hexachlorocyclopentadiene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
76	Hexachloroethane	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)

ลำดับที่	สารเคมี	วิธีวิเคราะห์
77	n-Hexane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method
78	Indeno(1,2,3-cd)pyrene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
79	Isophorone	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
80	Lead	Digestion, Inductively Coupled Plasma Method ^(a)
81	Manganese	Digestion, Inductively Coupled Plasma Method ^(a)
82	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^(a)
83	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
84	Methyl Bromide	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
85	Methylene Chloride	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
86	2-Methylnaphthalene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
87	2-Methylphenol	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
88	Methyl tert-butyl ether	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
89	Naphthalene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
90	Nickel	Digestion, Inductively Coupled Plasma Method ^(a)
91	Nitrobenzene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
92	N-Nitrosodiphenylamine	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
93	N-Nitrosodi-n-propylamine	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
94	Pentachlorophenol	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
95	pH	Electrometric Method ^(a)
96	Phenanthrene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)

ลำดับที่	สารเคมี	วิธีวิเคราะห์
97	Phenol	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
98	Pyrene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
99	Selenium	Digestion, Inductively Coupled Plasma Method ^(a)
100	Silver	Digestion, Inductively Coupled Plasma Method ^(a)
101	Styrene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
102	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
103	Tetrachloroethylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
104	Toluene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
105	Toxaphene	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
106	TPH (C ₅ -C ₆)	Purge and Trap, Gas Chromatographic Mass Spectrometric Method
107	TPH (C ₅ -C ₁₆)	Purge and Trap, Gas Chromatographic Mass Spectrometric Method
108	TPH (C ₅ -C ₃₅)	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
109	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
110	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
111	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
112	Trichloroethylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
113	2,4,5-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
114	2,4,6-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^(a)
115	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(a)
116	Vanadium	Digestion, Inductively Coupled Plasma Method ^(a)

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
117	Vinyl acetate	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ⁽⁴⁾
118	Vinyl chloride	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ⁽⁴⁾
119	m-Xylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ⁽⁴⁾
120	o-Xylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ⁽⁴⁾
121	p-Xylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ⁽⁴⁾
122	Xylene (Total)	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ⁽⁴⁾
123	Zinc	Digestion, Inductively Coupled Plasma Method ⁽⁴⁾

อากาศเสีย (ปล่องระบาย) จำนวน 28 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Antimony	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ⁽⁵⁾
2	Arsenic	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ⁽⁵⁾
3	Beryllium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ⁽⁵⁾
4	Cadmium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ⁽⁵⁾
5	Carbon Monoxide	Instrumental Analyzer Method ⁽⁵⁾
6	Chlorine	Isokinetic Sampling, Ion Chromatographic Method ⁽⁷⁾
7	Chromium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ⁽⁵⁾
8	Cobalt	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ⁽⁵⁾
9	Copper	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ⁽⁵⁾
10	Cresol	Absorption Sampling, Gas Chromatographic Method ⁽⁶⁾
11	Dioxin/Furans	Isokinetic Sampling, Analysis by ISO/IEC 17025 Accredited Laboratory ⁽⁵⁾

12 Hydrogen....

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
12	Hydrogen Chloride	Isokinetic Sampling, Ion Chromatographic Method ⁽⁷⁾
13	Hydrogen Fluoride	Isokinetic Sampling, Ion Chromatographic Method ⁽⁷⁾
14	Hydrogen Sulfide	Absorption Sampling, Iodometric Method ⁽⁵⁾
15	Lead	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ⁽⁵⁾
16	Manganese	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ⁽⁵⁾
17	Mercury	Isokinetic Sampling, Digestion, Cold-Vapour Atomic Absorption Spectrometric Method ⁽⁵⁾
18	Nickel	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ⁽⁵⁾
19	Opacity	Ringelmann's Method ⁽¹⁾
20	Oxides of Nitrogen	1) Absorption Sampling, Colorimetric Method ⁽⁶⁾ 2) Instrumental Analyzer Method ⁽⁷⁾
21	Tellurium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ⁽⁵⁾
22	Tin	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ⁽⁵⁾
23	Total Suspended Particulate	Isokinetic Sampling, Gravimetric Method ⁽⁷⁾
24	Selenium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ⁽⁵⁾
25	Sulfur Dioxide	1) Absorption Sampling, Barium-Thorin Titrimetric Method ⁽⁵⁾ 2) Instrumental Analyzer Method ⁽⁵⁾
26	Sulfuric Acid	Isokinetic Sampling, Barium-Thorin Titrimetric Method ⁽⁶⁾
27	Vanadium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ⁽⁵⁾
28	Xylene	Adsorption Sampling, Gas Chromatographic Method ⁽⁶⁾

สิ่งปฏิกูลหรือวัสดุ...

