

บทที่ 3

ผลการติดตามตรวจสอบคุณภาพสิ่งแวดล้อม

นิติบุคคลอาคารชุดแอสปายอุดรธานี

ที่อยู่เจ้าของโครงการ นิติบุคคลอาคารชุดแอสปายอุดรธานี
 669 หมู่2 ซ.บ้านโพธิ์สว่าง ถ.โพศรี ต.หมากแข้ง อ.เมือง จ.อุดรธานี 41000

วันที่เก็บตัวอย่าง มกราคม 2567 ถึง มิถุนายน 2567 (ความถี่ 1 ครั้ง /เดือน)

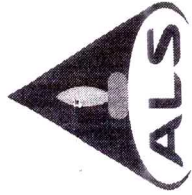
สถานที่เก็บตัวอย่าง

1. จุดระบายน้ำออกจากระบบ
2. บ่อพักน้ำสุดท้ายก่อนระบายออกท่อสาธารณะ

นิติบุคคลแอสปายอุดรธานี

| ตำแหน่งที่วัด | พารามิเตอร์ที่วัด | | | | | | Total dissolved solids |
|--------------------------------|-------------------|------------|--------------------------|---------------------|------------|----------------|------------------------|
| | pH | BOD (mg/L) | Settleable Solids (mg/L) | Oil & Grease (mg/L) | TKN (mg/L) | Sulfide (mg/L) | |
| 1. น้ำเสียหลังจากบำบัด ม.ค 67 | 7.8 | 5 | 0.1 | 3 | 52.4 | 0.6 | 300 |
| 2. น้ำเสียหลังจากบำบัด ก.พ 67 | 7.8 | 14.9 | 0.1 | 3 | 40.6 | 0.5 | 308 |
| 3. น้ำเสียหลังจากบำบัด มี.ค 67 | 7.7 | 78.5 | 0.1 | 7 | 61.9 | 0.8 | 344 |
| 4. น้ำเสียหลังจากบำบัด เม.ย 67 | 7.2 | 55 | 0.1 | 4 | 29.6 | 0.5 | 352 |
| 5. น้ำเสียหลังจากบำบัด พ.ค 67 | 7.5 | 38.4 | 0.1 | 3 | 35.5 | 0.1 | 360 |
| 6. น้ำเสียหลังจากบำบัด มิ.ย 67 | 7.2 | 36.9 | 0.1 | 3 | 50.9 | 0.5 | 244 |
| ค่ามาตรฐาน *** | 5-9 | ≤ 30 | ≤ 0.5 | ≤ 20 | ≤ 35 | ≤ 1.0 | ≤ 500 |

หมายเหตุ : *** ประกาศกระทรวงทรัพยากรธรรมชาติและสิ่งแวดล้อม เรื่อง กำหนดมาตรฐานควบคุม การระบายน้ำทิ้งจากอาคารบางประเภทและบางขนาด ลงวันที่ 7 พฤศจิกายน 2548 ประกาศในราชกิจจานุเบกษา เล่มที่ 122 ตอนที่ 12 ลง วันที่ 29 ธันวาคม 2548



Analysis Report NN24000004

Client : Juristic Person Condo Aspire Udonthani

669 Moo 2, Tambon Mak Khaeng, Amphoe Mueang Udon Thani, Udon Thani,
Thailand, 41000

P/O : ---

Project : ---

Project Location: Juristic Person Condo Aspire Udonthani

Work Order : NN24000004
Report Number : NN24000004-AA
Date Received : Jan 16, 2024
Date Reported : Jan 22, 2024
Date Analysis Commenced : Jan 17, 2024
No. of samples received : 1
Temperature : 4.3 °C
Sampled by : Adisak Phomphai

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.
ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Signatories

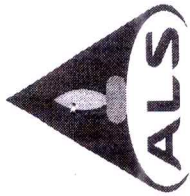
Nant Sook

Nanthawadee Somboon

Specialist 1



TESTING
1/17 No.0009



Analysis Report NN2400004

Report Number : NN2400004-AA

Sub-Matrix: WASTEWATER

(Matrix: WATER)

