

ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 11:30 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035984
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0016

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			สถานีฟาร์มดอม T23AH729-0016		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.3 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	4.0	≤ 20	2.0
SUSPENDED SOLIDS ^c	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
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 E)	3,300	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ภาคผนวก ข

ใบรายงานผลการวิเคราะห์คุณภาพสิ่งแวดล้อม

ภาคผนวก ข-1

ใบรายงานผลการวิเคราะห์คุณภาพน้ำผิวดิน

ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 12:40 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR SOMCHART UTHUMRAT
ANALYZED BY : MISS NAPAPORN KHUNNOKKHUM

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U028062
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG019-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ทดลองสาม T23AG019-0001	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.4 (32°C)	-
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: PART 2550 B)	32	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: PART 4500-O C)	3.0	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	5.5	1.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	13.8	5.0
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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, 23rd EDITION, 2017.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 20, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 13:00 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR SOMCHART UTHUMRAT
ANALYZED BY : MISS NAPAPORN KHUNNOKKHUM

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U028063
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG019-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			คลองสี T23AG019-0002	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ^a B)	7.6 (32°C)	-
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: PART 2550 B)	32	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: PART 4500-O C)	2.5	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	4.5	1.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	48.5	5.0
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	

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SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 20, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 13:10 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR SOMCHART UTHUMRAT
ANALYZED BY : MISS NAPAPORN KHUNNOKKHUM

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U028065
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG019-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ทดลองค่า T23AG019-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.8 (32°C)	-
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: PART 2550 B)	32	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: PART 4500-O C)	3.0	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	10.4	1.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	157	5.0
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	3
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/TURBID	
SEDIMENT			BLUE	

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SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 20, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 13:20 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR SOMCHART UTHUMRAT
ANALYZED BY : MISS NAPAPORN KHUNNOKKHUM

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U028066
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG019-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			คลองสำโรง T23AG019-0004	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.2 (31°C)	-
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: PART 2550 B)	31	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: PART 4500-O C)	3.0	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	3.8	1.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	24.3	5.0
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	3
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/TURBID	
SEDIMENT			GREEN	

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SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 20, 2023



ภาคผนวก ข-2

ใบรายงานผลการวิเคราะห์คุณภาพเสียและน้ำทิ้ง

ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 13:45 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALAE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002905
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ค่าตามระบอบควบคุม และ มาตรฐานที่กำหนด T23AA048-0001		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	8.0 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O ₂ G AND 5210 B)	ND	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	3,300	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 13:05 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002906
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจวัด T23AA048-0002		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	7.9 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	60.8	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	29.6	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	5	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 13:35 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002907
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย วัสดุอาคารศูนย์การเรียนรู้ T23AA048-0003		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.1 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O ₂ G AND 5210 B)	56.8	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	30.0	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 15:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALAE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002908
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้ และวิจัย จุฬาลงกรณ์มหาวิทยาลัย T23AA048-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	7.7 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	68.7	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	21.1	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pal@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 14:50 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002909
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			นสพ.กมลทิพย์ และบุคลากร 1 T23AA048-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	7.7 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	112	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	47.7	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	10	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pal@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 14:45 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002910
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บทฝึกนักศึกษา และบุคลากร 2 T23AA048-0006		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.3 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O ₂ G AND 5210 B)	95.7	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	410	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	9	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
 MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
 PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
 LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 14:35 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002911
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			นอพักนักศึกษา และบุคลากร 3 T23AA048-0007		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.9 (26°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O ₂ G AND 5210 B)	71.8	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	24.7	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	3	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 14:30 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALAE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002912
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			นสพ.กมลทิพย์ และบุคลากร 4 T23AA048-0008		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.1 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O ₂ G AND 5210 B)	914	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	37.6	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	4	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 14:00 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002913
WORK NO. : 2022-007587
ANALYSIS NO. : T23AAD48-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการสุ่มน้ำ T23AAD48-0009		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.4 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.4	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	24.0	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	2,200	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 15:00 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002914
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0010

