

ผลวิเคราะห์คุณภาพน้ำทิ้งของระบบบำบัดน้ำเสีย



United Analyst and Engineering Consultant Co., Ltd.

3 Soi Udomsuk 41, Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260

Tel.0 2763 2828 Fax 0 2763 2800 www.uaec consultant.com E-mail: uae@uaec consultant.com



NSC - TISI - TIS 17025
TESTING 0207

TESTING
No. 0063

ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED
ADDRESS : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE HOUSE
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : JULY 11, 2024
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ARIYA THARAROM
RECEIVED DATE : JULY 12, 2024
ANALYTICAL DATE : JULY 12-19, 2024
ISSUE DATE : SEPTEMBER 2, 2024
REPORT NO. : 2024-U080944
WORK NO. : 2024-006307
ANALYSIS NO. : T24AP860-0001 - T24AP860-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 T24AP860-0001	2 T24AP860-0002		
pH ^c	-	ELECTROMETRIC METHOD (SM: PART 4500 -H ⁺ B)	8.1 (25°C)	6.5 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^{a c}	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	278	14.8	≤ 30	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	199	18.4	≤ 40	5.0
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	117	18.8	≤ 35	1.5
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	29	3	≤ 20	3

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- PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.
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PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 T24AP860-0001	2 T24AP860-0002		
MICROBIOLOGY						
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	13,000	-	1.8
SAMPLE CONDITION						
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	YELLOW/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

RESULT 1 : INFLUENT

RESULT 2 : EFFLUENT

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005.

[^] : PARAMETER ANALYSED OF THE EFFLUENT IS SAMPLING BY CUSTOMER ON AUGUST 22, 2024, ANALYSIS NO. T24AT212-0001 (ANALYTICAL DATE : AUGUST 22-28, 2024).

THE REASON FOR ISSUING THE NEW REPORT IS SUBSTITUTE RESULT.

SUBSTITUTED REPORT FOR REPORT NO. 2024-U067768, ISSUE DATE JULY 24, 2024.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR



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2024-U080944

- End of Analysis Report -



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ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED
ADDRESS : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE HOUSE
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : AUGUST 14, 2024
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ARIYA THARAROM
RECEIVED DATE : AUGUST 15, 2024
ANALYTICAL DATE : AUGUST 15-22, 2024
ISSUE DATE : AUGUST 26, 2024
REPORT NO. : 2024-U078324
WORK NO. : 2024-007359
ANALYSIS NO. : T24AS491-0001 - T24AS491-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 T24AS491-0001	2 T24AS491-0002		
pH ^a	-	ELECTROMETRIC METHOD (SM: PART 4500 -H ⁺ B)	8.6 (25°C)	6.5 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	38.2	2.8	≤ 30	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	36.5	16.9	≤ 40	5.0
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	50.7	5.2	≤ 35	1.5
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	5	ND	≤ 20	3

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PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 T24AS491-0001	2 T24AS491-0002		
MICROBIOLOGY						
FAECAL COLIFORM BACTERIA _b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	11,000	-	1.8
SAMPLE CONDITION						
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	YELLOW/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

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IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

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RESULT 2 : EFFLUENT

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005.

BIOCHEMICAL OXYGEN DEMAND (T24AS491-0002) : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B,5(e).

ND : NOT DETECTED.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR



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2024-U078324

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ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED
ADDRESS : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE HOUSE
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : SEPTEMBER 16, 2024
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ARIYA THARAROM
RECEIVED DATE : SEPTEMBER 18, 2024
ANALYTICAL DATE : SEPTEMBER 18-26, 2024
ISSUE DATE : SEPTEMBER 27, 2024
REPORT NO. : 2024-U090159
WORK NO. : 2024-008281
ANALYSIS NO. : T24AV704-0001 - T24AV704-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 T24AV704-0001	2 T24AV704-0002		
pH ^a	-	ELECTROMETRIC METHOD (SM: PART 4500-H ⁺ B)	8.1 (25°C)	6.9 (25°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	97.7	17.4	≤ 30	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	90.7	10.2	≤ 40	5.0
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	46.2	22.2	≤ 35	1.5
OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	6	ND	≤ 20	3
MICROBIOLOGY						
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	4,900	-	1.8
SAMPLE CONDITION						
WATER'S COLOUR/TURBID			YELLOW/TURBID	YELLOW/TURBID		
SEDIMENT			BROWN	BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

RESULT 1 : INFLUENT

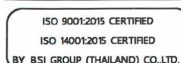
RESULT 2 : EFFLUENT

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 141, PART 233 D, DATED AUGUST 27, 2024.