TESTING
No.0009

Client Sample ID

Sampling Date

Guideline

MNRE 2548
Type B

Unit

LOQ

LOD

Analytes

Testing Lab

บันทึกผล

Jan 15, 2024 02:00 PM

NN2400004-001

Result

Chemical Parameters

| | | | | | | | | | | |
|--------|---------|------------------------------|------|-----|---------|-----|-----|-------|-----|-----|
| EN0045 | Bangkok | BOD (5 days at 20°C) | --- | 2.0 | mg/L | ≤30 | --- | 5 * | --- | --- |
| EN0048 | Bangkok | Oil & Grease | --- | 3 | mg/L | ≤20 | --- | <3 | --- | --- |
| EN0021 | Bangkok | pH at 25°C | --- | 1.0 | pH Unit | 5-9 | --- | 7.8 | --- | --- |
| EN0032 | Bangkok | Sulfides | --- | 0.5 | mg/L | ≤1 | --- | 0.6 * | --- | --- |
| EN0035 | Bangkok | Total Kjeldahl Nitrogen as N | 0.15 | 1.0 | mg/L | ≤35 | --- | 52.4 | --- | --- |

Physical and Aggregate Properties

| | | | | | | | | | | |
|--------|---------|-------------------------------------|-----|-----|---------|------|-----|--------|-----|-----|
| EN0093 | Bangkok | Settleable Solids | --- | 0.1 | mL/L/hr | ≤0.5 | --- | <0.1 * | --- | --- |
| EN0099 | Bangkok | Total Dissolved Solids at 103-105°C | --- | 5 | mg/L | ≤500 | --- | 300 | --- | --- |

Guideline: MNRE 2548 Type B: Building: Notification of The Ministry of Natural Resources and Environment on Effluent from building Type B (Guideline for TDS are in addition to the TDS of the water used not more than 500 mg/L)

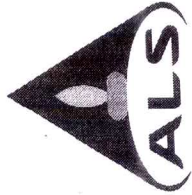
Comment: The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Sampling is not included in scope of accreditation ISO/IEC 17025

Key:

- LOD : Limit of Detection
- "L" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Result(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

----- END OF REPORT -----



Analysis Report NN2400025



TESTING
2/67 No.0009

Client : Juristic Person Condo Aspire Udonthani
669 Moo 2, Tambon Mak Khaeng, Amphoe Mueang Udon Thani, Udon Thani,
Thailand, 41000

P/O : ---
Project : ---

Project Location: Juristic Person Condo Aspire Udonthani

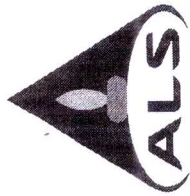
Work Order : NN2400025
Report Number : NN2400025-AA
Date Received : Feb 02, 2024
Date Reported : Feb 08, 2024
Date Analysis Commenced : Feb 02, 2024
No. of samples received : 1
Temperature : 4.1 °C
Sampled by : Adisak Phomphai

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.
ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Signatories

Siriluk P.

Siriluk Puengpang
Section Head



Analysis Report NN2400025

Report Number : NN2400025-AA

Sub-Matrix: WASTEWATER

(Matrix: WATER)