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการวิเคราะห์ T23AA048-0010		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.0 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O ₂ G AND 5210 B)	79.5	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	51.8	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	3	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL. 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 14:20 HOUR
SAMPLING METHOD^a : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY^c : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002922
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0011

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลพิกัดเจ้าหน้าที่ T23AA048-0011		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.9 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O ₂ G AND 5210 B)	64.2	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	30.5	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	3	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

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PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
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CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 13:20 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002924
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจวิเคราะห์ T23AA048-0012		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H+ B)	7.4 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	239	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	98.0	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID GREY		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 13:10 HOUR
SAMPLING METHOD ^a : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^a : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALÉE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002929
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0013

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			รับรองผลการ วิเคราะห์ในห้อง T23AA048-0013		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.0 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O ₂ G AND 5210 B)	71.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	38.2	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	18
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID YELLOW		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 14:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002932
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0014

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการวิเคราะห์ T23AA048-0014		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H B)	7.8 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.5	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	790	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR YELLOW		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
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PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 14:15 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-UD02933
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0015

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการวิเคราะห์ ค่า(สิ่งแวดล้อม) T23AA048-0015		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.3 (30°C)	5-9	-
FLOW RATE °	m ³ /hr	CURRENT METER AND CALCULATION	18	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	3.2	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	5.1	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	330	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/CLEAR		
SEDIMENT			YELLOW		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
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PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahldol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 14:05 HOUR
SAMPLING METHOD^a : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY^b : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002934
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0016

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการวิเคราะห์ T23AA048-0016		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.4 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O ₂ G AND 5210 B)	207	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	92.7	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			GREY		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 13:25 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002935
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0017

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บนบ่งนำทางด้าน หัตถ์วัดกิโลกรัม อาคารโรงพยาบาล T23AA048-0017		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.5 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	7.0	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	34.7	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	49	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID GREEN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHIL SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JANUARY 4, 2023
SAMPLING TIME : 14:55 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 4, 2023
ANALYTICAL DATE : JANUARY 4-10, 2023
REPORT NO. : 2023-U002936
WORK NO. : 2022-007587
ANALYSIS NO. : T23AA048-0018

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ห้องปฏิบัติการทางด้าน ทดสอบสิ่งแวดล้อมกับ อาคารในมหาวิทยาลัย T23AA048-0018		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.2 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O ₂ G AND 5210 B)	4.9	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	15.4	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	7,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID GREEN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JANUARY 13, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 14:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013685
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศาลาประชานิคม และพิธีกรรม T23AC073-0001		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.9 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	92,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR YELLOW		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
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PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 13:55 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013686
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจวัด T23AC073-0002		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	7.8 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	87.8	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	29.5	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	4	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			YELLOW		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 14:05 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013687
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จุฬาลงกรณ์มหาวิทยาลัย การเรียนรู้ T23AC073-0003		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.2 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	90.3	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	38.9	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	13	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			YELLOW		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 16:05 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013688
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้ และวิจัย จุฬาลงกรณ์มหาวิทยาลัย T23AC073-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	7.6 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	96.2	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	46.4	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	3	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID GREY		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 15:30 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013690
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 1 T23AC073-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.9 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	105	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	54.4	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	10	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			YELLOW		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 15:40 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013693
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ อาคาร 2 T23AC073-0006		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.8 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	53.0	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	37.2	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	3	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID YELLOW		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 15:20 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013695
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 3 T23AC073-0007		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.5 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	68.0	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	28.8	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	10	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID YELLOW		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 15:15 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013697
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 4 T23AC073-0008		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.6 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	70.0	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	28.1	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	10	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			YELLOW		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 15:50 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013699
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0010

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารชั้นหนการ T23AC073-0010		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	7.8 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	86.1	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	97.9	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	7	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID GREY		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 15:00 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013700
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0011

