

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 : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : SEPTEMBER 4, 2023
SAMPLING TIME : 12:35 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076624
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR281-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ทดลองใช้ T23AR281-0001	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.2 (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)	2.2	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	9.0	1.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	97.8	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/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.

ND : NON-DETECTABLE.

LABORATORY SUPERVISOR

SEPTEMBER 14, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : SEPTEMBER 4, 2023
SAMPLING TIME : 12:55 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR. SOMCHART LUTUMRAT
ANALYZED BY : MR. SOMCHART LUTUMRAT

RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076625
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR281-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ทดลองสำรวจ ณ สถานี T23AR281-0002	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.5 (33°C)	-
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: PART 2550 B)	33	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: PART 4500-O C)	3.7	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	4.2	1.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	49.3	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 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.

ND : NON-DETECTABLE.

LABORATORY SUPERVISOR

SEPTEMBER 14, 2023



ANALYSIS REPORT

CUSTOMER NAME	: CHAKRI NARUEBODINDRA MEDICAL INSTITUTE	RECEIVED DATE	: SEPTEMBER 4, 2023
ADDRESS	: 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540	ANALYTICAL DATE	: SEPTEMBER 4-12, 2023
CONTACT INFORMATION	: TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu	REPORT NO.	: 2023-U076626
SAMPLING SOURCE	: RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL	WORK NO.	: 2023-003345
SAMPLE TYPE	: SURFACE WATER	ANALYSIS NO.	: T23AR281-0003
SAMPLING DATE	: SEPTEMBER 4, 2023		
SAMPLING TIME	: 12:40 HOUR		
SAMPLING METHOD ^c	: GRAB		
SAMPLING BY ^c	: [REDACTED]		
ANALYZED BY	: [REDACTED]		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ทดลองค่า T23AR281-0003	
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.4 (32°C)	-
TEMPERATURE ^c	°C	THERMOMETER AT SITE (SM: PART 2550 B)	32	-
DISSOLVED OXYGEN ^c	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: PART 4500-O C)	2.0	0.5
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	26.9	1.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	123	5.0
FAT, OIL AND GREASE ^c	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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^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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 2023



ANALYSIS REPORT

CUSTOMER NAME	: CHAKRI NARUEBODINDRA MEDICAL INSTITUTE	RECEIVED DATE	: SEPTEMBER 4, 2023
ADDRESS	: 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540	ANALYTICAL DATE	: SEPTEMBER 4-12, 2023
CONTACT INFORMATION	: TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu	REPORT NO.	: 2023-U076627
SAMPLING SOURCE	: RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL	WORK NO.	: 2023-003345
SAMPLE TYPE	: SURFACE WATER	ANALYSIS NO.	: T23AR281-0004
SAMPLING DATE	: SEPTEMBER 4, 2023		
SAMPLING TIME	: 12:25 HOUR		
SAMPLING METHOD °	: GRAB		
SAMPLING BY °	: [REDACTED]		
ANALYZED BY	: [REDACTED]		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ผลของสาม T23AR281-0004	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.7 (33°C)	-
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: PART 2550 B)	33	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: PART 4500-O C)	2.7	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	2.2	1.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	7.4	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	

^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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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)
SAMPLING DATE : -
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : -
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-18, 2023
REPORT NO. : 2023-U062359
WORK NO. : 2023-003345
ANALYSIS NO. : 2023-FB0663, 2023-TB0642

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			1 2023-FB0663	2 2023-TB0642	
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.

LABORATORY SUPERVISOR

JULY 31, 2023



ภาคผนวก ข-2

ใบรายงานผลการวิเคราะห์คุณภาพเสียและน้ำทิ้ง

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 : JULY 6, 2023
SAMPLING TIME : 09:50 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062360
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ค่ามาตรฐาน และพิสัยกักเก็บ T23AM946-0001		
pH °	-	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)	5.0	≤ 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)	>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.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 11:10 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062361
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจ T23AM946-0002		
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)	89.0	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	46.1	≤ 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.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 09:40 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062362
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และ วิจัย จุฬาลงกรณ์ การเรียนรู้ T23AM946-0003		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H* B)	7.8 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	65.4	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	15.7	≤ 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.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 11:15 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062363
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และ วิจัย จุดอาคารศูนย์ การเรียนรู้ PRECLINIC T23AM946-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H+ B)	7.6 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	37.0	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	26.6	≤ 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.

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 LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 10:50 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062364
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ อาคาร 1 T23AM946-0005		
pH ^c	-	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)	201	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	55.2	≤ 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)	26	≤ 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.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 11:05 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062365
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ อาคาร 2 T23AM946-0006		
pH °	-	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)	34.0	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	30.8	≤ 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)	>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.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 10:35 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062366
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและบุคลากร 3 T23AM946-0007		
pH ^c	-	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)	86.7	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	59.9	≤ 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)	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 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.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 10:30 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062368
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 4 T23AM946-0008		
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)	49.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	18.2	≤ 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)	3	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221E)	>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

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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.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 10:55 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062370
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารนันทนาการ T23AM946-0009		
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)	49.5	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	26.6	≤ 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

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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.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 10:20 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062371
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0010

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลพิกษาหน้าทึ T23AM946-0010		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.9 (31°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)	35.4	≤ 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)	7	≤ 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.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 09:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062373
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0011

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการวิเคราะห์ บริการ T23AM946-0011		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.0 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	107	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	43.2	≤ 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.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 09:15 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062375
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			โรงจอดรถ และซ่อม ปาร์ก T23AM946-0012		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	6.9 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	137	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	62.7	≤ 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)	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.