สิ่งปฏิกูลหรือวัสดุที่ไม่ได้ใช้แล้ว จำนวน 37 รายการ

ลำดับที่	สารเคมี	วิธีวิเคราะห์
1	Aldrin	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
2	Antimony	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,15) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)
3	Arsenic	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,15) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)
4	Barium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,15) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)
5	Beryllium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,15) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)
6	Cadmium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,15) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)
7	Chlordane	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
8	Chromium (III)	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method; Waste Extraction Colorimetric Method; Calculation ^(10,17) 2) Digestion, Inductively Coupled Plasma Method; Alkaline Digestion, Colorimetric Method; Calculation Method ^(2,10,17)
9	Chromium (VI)	1) Waste Extraction, Digestion, Colorimetric Method ^(10,17) 2) Alkaline Digestion, Colorimetric Method ^(10,17)
10	Cobalt	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,15) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)
11	Copper	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,15) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)

วิธีวิเคราะห์

ลำดับที่	สารเคมี	วิธีวิเคราะห์
12	Dieldrin	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
13	DDD	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
14	DDE	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
15	DDT	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
16	2,4-D (2,4-Dichlorophenoxyacetic acid)	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
17	Endrin	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
18	Heptachlor	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
19	Kepone	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
20	Lead	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,11) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)
21	Lindane	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
22	Mercury	1) Waste Extraction, Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^(2,18) 2) Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ⁽¹⁸⁾
23	Methoxychlor	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
24	Mirex	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
25	Molybdenum	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,15) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)
26	Polychlorinated Biphenyls (PCBs)	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
27	Pentachlorophenol	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
28	Nickel	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,15) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)
29	Selenium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,15) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)

ลำดับที่	สารเคมี	วิธีวิเคราะห์
30	Silver	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,15) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)
31	Silvex; 2,4,5-Trichlorophenoxypropionic acid	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
32	Thallium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,15) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)
33	Total Chromium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method; Waste Extraction Colorimetric Method; Calculation ^(10,17) 2) Digestion, Inductively Coupled Plasma – Atomic Emission Spectrometry Method ^(8,15)
34	Toxaphene	Ultrasonic Extraction, Gas Chromatographic Method ^(12,20,21)
35	Trichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^(14,22)
36	Vanadium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,15) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)
37	Zinc	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^(2,15) 2) Digestion, Inductively Coupled Plasma Method ^(8,15)

ดิน จำนวน 123 รายการ

ลำดับที่	สารเคมี	วิธีวิเคราะห์
1	Acenaphthene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
2	Acetone	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
3	Aldrin	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
4	Anthracene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
5	Antimony	Digestion, Inductively Coupled Plasma Method ^(9,15)

6 Arsenic...

ลำดับที่	สารเคมี	วิธีวิเคราะห์
6	Arsenic	Digestion, Inductively Coupled Plasma Method ^(9,15)
7	Atrazine	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
8	Barium	Digestion, Inductively Coupled Plasma Method ^(9,15)
9	Benzo(a)anthracene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
10	Benzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
11	Benzo(b)fluoranthene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
12	Benzo(k)fluoranthene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
13	Benzoic acid	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
14	Benzo(a)pyrene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
15	Benzo(g,h,i)perylene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
16	Beryllium	Digestion, Inductively Coupled Plasma Method ^(9,15)
17	Bis(2-Chloroethyl)ether	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
18	Bis(2-Ethylhexyl)phthalate	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
19	Bromodichloromethane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
20	Bromoform	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
21	Butyl benzyl phthalate	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
22	Cadmium	Digestion, Inductively Coupled Plasma Method ^(9,15)
23	Carbazole	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
24	Carbon disulfide	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
25	Carbon tetrachloride	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)

26 Chlordane...

ลำดับที่	สารเคมี	วิธีวิเคราะห์
26	Chlordane	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
27	p-Chloroaniline	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
28	Chlorobenzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
29	Chlorodibromomethane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
30	Chloroform	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
31	2-Chlorophenol	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
32	Chromium	Digestion, Inductively Coupled Plasma Method ^(9,15)
33	Chromium (III)	Digestion, Inductively Coupled Plasma Method ; Filtration, Colorimetric Method; Calculation ^(9,10,15)
34	Chromium (VI)	Alkaline Digestion, Colorimetric Method ⁽¹⁰⁾
35	Chrysene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
36	Cyanide	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
37	2,4-D	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
38	DDD	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
39	DDE	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
40	DDT	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
41	Dibenz(a,h)anthracene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
42	Di-n-Butyl phthalate	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
43	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)