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอดักเจ้าน้ำที่ T23AC073-0011		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	7.9 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	76.2	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	49.4	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	5	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			YELLOW		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 15:05 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB
RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013701
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารวิศวกรรม บริการ T23AC073-0012		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.9 (33°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	71.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	57.7	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	4	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID YELLOW		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME	: CHAKRI NARUEBODINDRA MEDICAL INSTITUTE	RECEIVED DATE	: FEBRUARY 7, 2023
ADDRESS	: 111 MOO 14 BANG PLA BANG PHI SAMUT PRAKAN 10540	ANALYTICAL DATE	: FEBRUARY 7-14, 2023
CONTACT INFORMATION	: TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu	REPORT NO.	: 2023-U013702
SAMPLING SOURCE	: RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL	WORK NO.	: 2022-007587
SAMPLE TYPE	: BUILDING EFFLUENT	ANALYSIS NO.	: T23AC073-0013
SAMPLING DATE	: FEBRUARY 7, 2023		
SAMPLING TIME	: 15:55 HOUR		
SAMPLING METHOD °	: GRAB, GRAB AND STERILE TECHNIQUE		
SAMPLING BY °	: MR PRACHCHAPOL SOPHA		
ANALYZED BY	: MISS ITSARIYAPORN BUATIB		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			โรงจวดรกร และข้อมปารจกร T23AC073-0013		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	7.8 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	63.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	88.8	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	5	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 14:50 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013703
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0014

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			สถานีไฟฟ้ามอช T23AC073-0014		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	7.8 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.6	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	5.2	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR YELLOW		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 14:55 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013704
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0015

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการป้ด น้ำเสัรวม T23AC073-0015		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.7 (33°C)	5-9	-
FLOW RATE °	m ³ /hr	CURRENT METER AND CALCULATION	21.75	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.8	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	1.8	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR YELLOW		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 14:40 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013705
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0016

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารพักขยะ T23AC073-0016		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.6 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	164	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	134	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	7	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID GREY		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 14:30 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013698
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการสุ่มน้ำ T23AC073-0009		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.9 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	5.0	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	17.5	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	24,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID YELLOW		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME	: CHAKRI NARUEBODINDRA MEDICAL INSTITUTE	RECEIVED DATE	: FEBRUARY 7, 2023
ADDRESS	: 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540	ANALYTICAL DATE	: FEBRUARY 7-14, 2023
CONTACT INFORMATION	: TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu	REPORT NO.	: 2023-U013706
SAMPLING SOURCE	: RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL	WORK NO.	: 2022-007587
SAMPLE TYPE	: BUILDING EFFLUENT	ANALYSIS NO.	: T23AC073-0017
SAMPLING DATE	: FEBRUARY 7, 2023		
SAMPLING TIME	: 14:00 HOUR		
SAMPLING METHOD °	: GRAB, GRAB AND STERILE TECHNIQUE		
SAMPLING BY °	: MR PRACHCHAPOL SOPHA		
ANALYZED BY	: MISS ITSARIYAPORN BUATIB		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อน้ำทางด้านทิศตะวันตกใกล้กับอาคารโรงพยาบาล T23AC073-0017		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.8 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	6.4	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	44.9	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	24,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			GREEN/TURBID		
SEDIMENT			GREEN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : FEBRUARY 7, 2023
SAMPLING TIME : 15:35 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : FEBRUARY 7, 2023
ANALYTICAL DATE : FEBRUARY 7-14, 2023
REPORT NO. : 2023-U013707
WORK NO. : 2022-007587
ANALYSIS NO. : T23AC073-0018