ND : NOT DETECTED.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR



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ANALYSIS REPORT

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ADDRESS : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE HOUSE
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : OCTOBER 24, 2024
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ARIYA THARAROM
RECEIVED DATE : OCTOBER 25, 2024
ANALYTICAL DATE : OCTOBER 25 - NOVEMBER 6, 2024
ISSUE DATE : NOVEMBER 29, 2024
REPORT NO. : 2024-U111280
WORK NO. : 2024-009296
ANALYSIS NO. : T24AZ059-0001 - T24AZ059-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT	LIMIT OF QUANTITATION (LOQ)
			1 T24AZ059-0001	2 T24AZ059-0002			
pH ^c	-	ELECTROMETRIC METHOD (SM: PART 4500-H ⁺ B)	7.8 (25°C)	6.6 (25°C) ✓	5.5-9.0	-	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	257	29.2 ✓	≤ 30	-	20
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	401	10.9 ^ ✓	≤ 40	-	5.0
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	49.7	10.1 ✓	≤ 35	1.5	5.0
OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	12	< 3 ✓	≤ 20	-	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT	LIMIT OF QUANTITATION (LOQ)
			1 T24AZ059-0001	2 T24AZ059-0002			
MICROBIOLOGY							
FAECAL COLIFORM BACTERIA b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	>160,000	-	1.8	-
SAMPLE CONDITION							
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	YELLOW/TURBID BROWN			

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

RESULT 1 : INFLUENT

RESULT 2 : EFFLUENT

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL.141, PART 233 D, DATED AUGUST 27, 2024.

BIOCHEMICAL OXYGEN DEMAND (T24AZ059-0002) : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B,5(e).

ND : NOT DETECTED.

^A : PARAMETER ANALYSED OF THE EFFLUENT IS SAMPLING ON NOVEMBER 12, 2024, ANALYSIS NO. T24BA764-0001 (ANALYTICAL DATE: NOVEMBER 14-21, 2024).

THE REASON FOR ISSUING THE NEW REPORT IS SUBSTITUTE RESULT OF TOTAL SUSPENDED SOLIDS.
SUBSTITUTED REPORT FOR REPORT NO. 2024-103165, ISSUE DATE NOVEMBER 5, 2024.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED
ADDRESS : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE HOUSE
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : NOVEMBER 12, 2024
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ARIYA THARAROM
RECEIVED DATE : NOVEMBER 14, 2024
ANALYTICAL DATE : NOVEMBER 14-21, 2024
ISSUE DATE : NOVEMBER 25, 2024
REPORT NO. : 2024-U109838
WORK NO. : 2024-010316
ANALYSIS NO. : T24BA763-0001 - T24BA763-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT	LIMIT OF QUANTITATION (LOQ)
			1 T24BA763-0001	2 T24BA763-0002			
pH ^a	-	ELECTROMETRIC METHOD (SM: PART 4500-H ⁺ B)	7.8 (25°C)	6.8 (25°C) ✓	5.5-9.0	-	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	80.2	3.7 ✓	≤ 30	-	2.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	44.5	15.2 ✓	≤ 40	-	5.0
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	45.0	8.6 ✓	≤ 35	1.5	5.0
OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	6	< 3 ✓	≤ 20	-	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT	LIMIT OF QUANTITATION (LOQ)
			1 T24BA763-0001	2 T24BA763-0002			
MICROBIOLOGY							
FAECAL COLIFORM BACTERIA b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	4,900	-	1.8	-
SAMPLE CONDITION							
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	YELLOW/TURBID BROWN			

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

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IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

RESULT 1 : INFLUENT

RESULT 2 : EFFLUENT

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 141, PART 233 D, DATED AUGUST 27, 2024.