TESTING
No.0009

Client Sample ID

| Sub-Matrix: WASTEWATER (Matrix: WATER) | | | | | Client Sample ID | | วันที่ออก | |
|---|-------------|-------------------------------------|------|-----|------------------|-----------|-----------------------|--------|
| | | | | | Sampling Date | | Feb 01, 2024 11:40 AM | |
| Method | Testing Lab | Analytes | LOD | LOQ | Unit | Guideline | | Result |
| | | | | | | MNRE 2548 | Type B | |
| Chemical Parameters | | | | | | | | |
| EN0044 | Bangkok | BOD (5 days at 20°C) | | 2.0 | mg/L | ≤30 | | 14.9 |
| EN0048 | Bangkok | Oil & Grease | | 3 | mg/L | ≤20 | | 3 |
| EN0021 | Bangkok | pH at 25°C | | 1.0 | pH Unit | 5-9 | | 7.8 |
| EN0032 | Bangkok | Sulfides | | 0.5 | mg/L | ≤1 | | <0.5 * |
| EN0035 | Bangkok | Total Kjeldahl Nitrogen as N | 0.15 | 1.0 | mg/L | ≤35 | | 40.6 |
| Physical and Aggregate Properties | | | | | | | | |
| EN0093 | Bangkok | Settleable Solids | | 0.1 | mL/L/hr | ≤0.5 | | <0.1 * |
| EN0099 | Bangkok | Total Dissolved Solids at 103-105°C | | 5 | mg/L | ≤500 | | 308 |

Guideline: MNRE 2548 Type B: Building: Notification of The Ministry of Natural Resources and Environment on Effluent from building Type B (Guideline for TDS are in addition to the TDS of the water used not more than 500 mg/L)

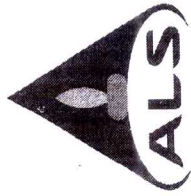
Comment: The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Sampling is not included in scope of accreditation ISO/IEC 17025

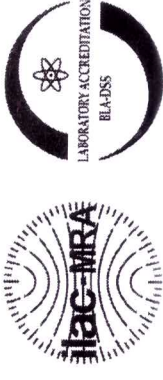
Key:

- LOD : Limit of Detection
- "L" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Result(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

----- END OF REPORT -----



Analysis Report NN2400063



3/67 TESTING
No.0009

Client : Juristic Person Condo Aspire Udonthani
669 Moo 2, Tambon Mak Khaeng, Amphoe Mueang Udon Thani, Udon Thani,
Thailand, 41000
P/O : ---
Project : ---
Project Location: Juristic Person Condo Aspire Udonthani

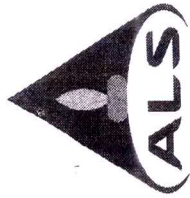
Work Order : NN2400063
Report Number : NN2400063-AA
Date Received : Mar 02, 2024
Date Reported : Mar 08, 2024
Date Analysis Commenced : Mar 02, 2024
No. of samples received : 1
Temperature : 3.7 °C
Sampled by : Adisak Phomphai

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.
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Signatories

Siriluk P.

Siriluk Bunnak
Section Head



Analysis Report NN2400063

Report Number : NN2400063-AA

Sub-Matrix: WASTEWATER

(Matrix: WATER)

Client Sample ID

Sampling Date

Method

Testing Lab

Analytes

Unit

LOQ

LOD

Guideline

MNRE 2548
Type B

Result

Chemical Parameters

| | | | | | | | | | |
|--------|---------|------------------------------|------|-----|---------|-----|-------|-----|-----|
| EN0044 | Bangkok | BOD (5 days at 20°C) | --- | 2.0 | mg/L | --- | 78.5 | --- | --- |
| EN0048 | Bangkok | Oil & Grease | --- | 3 | mg/L | --- | 7 | --- | --- |
| EN0021 | Bangkok | pH at 25°C | --- | 1.0 | pH Unit | --- | 7.7 | --- | --- |
| EN0032 | Bangkok | Sulfides | --- | 0.5 | mg/L | --- | 0.8 * | --- | --- |
| EN0035 | Bangkok | Total Kjeldahl Nitrogen as N | 0.15 | 1.0 | mg/L | --- | 61.9 | --- | --- |

Physical and Aggregate Properties

| | | | | | | | | | |
|--------|---------|-------------------------------------|-----|-----|---------|-----|--------|-----|-----|
| EN0093 | Bangkok | Settleable Solids | --- | 0.1 | mL/L/hr | --- | <0.1 * | --- | --- |
| EN0099 | Bangkok | Total Dissolved Solids at 103-105°C | --- | 5 | mg/L | --- | 344 | --- | --- |