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อน้ำทางด้านทิศตะวันออกใกล้กับอาคารชั้นบนอาคาร T23AC073-0018		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.5 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	10.1	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	17.6	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	2,400	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			GREEN/TURBID		
SEDIMENT			GREEN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : -
SAMPLE TYPE : BLANK (BUILDING EFFLUENT) **RECEIVED DATE** : FEBRUARY 7, 2023
SAMPLING DATE : - **ANALYTICAL DATE** : FEBRUARY 7-14, 2023
SAMPLING TIME : - **REPORT NO.** : 2023-U013708
SAMPLING METHOD : - **WORK NO.** : 2022-007587
SAMPLING BY : - **ANALYSIS NO.** : 2023-FB0115, 2023-TB0115
ANALYZED BY : MISS ITSARIYAPORN BUATIB

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			1 2023-FB0115	2 2023-TB0115	
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	ND	2.0
SUSPENDED SOLIDS	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	ND	5.0
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	ND	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	< 1.8	< 1.8	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR	COLOURLESS/CLEAR	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

RESULT 1 : FIELD BLANK

RESULT 2 : TRIP BLANK

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 10:30 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022477
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศาลาประชาม และพิธีกร T23AD913-0001		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.8 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	ND	≤ 20	2.0
SUSPENDED SOLIDS ^c	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
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 E)	54,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 12:40 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022478
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจ T23AD913-0002		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.8 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	65.1	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	49.7	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 10:35 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022479
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และ วิจัย จุดอาคารศูนย์ การเรียนรู้ T23AD913-0003		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.5 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	ND	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	49	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 10:45 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022480
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้ และวิจัย จุฬาลงกรณ์มหาวิทยาลัย T23AD913-0004		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.8 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	57.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	57.2	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
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 E)	160,000	-	18
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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 11:20 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022481
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 1 T23AD913-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.8 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	109	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	67.6	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 11:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022482
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 2 T23AD913-0006		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	9.0 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	69.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	36.7	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 11:30 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022483
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 3 T23AD913-0007		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.9 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	70.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	28.0	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 11:35 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022484
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 4 T23AD913-0008		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	9.0 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	56.0	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	21.3	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 12:00 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022485
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารสุมน้ำ T23AD913-0009		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.9 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	9.2	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	24.8	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
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 E)	1,300	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 10:50 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022486
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0010

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารนิเทศการ T23AD913-0010		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.7 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	93.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	89.0	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 12:30 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022487
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0011

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักเจ้าหน้าที่ T23AD913-0011		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.9 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	54.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	42.4	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 11:00 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022488
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารวิศวกรรม บริการ T23AD913-0012		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.6 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	106	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	72.4	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 11:40 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022489
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0013

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			รับรองผล และซ่อมบำรุง T23AD913-0013		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.9 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	55.0	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	35.9	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	>160,000	-	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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 12:20 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022490
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0014

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			สถานีไฟฟ้าพลบ T23AD913-0014		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.8 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	2.2	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	7.3	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	92,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 12:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022492
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0016

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารพักขยะ T23AD913-0016		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.9 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	49.0	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	30.4	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	>160,000	-	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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023





Analysis / Test Report

TESTING

No.0009

Lot ID: 2325581

Date Received : Mar 10, 2023

Date Reported : Mar 17, 2023

Report Number : 2595698-1

Client : Chakri Naruebodindra Medical Institute, Faculty of Medicine Ramathibodi Hospital, Mahidol

University

111 Moo 14, Bang Pla, Bang Phli, Samutprakarn Thailand 10540

P/O : สังกะเสน C017/2566 (CNMI)

Project Name : โรงพยาบาลราชวิถีจังหวัดขอนแก่น

Project Location:

Page 1 of 2

Sample Number	2325581-3
Sampled Date	Mar 10, 2023 8:40 AM
Sample Description	Wastewater
Location	น้ำเสียจากบ้านจัด
Date Analysis Commenced	Mar 10, 2023
Condition of Sample	Contained in five plastic bottles and one amber glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
BOD (5 days at 20 degree C) *	mg/L	-	2.0	2.8	≤20	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, 4500 - O (C)	Bangkok
COD	mg/L	-	25	37	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Bangkok
Oil & Grease	mg/L	-	3	<3	≤20	In-house method : STM 04-014 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Bangkok
pH at 25 degree C		-	-	6.7	5.0-9.0	In-house method : STM 04-003 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Bangkok
Residual Free Chlorine *	mg/L	-	0.1	0.2	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - O (F)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	<0.1	≤0.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 F	Bangkok

Approved by

Tuanjai Thangklang
Manager

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate 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.