ลำดับที่	สารเคมี	วิธีวิเคราะห์
44	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
45	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
46	3,3-Dichlorobenzidine	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
47	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
48	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
49	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
50	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
51	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
52	2,4-Dichlorophenol	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
53	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
54	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
55	1,3-Dichloropropene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
56	Dieldrin	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
57	Diethyl phthalate	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
58	2,4-Dimethylphenol	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
59	2,4-Dinitrophenol	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
60	2,4-Dinitrotoluene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)
61	2,6-Dinitrotoluene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(23,24)

ลำดับที่	สารเคมี	วิธีวิเคราะห์
62	Di-n-octyl phthalate	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
63	Endosulfan	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
64	Endrin	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
65	Ethylbenzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^[14,22]
66	Fluoranthene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
67	Fluorene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
68	Heptachlor	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
69	Heptachlor epoxide	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
70	Hexachlorobenzene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
71	Hexachloro-1,3-butadiene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
72	α -HCH	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
73	β -HCH	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
74	γ -HCH	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
75	Hexachlorocyclopentadiene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
76	Hexachloroethane	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
77	n-Hexane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^[14,22]
78	Indeno(1,2,3-cd)pyrene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
79	Isophorone	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
80	Lead	Digestion, Inductively Coupled Plasma Method ^[9,15]

ลำดับที่	สารเคมี	วิธีวิเคราะห์
81	Manganese	Digestion, Inductively Coupled Plasma Method ^[9,15]
82	Mercury	Digestion, Cold vapor Atomic Absorption Spectrometric Method
83	Methoxychlor	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
84	Methyl Bromide	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^[14,22]
85	Methylene Chloride	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^[14,22]
86	2-Methylnaphthalene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
87	2-Methylphenol	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
88	Methyl tert-butyl ether	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^[14,22]
89	Naphthalene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
90	Nickel	Digestion, Inductively Coupled Plasma Method ^[9,15]
91	Nitrobenzene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
92	N-Nitrosodiphenylamine	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
93	N-Nitrosodi-n-propylamine	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
94	Pentachlorophenol	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
95	Phenanthrene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
96	Phenol	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
97	Polychlorinated Biphenyls (PCBs)	Ultrasonic Extraction, Gas Chromatographic Method ^[9,16,17]
98	Pyrene	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^[23,24]
99	Selenium	Digestion, Inductively Coupled Plasma Method ^[9,15]
100	Silver	Digestion, Inductively Coupled Plasma Method ^[9,15]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
101	Styrene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
102	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
103	Tetrachloroethylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
104	Toluene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
105	Toxaphene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22) Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(9,10)
106	TPH (C ₅ -C ₈)	Purge and Trap, Gas Chromatographic Mass Spectrometric Method ^(14,22)
107	TPH (C ₈ -C ₁₆)	Ultrasonic Extraction, Gas Chromatographic Mass Spectrometric Method ^(9,10,18)
108	TPH (C ₁₆ -C ₃₅)	Ultrasonic Extraction, Gas Chromatographic Mass Spectrometric Method ^(10,18)
109	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
110	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
111	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
112	Trichloroethylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
113	2,4,5-Trichlorophenol	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(9,10)
114	2,4,6-Trichlorophenol	Microwave Extraction, Gas Chromatographic / Mass Spectrometric Method ^(9,10)
115	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
116	Vanadium	Digestion, Inductively Coupled Plasma Method ^(9,15)
117	Vinyl Acetate	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)
118	Vinyl Chloride	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(14,22)



ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
119	m-Xylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(6,8)
120	o-Xylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(6,8)
121	p-Xylene	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(6,8)
122	Xylene (Total)	Purge and Trap, Gas Chromatographic / Mass Spectrometric Method ^(6,8)
123	Zinc	Digestion, Inductively Coupled Plasma Method ^(9,15)

เอกสารอ้างอิง

1. กระทรวงอุตสาหกรรม. ประกาศกระทรวงอุตสาหกรรม พ.ศ.2549 เรื่อง กำหนดค่าปริมาณเผาไหม้ที่เจือปนในอากาศที่ระบายออกจากปล่องของหม้อน้ำโรงสีข้าวที่ใช้กลั่นเป็นเชื้อเพลิง.

ราชกิจจานุเบกษา. 4 ธันวาคม 2549. เล่มที่ 123 ตอนพิเศษ 125 ง.

2. กระทรวงอุตสาหกรรม. ประกาศกระทรวงอุตสาหกรรม พ.ศ.2548 เรื่อง การกำจัดสิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว. ราชกิจจานุเบกษา. 25 มกราคม 2549. เล่มที่ 123 ตอนพิเศษ 11ง.