BIOCHEMICAL OXYGEN DEMAND (T24BA763-0002) : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B,5(e).

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR



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CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE HOUSE
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : DECEMBER 17, 2024
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ARIYA THARAROM
RECEIVED DATE : DECEMBER 19, 2024
ANALYTICAL DATE : DECEMBER 19-26, 2024
ISSUE DATE : JANUARY 2, 2025
REPORT NO. : 2024-U123394
WORK NO. : 2024-011305
ANALYSIS NO. : T24BD827-0001 - T24BD827-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT	LIMIT OF QUANTITATION (LOQ)
			1 T24BD827-0001	2 T24BD827-0002			
pH ^a	-	ELECTROMETRIC METHOD (SM: PART 4500-H ⁺ B)	8.6 (25°C)	6.8 (25°C)	5.5-9.0	-	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	378	10.8	≤ 30	-	2.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	108	32.7	≤ 40	-	5.0
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	102	14.6	≤ 35	1.5	5.0
OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	55	< 3	≤ 20	-	3



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CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE HOUSE
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JULY 11, 2024
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ARIYA THARAROM

RECEIVED DATE : JULY 12, 2024
ANALYTICAL DATE : JULY 12-19, 2024
ISSUE DATE : SEPTEMBER 2, 2024
REPORT NO. : 2024-U080945
WORK NO. : 2024-006307
ANALYSIS NO. : T24AP860-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			จุดระบายน้ำออกนอกโครงการ T24AP860-0003		
pH ^a	-	ELECTROMETRIC METHOD (SM: PART 4500-H ⁺ B)	6.3 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^{a c}	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	22.6	≤ 30	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	38.5	≤ 40	5.0
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	7.9	≤ 35	1.5
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3



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Tel.0 2763 2828 Fax 0 2763 2800 www.uaec consultant.com E-mail: uae@uaec consultant.com



NSC-TISI-TIS 17025
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No. 0063

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			จุดระบายน้ำออกนอกโครงการ T24AP860-0003		
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	11,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005.

ND : NOT DETECTED.

^A : SAMPLING BY CUSTOMER ON AUGUST 22, 2024, ANALYSIS NO. T24AT212-0002 (ANALYTICAL DATE : AUGUST 22-28, 2024).

THE REASON FOR ISSUING THE NEW REPORT IS SUBSTITUTE RESULT.

SUBSTITUTED REPORT FOR REPORT NO. 2024-U067769, ISSUE DATE JULY 24, 2024.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR



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2024-U080945

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Tel.0 2763 2828 Fax 0 2763 2800 www.uaeconsultant.com E-mail: uae@uaeconsultant.com



NSC-TISI-TIS 17025
TESTING 0207



TESTING
No. 0063

ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED
ADDRESS : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE HOUSE
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : AUGUST 14, 2024
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ARIYA THARAROM
RECEIVED DATE : AUGUST 15, 2024
ANALYTICAL DATE : AUGUST 15-22, 2024
ISSUE DATE : AUGUST 26, 2024
REPORT NO. : 2024-U078325
WORK NO. : 2024-007359
ANALYSIS NO. : T24AS491-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			จุดตรวจน้ำออกนอกโครงการ T24AS491-0003		
pH ^a	-	ELECTROMETRIC METHOD (SM: PART 4500-H ⁺ B)	6.5 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	2.5	≤ 30	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	14.8	≤ 40	5.0
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	5.7	≤ 35	1.5
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	2,600	-	1.8
SAMPLE CONDITION			YELLOW/TURBID BROWN		
WATER'S COLOUR/TURBID					
SEDIMENT					

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

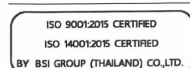
REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005.

* : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B.5(e).