Analysis / Test Report

Client : Chakri Naruebodindra Medical Institute, Faculty of Medicine Ramathibodi Hospital, Mahidol University

111 Moo 14, Bang Pla, Bang Phli, Samutprakarn Thailand 10540

P/O : ศาสตราจารย์ ดร. C017/2566 (CNMI)

Project Name : โครงการพัฒนาระบบน้ำประปาชุมชน

Project Location:

TESTING

No.0009

Lot ID: 2325581

Date Received : Mar 10, 2023

Date Reported : Mar 17, 2023

Report Number : 2595697-1

Page 2 of 2

Guideline : Notification of Ministry of Natural Resources and Environment November, 7, B.E. 2548 on Effluent Control Standard from Types and Sized of Buildings, Type A.

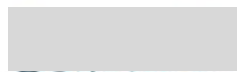
(1) : The values are in addition to the Total Dissolved Solids of the water used not more than 500 mg/L.

Sampling By : Prapote Wannachoochai

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by



Suwimon Chairuangwut

Scientist (2)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate 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.

ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 12:50 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022493
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0017

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อน้ำทางด้าน ทิศตะวันตกใกล้กับ อาคารโรงพยาบาล T23AD913-0017		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.7 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	7.9	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	22.5	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
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 E)	4.0	-	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

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REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MARCH 7, 2023
SAMPLING TIME : 11:25 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MISS WIMONWAN KHUMTAN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 7, 2023
ANALYTICAL DATE : MARCH 7-14, 2023
REPORT NO. : 2023-U022494
WORK NO. : 2022-007587
ANALYSIS NO. : T23AD913-0018

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อน้ำทางด้าน ทิศตะวันออกใกล้กับ อาคารนันทนาการ T23AD913-0018		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H+ B)	9.0 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	2.7	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	15.1	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	1,300	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : -
SAMPLE TYPE : BLANK (BUILDING EFFLUENT) **RECEIVED DATE** : MARCH 7, 2023
SAMPLING DATE : - **ANALYTICAL DATE** : MARCH 7-22, 2023
SAMPLING TIME : - **REPORT NO.** : 2023-U022495
SAMPLING METHOD : - **WORK NO.** : 2022-007587
SAMPLING BY : - **ANALYSIS NO.** : 2023-FB0210, 2023-TB0199
ANALYZED BY : MISS ITSARIYAPORN BUATIB

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			1 2023-FB0210	2 2023-TB0199	
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	ND	ND	2.0
SUSPENDED SOLIDS	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	ND	5.0
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	ND	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	< 1.8	< 1.8	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -	COLOURLESS/CLEAR -	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

RESULT 1 : FIELD BLANK

RESULT 2 : TRIP BLANK

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : -
SAMPLE TYPE : BLANK (BUILDING EFFLUENT) **RECEIVED DATE** : APRIL 4, 2023
SAMPLING DATE : - **ANALYTICAL DATE** : APRIL 4-19, 2023
SAMPLING TIME : - **REPORT NO.** : 2023-U031686
SAMPLING METHOD : - **WORK NO.** : 2022-007587
SAMPLING BY : - **ANALYSIS NO.** : 2023-FB0316, 2023-TB0302
ANALYZED BY : MISS ITSARIYAPORN BUATIB