Guideline: MNRE 2548 Type B: Building: Notification of The Ministry of Natural Resources and Environment on Effluent from building Type B (Guideline for TDS are in addition to the TDS of the water used not more than 500 mg/L)

Comment: The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

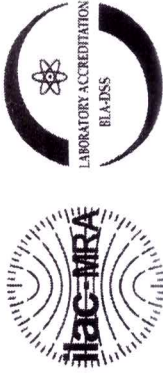
Sampling is not included in scope of accreditation ISO/IEC 17025

Key: ° LOD : Limit of Detection

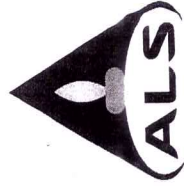
° "L" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

° Result(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

----- END OF REPORT -----



TESTING
No.0009



Analysis Report NN2400107



TESTING
No.0009 4/67

Client : Juristic Person Condo Aspire Udonthani
669 Moo 2, Tambon Mak Khaeng, Amphoe Mueang Udon Thani, Udon Thani,
Thailand, 41000

P/O : -----

Project : -----

Project Location: Juristic Person Condo Aspire Udonthani

Work Order : NN2400107

Report Number : NN2400107-AA

Date Received : Apr 02, 2024

Date Reported : Apr 08, 2024

Date Analysis Commenced : Apr 03, 2024

No. of samples received : 1

Temperature : 3.6 °C

Sampled by : Anukun Wilasang

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.

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Signatories

Siriluk P.

Siriluk Bunnak
Section Head

ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Life Sciences

104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand T +662 760 3000

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Page 1 of 3

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TESTING
No. 00009

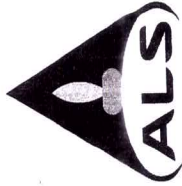
100

Sampling Date

| | |
|---------|---|
| 103-105 | 0 |
|---------|---|

- ° "Z": Lower than LOQ (Limit of Quantitation).
- ° Result(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

END OF REPORT



Analysis Report NN2400134



TESTING
No.0009 5/67



Client : Juristic Person Condo Aspire Udonthani
669 Moo 2, Tambon Mak Khaeng, Amphoe Mueang Udon Thani, Udon Thani,
Thailand, 41000

P/O : ---

Project : ---

Project Location: Juristic Person Condo Aspire Udonthani

Work Order : NN2400134

Report Number : NN2400134-AA

Date Received : May 03, 2024

Date Reported : May 09, 2024

Date Analysis Commenced : May 03, 2024

No. of samples received : 1

Temperature : 2.2 °C

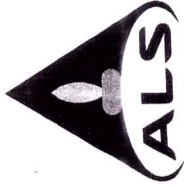
Sampled by : Adisak Phomphai

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.
ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Signatories

Siriluk P.

Siriluk Bunnak
Section Head



Analysis Report NN2400134

Report Number : NN2400134-AA

Sub-Matrix: WASTEWATER

(Matrix: WATER)

Client Sample ID

ไม่ทราบ

Sampling Date

May 02, 2024 03:55 PM

Guideline

NN2400134-001

MNRE 2548

Type B

Result

Method

Testing Lab

Analytes

LOD

LOQ

Unit

Guideline

NN2400134-001

MNRE 2548

Type B

Result

Chemical Parameters

| | | | | | | | | | |
|-----------------------------------|---------|-------------------------------------|------|-----|---------|------|-----|--------|-----|
| EN0044 | Bangkok | BOD (5 days at 20°C) | --- | 2.0 | mg/L | ≤30 | --- | 38.4 | --- |
| EN0048 | Bangkok | Oil & Grease | --- | 3 | mg/L | ≤20 | --- | <3 | --- |
| EN0021 | Bangkok | pH at 25°C | --- | 1.0 | pH Unit | 5-9 | --- | 7.5 | --- |
| EN0032 | Bangkok | Sulfides | --- | 0.5 | mg/L | ≤1 | --- | <0.5 * | --- |
| EN0035 | Bangkok | Total Kjeldahl Nitrogen as N | 0.15 | 1.0 | mg/L | ≤35 | --- | 35.5 | --- |
| Physical and Aggregate Properties | | | | | | | | | |
| EN0093 | Bangkok | Settleable Solids | --- | 0.1 | mL/L/hr | ≤0.5 | --- | <0.1 * | --- |
| EN0099 | Bangkok | Total Dissolved Solids at 103-105°C | --- | 5 | mg/L | ≤500 | --- | 360 | --- |