3. สมาคมวิศวกรรมสิ่งแวดล้อมแห่งประเทศไทย. คู่มือวิเคราะห์น้ำเสีย. พิมพ์ครั้งที่ 4. กรุงเทพมหานคร: 2547

4. APHA, AWWA, WEF. Standard Methods for the Examination of Water and Wastewater. 23rd ed. Washington, DC : APHA, 2017

5. United States Environmental Protection Agency. Standards of Performance for New Stationary Sources. 40 CFR 60. Appendix A, 2017

6. United States Environmental Protection Agency. Standards of Performance for New Stationary Sources. 40 CFR 60. Appendix A, 2019

7. United States Environmental Protection Agency. Standards of Performance for New Stationary Sources. 40 CFR 60. Appendix A, 2020

8. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Acid Digestion of Sediments Sludges, and Soils. SW-846 Method 3050B, 1996.

9. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Acid Digestion of Sediments, Sludges, and Soils. SW-846 Method 3051A, 2007

10. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Alkaline Digestion for Hexavalent Chromium. SW-846 Method 3060A, 1996.



11. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. SW-846, 2006.
12. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Ultrasonic Extraction. SW-846 Method 3550C, 2007.
13. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples. SW-846 Method 5035A, 2002
14. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Closed-System Purge-and-Trap for Aqueous Samples. SW-846 Method 5035C, 2003.
15. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Inductively Coupled Plasma – optical Emission Spectrometry. SW-846 Method 6010D, 2018
16. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Antimony and Arsenic (Atomic Absorption, Borohydride Reduction). SW-846 Method 7062A, 1994.
17. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Chromium, Hexavalent (Colorimetric). Method 7196A, 1992.
18. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Mercury in Solid or Semisolid Waste (Manual Cold-Vapor Technique). SW-846 Method 7471B, 2007.
19. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Nonhalogenated Organics Using GC/FID. SW-846 Method 8015D, 2003.
20. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Organochlorine Pesticide by Gas Chromatography. SW-846 Method 8081B, 2007.
21. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Polychlorinated Biphenyls (PCBs) By Gas Chromatography. SW-846 Method 8082A, 2007
22. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS). SW-846 Method 8260D, 2018.



23. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry. SW-846 Method 8270E, 2018.
24. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Microwave Extraction, Gas Chromatography/Mass Spectrometry. SW-846 Method 3546, 2007.
25. United States Environmental Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. Cyanide Extraction Procedure for Solids and Oils. SW-846 Method 9013A, 2014.





เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
 บริษัท เอสจีเอส (ประเทศไทย) จำกัด เลขทะเบียน ๖-๐๑๐
 ที่ อก ๐๓๑๐(๑)/ ๔๗๘๖ ลงวันที่ ๒๑ เมษายน ๒๕๖๕
 ขอบข่ายสามารถพืชที่ได้รับการขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๒๐ รายการ

น้ำเสีย จำนวน 20 รายการ

ลำดับที่	สารเคมี	วิธีวิเคราะห์
1	Aldrin	Liquid-Liquid Extraction, Gas Chromatographic Method
2	α-BHC	Liquid-Liquid Extraction, Gas Chromatographic Method
3	β-BHC	Liquid-Liquid Extraction, Gas Chromatographic Method
4	δ-BHC	Liquid-Liquid Extraction, Gas Chromatographic Method
5	γ-BHC	Liquid-Liquid Extraction, Gas Chromatographic Method
6	Chlordane	Liquid-Liquid Extraction, Gas Chromatographic Method
7	p,p'-DDD	Liquid-Liquid Extraction, Gas Chromatographic Method
8	p,p'-DDE	Liquid-Liquid Extraction, Gas Chromatographic Method
9	o,p'-DDT	Liquid-Liquid Extraction, Gas Chromatographic Method
10	p,p'-DDT	Liquid-Liquid Extraction, Gas Chromatographic Method
11	Dieldrin	Liquid-Liquid Extraction, Gas Chromatographic Method
12	Endosulfan I	Liquid-Liquid Extraction, Gas Chromatographic Method
13	Endosulfan II	Liquid-Liquid Extraction, Gas Chromatographic Method
14	Endosulfan Sulfate	Liquid-Liquid Extraction, Gas Chromatographic Method
15	Endrin	Liquid-Liquid Extraction, Gas Chromatographic Method
16	Endrin Aldehyde	Liquid-Liquid Extraction, Gas Chromatographic Method
17	Heptachlor	Liquid-Liquid Extraction, Gas Chromatographic Method
18	Heptachlor Epoxide	Liquid-Liquid Extraction, Gas Chromatographic Method
19	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic Method
20	Temperature	Laboratory and Field Methods

เอกสารอ้างอิง

APHA, AWWA, WEF. Standard Methods for the Examination of Water and Wastewater.
 23rd ed. Washington, DC: APHA, 2017 