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			1 2023-FB0316	2 2023-TB0302	
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	ND	ND	2.0
SUSPENDED SOLIDS	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	ND	5.0
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	ND	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	< 1.8	< 1.8	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -	COLOURLESS/CLEAR -	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

RESULT 1 : FIELD BLANK

RESULT 2 : TRIP BLANK

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 13:50 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031687
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจวัด และพิสัยกำหนด T23AG018-0001		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.7 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	2.0	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	5.6	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 15:00 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031690
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจ T23AG018-0002		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.7 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	56.1	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	44.3	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	5	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 13:30 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031691
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จุดอาคารศูนย์การเรียนรู้ T23AG018-0003		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.1 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	59.7	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	53.6	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 13:40 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031692
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จุดอาคารศูนย์การเรียนรู้ PRECLINIC T23AG018-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.8 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	26.8	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	59.8	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	2,400	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTITAMANUTIWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 15:20 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031694
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 1 T23AG018-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.4 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	109	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	66.2	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	5	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 15:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031697
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 2 T23AG018-0006		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.9 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	44.0	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	35.6	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	4	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 15:40 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031699
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 3 T23AG018-0007		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.7 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	57.9	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	44.8	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	4	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 15:30 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031702
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 4 T23AG018-0008		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.9 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	70.5	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	49.2	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	4	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 15:50 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031706
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0010

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการวิเคราะห์ T23AG018-0010		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.7 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	75.2	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	38.3	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	4	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 14:50 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031708
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0011

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอยพักเจ้าหน้าที่ T23AG018-0011		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.8 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	74.0	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	43.8	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	4	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(Signature)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 14:30 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031710
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			โรงจอดรถ และซ่อม ปาร์กรถ T23AG018-0012		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.7 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	174	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	71.8	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	6	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 28, 2023
SAMPLING TIME : 09:40 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 28, 2023
ANALYTICAL DATE : APRIL 28-MAY 11, 2023
REPORT NO. : 2023-U035348
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH638-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารวิศวกรรม บริการ T23AH638-0001		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H+ B)	7.5 (33°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	584	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	321	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	24	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 15, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 14:40 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031711
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0013

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			สถานีไฟฟ้ายม T23AG018-0013		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.8 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	ND	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	13,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 14:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031713
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0015

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารพักขยะ T23AG018-0015		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H+ B)	7.7 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	88.2	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	40.5	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	4	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID GREY		

^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, 23rd EDITION, 2017.

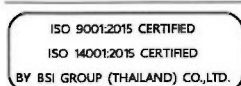
REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023





ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 16:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031714
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0016

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อน้ำทางด้าน ทิศตะวันตกใกล้กับ อาคารโรงพยาบาล T23AG018-0016		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.3 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	2.9	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	12.3	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	7,900	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR GREEN		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 16:00 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031715
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0017

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ป้อนหน่วยงานทางด้าน ทดสอบวิเคราะห์กับ มาตรฐานวิชาการ T23AG018-0017		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	9.0 (34°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	11.8	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	24.2	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	46	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID GREEN		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : APRIL 4, 2023
SAMPLING TIME : 14:20 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : APRIL 4, 2023
ANALYTICAL DATE : APRIL 4-17, 2023
REPORT NO. : 2023-U031704
WORK NO. : 2022-007587
ANALYSIS NO. : T23AG018-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการสุ่มน้ำ T23AG018-0009		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.3 (34°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	8.1	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	43.9	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 10:20 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035969
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ค่ามาตรฐาน และพิพจน์ T23AH729-0001		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.5 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	ND	≤ 20	2.0
SUSPENDED SOLIDS ^c	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
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 E)	35,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			YELLOW		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 10:30 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035970
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจ T23AH729-0002		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.4 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	35.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	18.6	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	4	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 10:10 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035971
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จุฬาลงกรณ์มหาวิทยาลัย การเรียนรู้ T23AH729-0003		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.2 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	34.5	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	44.7	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	12	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 13:00 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035972
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จุดอาคารศูนย์การเรียนรู้ PRECLINIC T23AH729-0004		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.9 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	42.3	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	63.9	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	14	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 12:40 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035973
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 1 T23AH729-0005		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.6 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	76.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	37.9	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	7	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	160,000	-	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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 12:30 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035974
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ อาคาร 2 T23AH729-0006		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.7 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	38.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	17.0	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	5	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 12:10 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035975
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและบุคลากร 3 T23AH729-0007		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.6 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	47.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	24.3	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	5	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 12:00 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035976
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 4 T23AH729-0008		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.8 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	15.1	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	11.1	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
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 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BLACK		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 12:20 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035977
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารนันทนาการ T23AH729-0009		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.5 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	63.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	34.0	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	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 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 11:50 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035978
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0010