ND : NOT DETECTED.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR



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NSC-TISI-TIS 17025
TESTING 0207



TESTING
No. 0063

ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED
ADDRESS : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE HOUSE
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : SEPTEMBER 16, 2024
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ARIYA THARAROM
RECEIVED DATE : SEPTEMBER 18, 2024
ANALYTICAL DATE : SEPTEMBER 18-26, 2024
ISSUE DATE : SEPTEMBER 27, 2024
REPORT NO. : 2024-U090160
WORK NO. : 2024-008281
ANALYSIS NO. : T24AV704-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			จุดระบายน้ำออกนอกโครงการ T24AV704-0003		
pH ^a	-	ELECTROMETRIC METHOD (SM: PART 4500-H ⁺ B)	6.8 (25°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	16.6	≤ 30	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	11.3	≤ 40	5.0
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	21.7	≤ 35	1.5
OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	490	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 141, PART 233 D, DATED AUGUST 27, 2024.

ND : NOT DETECTED.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

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ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED
ADDRESS : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE HOUSE
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : OCTOBER 24, 2024
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ARIYA THARAROM

RECEIVED DATE : OCTOBER 25, 2024
ANALYTICAL DATE : OCTOBER 25 - NOVEMBER 6, 2024
ISSUE DATE : NOVEMBER 29, 2024
REPORT NO. : 2024-U111282
WORK NO. : 2024-009296
ANALYSIS NO. : T24AZ059-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT	LIMIT OF QUANTITATION (LOQ)
			จุดตรวจน้ำออกนอกโครงการ T24AZ059-0003			
pH °C	-	ELECTROMETRIC METHOD (SM: PART 4500-H+ B)	6.6 (25°C)	5.5-9.0	-	-
BIOCHEMICAL OXYGEN DEMAND* A C	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	3.2	≤ 30	-	2.0
TOTAL SUSPENDED SOLIDS A B	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	12.6	≤ 40	-	5.0
TOTAL KJELDAHL NITROGEN B	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	9.4	≤ 35	1.5	5.0
OIL AND GREASE C	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	< 3	≤ 20	-	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT	LIMIT OF QUANTITATION (LOQ)
			จุดระบายน้ำออกนอกโครงการ T24AZ059-0003			
MICROBIOLOGY						
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	92,000	-	1.8	-
SAMPLE CONDITION						
WATER'S COLOUR/TURBID			YELLOW/TURBID			
SEDIMENT			BROWN			

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 141, PART 233 D, DATED AUGUST 27, 2024.

* : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B,5(e).

ND : NOT DETECTED.

^A : PARAMETER ANALYSED OF THE EFFLUENT IS SAMPLING ON NOVEMBER 12, 2024, ANALYSIS NO. T24BA764-0002 (ANALYTICAL DATE : NOVEMBER 14-21, 2024).

THE REASON FOR ISSUING THE NEW REPORT IS SUBSTITUTE RESULT OF BIOCHEMICAL OXYGEN DEMAND AND TOTAL SUSPENDED SOLIDS. SUBSTITUTED REPORT FOR REPORT NO. 2024-103166, ISSUE DATE NOVEMBER 5, 2024.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED
ADDRESS : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE HOUSE
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : NOVEMBER 12, 2024
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ARIYA THARAROM
RECEIVED DATE : NOVEMBER 14, 2024
ANALYTICAL DATE : NOVEMBER 14-21, 2024
ISSUE DATE : NOVEMBER 25, 2024
REPORT NO. : 2024-U109840
WORK NO. : 2024-010316
ANALYSIS NO. : T24BA763-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT	LIMIT OF QUANTITATION (LOQ)
			จตุรรมายน้ำออกนอกโครงการ T24BA763-0003			
pH °C	-	ELECTROMETRIC METHOD (SM: PART 4500-H ⁺ B)	6.7 (25°C)	5.5-9.0	-	-
BIOCHEMICAL OXYGEN DEMAND ^a _c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	4.4	≤ 30	-	2.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	15.8	≤ 40	-	5.0
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	10.2	≤ 35	1.5	5.0
OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	< 3	≤ 20	-	3
MICROBIOLOGY						
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	330	-	1.8	-
SAMPLE CONDITION						
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN			

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 141, PART 233 D, DATED AUGUST 27, 2024.

* : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B.5(e).

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR



ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED
ADDRESS : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE HOUSE
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : DECEMBER 17, 2024
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ARIYA THARAROM
RECEIVED DATE : DECEMBER 19, 2024
ANALYTICAL DATE : DECEMBER 19-26, 2024
ISSUE DATE : JANUARY 2, 2025
REPORT NO. : 2024-U123395
WORK NO. : 2024-011305
ANALYSIS NO. : T24BD827-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT	LIMIT OF QUANTITATION (LOQ)
			จุดระบายน้ำออก นอกโครงการ T24BD827-0003			
pH ^a	-	ELECTROMETRIC METHOD (SM: PART 4500-H ⁺ B)	6.8 (25°C)	5.5-9.0	-	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	10.6	≤ 30	-	2.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	28.9	≤ 40	-	5.0
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	15.9	≤ 35	1.5	5.0
OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	< 3	≤ 20	-	3
MICROBIOLOGY						
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	54,000	-	1.8	-
SAMPLE CONDITION						
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN			

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 141, PART 233 D, DATED AUGUST 27, 2024.

* : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B.5(e).

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR



ผลวิเคราะห์คุณภาพน้ำสระว่ายน้ำ



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No.0063

ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED
ADDRESS : 120 SILOM ROAD SURİYAWONG BANG RAK BANGKOK 10500
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLE SOURCE : CAPE HOUSE
SAMPLE TYPE : WATER SAMPLE FROM SWIMMING POOL
SAMPLING DATE : JULY 11, 2024
SAMPLING TIME : 10:03 HOUR
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ITSARIYAPORN BUATIB
RECEIVED DATE : JULY 12, 2024
ANALYTICAL DATE : JULY 12-25, 2024
ISSUE DATE : JULY 26, 2024
REPORT NO. : 2024-U068045
WORK NO. : 2024-006308
ANALYSIS NO. : T24AP866-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			SWIMMING POOL (DEEP ZONE) T24AP866-0001		
pH ^a	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	7.2	7.2-7.6*	-
RESIDUAL CHLORINE ^a	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	1.5	1.0-3.0*	0.1
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B AND C)	< 1.1	< 10	1.1
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

REGULATORY STANDARD : BANGKOK METROPOLITAN REGULATIONS FOR THE BUSINESS DISTRIEMENTAL TO HEALTH, B.E. 2530 (1987).

* : NATIONAL SPA AND POOL INSTITUTE (NSPI).

^a : MEASURED BY CUSTOMER.

Chaweevan B.

(MISS CHAWEEVAN BOONLA)
LABORATORY SUPERVISOR

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ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED
ADDRESS : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : CAPE HOUSE
SAMPLE TYPE : WATER SAMPLE FROM SWIMMING POOL
SAMPLING DATE : OCTOBER 24, 2024
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MR PITTAPAN LAEKODD
RECEIVED DATE : OCTOBER 25, 2024
ANALYTICAL DATE : OCTOBER 25 - NOVEMBER 5, 2024
ISSUE DATE : NOVEMBER 6, 2024
REPORT NO. : 2024-U103733
WORK NO. : 2024-009297
ANALYSIS NO. : T24AZ060-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			SWIMMING POOL (DEEP ZONE) T24AZ060-0001		
pH ^c	-	ELECTROMETRIC METHOD (SM: PART 4500-H ⁺ B)	7.2 (25°C)	7.2-7.6*	-
RESIDUAL CHLORINE ^c	mg/L Cl ₂	DPD FERROUS TITRIMETRIC METHOD (SM: PART 4500-Cl F)	1.7	1.0-3.0*	0.1
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221B AND C)	< 1.1	< 10	1.1
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

REGULATORY STANDARD : BANGKOK METROPOLITAN REGULATIONS FOR THE BUSINESS DISTRIMENTAL TO HEALTH, B.E. 2530 (1987).

* : NATIONAL SPA AND POOL INSTITUTE (NSPI).

Chaweevan B.

(MISS CHAWEEVAN BOONLA)
LABORATORY SUPERVISOR