Guideline: MNRE 2548 Type B: Building: Notification of The Ministry of Natural Resources and Environment on Effluent from building Type B (Guideline for TDS are in addition to the TDS of the water used not more than 500 mg/L)

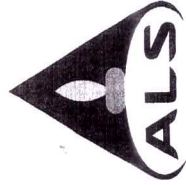
Comment: The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Sampling is not included in scope of accreditation ISO/IEC 17025

Key:

- LOD : Limit of Detection
- "L" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Result(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

----- END OF REPORT -----



Analysis Report NN2400154



Accreditation No.1031/47

6/67

Client : Juristic Person Condo Aspire Udonthani
669 Moo 2, Tambon Mak Khaeng, Amphoe Mueang Udon Thani, Udon Thani,
Thailand, 41000
P/O : ---
Project : ---
Project Location: Juristic Person Condo Aspire Udonthani

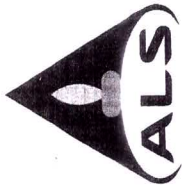
Work Order : NN2400154
Report Number : NN2400154-AA
Date Received : Jun 04, 2024
Date Reported : Jun 12, 2024
Date Analysis Commenced : Jun 04, 2024
No. of samples received : 1
Temperature : 2.9 °C
Sampled by : Anukun Wilasang

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without written consent from the laboratory.
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Signatories

Nant Somb

Nanthawadee Somboon
Specialist 2



Analysis Report NN2400154

Report Number : NN2400154-AB

Sub-Matrix: WASTEWATER

(Matrix: WATER)

Client Sample ID

Sampling Date

Guideline

MNRE 2548

Type B

Method

Testing Lab

Analytes

LOQ

Unit

Result

Jun 03, 2024 02:20 PM

NN2400154-002

Unit Name

Chemical Parameters

| | | | | | |
|--------|---------|------------------------------|-----|---------|--------|
| EN0044 | Bangkok | BOD (5 days at 20°C) | 2.0 | mg/L | 36.9 |
| EN0048 | Bangkok | Oil & Grease | 3 | mg/L | 3 |
| EN0021 | Bangkok | pH at 25°C | 1.0 | pH Unit | 7.2 |
| EN0032 | Bangkok | Sulfides | 0.5 | mg/L | <0.5 * |
| EN0035 | Bangkok | Total Kjeldahl Nitrogen as N | 1.0 | mg/L | 50.9 |

Physical and Aggregate Properties

| | | | | | |
|--------|---------|-------------------------------------|-----|---------|--------|
| EN0093 | Bangkok | Settleable Solids | 0.1 | mL/L/hr | <0.1 * |
| EN0099 | Bangkok | Total Dissolved Solids at 103-105°C | 5 | mg/L | 244 |

Guideline: MNRE 2548 Type B: Building: Notification of The Ministry of Natural Resources and Environment on Effluent from building Type B (Guideline for TDS are in addition to the TDS of the water used not more than 500 mg/L)

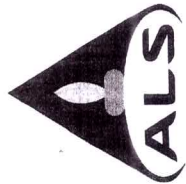
Comment: The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Sampling is not included in scope of accreditation ISO/IEC 17025

Key:

- ° LOD : Limit of Detection
- ° "<": Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- ° Result(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

END OF REPORT



Analysis Report NN2400154

Report Number : NN2400154-AA

Sub-Matrix: PROCESS WATER

(Matrix: WATER)