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักเจ้าหน้าที่ T23AH729-0010		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.4 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	50.2	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	32.2	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
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 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 10:50 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035979
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0011

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการวิเคราะห์ บริการ T23AH729-0011		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.6 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	238	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	261	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	94	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 11:00 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035980
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			รับรองผล และซ่อม ปารุณ T23AH729-0012		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.3 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	166	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	66.5	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	15	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 11:20 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035981
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0013

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารพักขยะ T23AH729-0013		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.5 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	314	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	44.2	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	8	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			BLACK		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 11:40 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035982
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0014

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารบำบัดน้ำเสีย รวม T23AH729-0014		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.1 (33°C)	5-9	-
FLOW RATE ^c	m ³ /hr	CURRENT METER AND CALCULATION	25.45	-	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	ND	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	6.1	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
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 E)	11	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/CLEAR		
SEDIMENT			YELLOW		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 11:10 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035983
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0015

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารสุมน้ำ T23AH729-0015		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.5 (33°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	4.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	19.2	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
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 E)	11,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			YELLOW		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 13:10 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035985
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0017

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ป้อนหน่วยงานด้าน ทดสอบวิเคราะห์ อาคารโรงพยาบาล T23AH729-0017		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.3 (33°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	8.8	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	11.5	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
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 E)	790	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			YELLOW		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : MAY 2, 2023
SAMPLING TIME : 12:50 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PEERAPAT BANYATSIN
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035986
WORK NO. : 2022-007587
ANALYSIS NO. : T23AH729-0018

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อน้ำทางด้าน ทิศตะวันออกใกล้กับ อาคารนันทนาการ T23AH729-0018		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.5 (33°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	7.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	10.8	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
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 E)	490	-	18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			YELLOW		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : -
SAMPLE TYPE : BLANK (BUILDING EFFLUENT)
SAMPLING DATE : -
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : -
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MAY 2, 2023
ANALYTICAL DATE : MAY 2-12, 2023
REPORT NO. : 2023-U035987
WORK NO. : 2022-007587
ANALYSIS NO. : 2023-FB0415, 2023-TB0401

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			1 2023-FB0415	2 2023-TB0401	
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	ND	ND	2.0
SUSPENDED SOLIDS	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	ND	5.0
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	ND	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	< 1.8	< 1.8	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR	COLOURLESS/CLEAR	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

RESULT 1 : FIELD BLANK

RESULT 2 : TRIP BLANK

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 17, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : -
SAMPLE TYPE : BLANK (EFFLUENT) **RECEIVED DATE** : JUNE 6, 2023
SAMPLING DATE : - **ANALYTICAL DATE** : JUNE 6-13, 2023
SAMPLING TIME : - **REPORT NO.** : 2023-U049963
SAMPLING METHOD : - **WORK NO.** : 2022-007587
SAMPLING BY : - **ANALYSIS NO.** : 2023-FB0534, 2023-TB0520
ANALYZED BY : MISS AKSARIN BUNKONG

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			1 2023-FB0534	2 2023-TB0520	
BIOCHEMICAL OXYGEN DEMAND	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	ND	ND	2.0
SUSPENDED SOLIDS	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	ND	5.0
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	ND	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	< 1.8	< 1.8	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -	COLOURLESS/CLEAR -	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

RESULT 1 : FIELD BLANK

RESULT 2 : TRIP BLANK

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 09:50 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049964
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศาลาประชาม และพิธีภักษา T23AK434-0001		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.7 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	4.3	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 08:45 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049965
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจ T23AK434-0002		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H+ B)	7.7 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	49.4	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	28.1	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 09:40 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049966
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จุดอาคารศูนย์การเรียนรู้ T23AK434-0003		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.7 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	13.3	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	8.4	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 11:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049967
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จุดอาคารศูนย์การเรียนรู้ PRECLINIC T23AK434-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.8 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	46.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	25.2	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 11:00 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049970
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 1 T23AK434-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.5 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	79.0	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	34.4	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	4	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 10:55 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049972
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 2 T23AK434-0006		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.7 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	24.5	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	23.7	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	54,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 10:40 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049975
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 3 T23AK434-0007		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.6 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	68.1	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	19.7	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	4	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 10:35 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049977
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 4 T23AK434-0008		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.9 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	65.7	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	24.4	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	5	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 10:50 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049983
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0010

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารบันทึกการ T23AK434-0010		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.5 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	69.6	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	23.0	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 10:30 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049984
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0011

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ขอพักเจ้าหน้าที่ T23AK434-0011		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.7 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	51.0	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	22.7	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 08:55 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-15, 2023
REPORT NO. : 2023-U049985
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการวิเคราะห์ บริการ T23AK434-0012		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.6 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	222	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	373	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	88	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

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

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

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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 09:00 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049986
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0013

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			โรงจอดรถ และซ่อม ปาร์กรถ T23AK434-0013		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.2 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	136	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	96.2	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	13	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 10:20 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049987
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0014

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			สถานีไฟฟ้าพลม T23AK434-0014		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.4 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	ND	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	35,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 10:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049989
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0016

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารพักขยะ T23AK434-0016		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.7 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	94.8	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	73.3	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	8	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 10:00 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-16, 2023
REPORT NO. : 2023-U049988
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0015

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการบำบัด น้ำเสียรวม T23AK434-0015		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H+ B)	7.3 (31°C)	5-9	-
FLOW RATE °	m³/hr	CURRENT METER AND CALCULATION	19.3	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	ND	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221E)	< 1.8	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/CLEAR		
SEDIMENT			YELLOW		

^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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 09:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049990
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0017

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ป้อนหน่วยงานทางด้าน ทดสอบวิเคราะห์กับ อาคารโรงพยาบาล T23AK434-0017		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.8 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	2.8	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	41.6	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	490	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 11:03 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049991
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0018

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อน้ำทางด้าน ทิศตะวันออกใกล้กับ อาคารนันทนาการ T23AK434-0018		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.0 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	5.1	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	14.8	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	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 E)	2,400	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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, 23rd EDITION, 2017.

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ND : NON-DETECTABLE.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 2492 8914 e-mail : pakwipa.pai@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : JUNE 6, 2023
SAMPLING TIME : 10:05 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR APISIT SRIKONGKAEW
ANALYZED BY : MISS NAPAPORN KHUNNOKKHUM

RECEIVED DATE : JUNE 6, 2023
ANALYTICAL DATE : JUNE 6-13, 2023
REPORT NO. : 2023-U049980
WORK NO. : 2022-007587
ANALYSIS NO. : T23AK434-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารศูนย์ T23AK434-0009		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.1 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	ND	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	27.3	≤ 30	5.0
FREE CHLORINE °	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	-	0.1
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	3,300	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN		

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

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

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

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REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

ND : NON-DETECTABLE.

(MRS PIYAPAT SUTIMANUTWONG)
LABORATORY SUPERVISOR

JUNE 26, 2023