Accreditation No. 1031/47

| Sub-Matrix: PROCESS WATER | | | | | | | | | |
|-----------------------------------|---------|-----------------------|-----|------|------------|---------|-----|-------|-----|
| (Matrix: WATER) | | | | | | | | | |
| Client Sample ID | | | | | | | | | |
| Sampling Date | | | | | | | | | |
| Guideline | | | | | | | | | |
| Result | | | | | | | | | |
| PWA 2565 | | | | | | | | | |
| Unit | | | | | | | | | |
| LOQ | | | | | | | | | |
| LOD | | | | | | | | | |
| Analytes | | | | | | | | | |
| Testing Lab | | | | | | | | | |
| Method | | | | | | | | | |
| Chemical Parameters | | | | | | | | | |
| EN0021 | Bangkok | pH at 25°C | --- | 1.0 | pH Unit | 6.5-8.5 | --- | 6.8 | --- |
| Physical and Aggregate Properties | | | | | | | | | |
| EN0081 | Bangkok | Color (Apparent) | --- | 5 | Color unit | ≤15 | --- | <5 * | --- |
| EN0082 | Bangkok | Conductivity at 25 °C | --- | 0.50 | µS/cm | --- | --- | 165 * | --- |
| EN0104 | Bangkok | Turbidity | --- | 0.1 | NTU | ≤5 | --- | 1.0 | --- |

Guideline: PWA 2565: Provincial Waterworks Authority on water quality standards

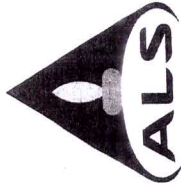
Comment: The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Sampling is not included in scope of accreditation ISO/IEC 17025

Key:

- LOD : Limit of Detection
- "L" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Result(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

----- END OF REPORT -----



Analysis Report NN2400154

Report Number : NN2400154-AC

Sub-Matrix: PROCESS WATER

(Matrix: WATER)

TESTING
No.0009



| Sub-Matrix: PROCESS WATER | | | | | | | Client Sample ID | |
|-----------------------------------|-------------|---------------------------|------|------|-----------|--------------|-----------------------|--|
| (Matrix: WATER) | | | | | | | สรุบัญณ์ | |
| Sampling Date | | | | | | | Jun 03, 2024 02:00 PM | |
| Method | Testing Lab | Analytes | LOD | LOQ | Unit | Guideline | | |
| | | | | | | MOPH | Result | |
| | | | | | | 1/2550 | NN2400154-003 | |
| | | | | | | | | |
| Chemical Parameters | | | | | | | | |
| EN0017 | Bangkok | Ammonia Nitrogen | 0.02 | 0.05 | mg/L | ≤20 | Not Detected * | |
| EN0002 | Bangkok | Chloride as Cl | 0.06 | 0.2 | mg/L | ≤600 | 38.2 * | |
| EN0002 | Bangkok | Nitrate as N | 0.06 | 0.2 | mg/L | | 0.3 * | |
| EN0021 | Bangkok | pH at 25°C | | 1.0 | pH Unit | 7.2-8.4 | 7.2 * | |
| EN0041 | Bangkok | Total Hardness as CaCO3 | | 1 | mg/L | | 53 * | |
| | | | | | | | | |
| Microbiological Parameters | | | | | | | | |
| MC6009 | Bangkok | Total Coliforms | | | MPN/100mL | <10 | <1.1 | |
| MC6012 | Bangkok | Escherichia coli | | | in 100mL | Not Detected | Not Detected | |
| MC6021 | Bangkok | Fecal Coliforms | | | MPN/100mL | | <1.1 | |
| | | | | | | | | |
| Physical and Aggregate Properties | | | | | | | | |
| EN0077 | Bangkok | Total Alkalinity as CaCO3 | | 1 | mg/L | 80-100 | 51 * | |

Guideline: MOPH 1/2550: Recommendations of The Public Health Committee on Swimming Pool Operations

Comment: The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Sampling is not included in scope of accreditation ISO/IEC 17025

- Key:
- LOD : Limit of Detection
 - " < " : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
 - Result(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

END OF REPORT