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ND : NON-DETECTABLE.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 10:05 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062377
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0013

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการวิเคราะห์ T23AM946-0013		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.2 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	79.4	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	23.2	≤ 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 °	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

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ND : NON-DETECTABLE.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 10:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : 
ANALYZED BY : 

RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062384
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0016

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			สถานีไฟฟ้าผอม T23AM946-0016		
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)	160,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/CLEAR		
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.

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LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 10:15 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062387
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0019

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			โรงซักผ้า T23AM946-0019		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.2 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	12.2	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	48.4	≤ 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)	13,000	-	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.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 10:00 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062382
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0015

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารสุมน้ำ T23AM946-0015		
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)	2.5	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	22.5	≤ 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)	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		

° : 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.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 09:00 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-18, 2023
REPORT NO. : 2023-U062379
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0014

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการบำบัดน้ำเสียรวม T23AM946-0014		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	6.6 (32°C)	5-9	-
FLOW RATE °	m ³ /hr	CURRENT METER AND CALCULATION	20.75	-	-
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)	< 1.8	-	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.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 09:20 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062385
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0017

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ป้อนหน่วยงานด้าน ทดสอบวิเคราะห์กับ อาคารโรงพยาบาล T23AM946-0017		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.3 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	3.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 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: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	7,000	-	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.

LABORATORY SUPERVISOR

JULY 31, 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 : JULY 6, 2023
SAMPLING TIME : 11:00 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : JULY 6, 2023
ANALYTICAL DATE : JULY 6-14, 2023
REPORT NO. : 2023-U062386
WORK NO. : 2023-003345
ANALYSIS NO. : T23AM946-0018

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อน้ำทางด้าน ทิศตะวันออกใกล้กับ อาคารนันทนาการ T23AM946-0018		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.1 (33°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	3.2	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	11.3	≤ 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 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.

LABORATORY SUPERVISOR

JULY 31, 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 : AUGUST 8, 2023
SAMPLING TIME : 13:55 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068137
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศาลาประชาม และพิธีภักดิ์ T23AP181-0001		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.6 (34°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)	24,000	-	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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 16:20 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068138
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจ T23AP181-0002		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.5 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	45.4	≤ 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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 13:50 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068139
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จุดอาคารศูนย์การเรียนรู้ T23AP181-0003		
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)	38.5	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	13.9	≤ 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 °	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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 16:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068141
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จุฬาลงกรณ์มหาวิทยาลัย การเรียนรู้ PRECLINIC T23AP181-0004		
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)	73.8	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	50.1	≤ 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			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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 15:40 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : 
ANALYZED BY : 
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068143
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 1 T23AP181-0005		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.4 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	105	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	48.8	≤ 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)	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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 15:30 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068146
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 2 T23AP181-0006		
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)	105	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	38.8	≤ 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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 15:20 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068147
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 3 T23AP181-0007		
pH ^c	-	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)	82.8	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	32.8	≤ 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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 15:15 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068149
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 4 T23AP181-0008		
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)	67.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	19.6	≤ 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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 16:00 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068150
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารนั้นหนการ T23AP181-0009		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H° B)	7.5 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	60.9	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	26.2	≤ 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)	3	≤ 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.

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[Signature]
LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 15:05 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068151
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0010

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอดพักเจ้าหน้าที่ T23AP181-0010		
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)	29.3	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	15.8	≤ 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)	>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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 13:00 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : 
ANALYZED BY : 

RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068152
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0011

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารวิศวกรรม บริการ T23AP181-0011		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.3 (34°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	173	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	105	≤ 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 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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 13:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068153
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			โรงจอดรถ และซ่อม บำรุงรถ T23AP181-0012		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.3 (33°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	224	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	267	≤ 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)	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 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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 14:55 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068157
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0016

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			สถานีไฟฟ้าขอม T23AP181-0016		
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)	5.3	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	7.6	≤ 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)	24,000	-	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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 14:50 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068154
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0013

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารพักขยะ T23AP181-0013		
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)	135	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	166	≤ 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)	3	≤ 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 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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 14:30 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : 
ANALYZED BY : 

RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068160
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0019

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			โรงซักผ้า T23AP181-0019		
pH ^c	-	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)	7.7	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	9.2	≤ 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)	7,900	-	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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 14:20 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068155
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0014

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารพาณิชย์ รวม T23AP181-0014		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.2 (34°C)	5-9	-
FLOW RATE °	m ³ /hr	CURRENT METER AND CALCULATION	23	-	-
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)	330	-	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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 13:20 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068158
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0017

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อน้ำทางด้าน ทิศตะวันตกใกล้กับ อาคารโรงพยาบาล T23AP181-0017		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.7 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	6.2	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	31.9	≤ 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)	23	-	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)

° : 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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 15:45 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068159
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0018

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อน้ำทางด้านทิศตะวันออกเฉียงใต้ อาคารนันทนาการ T23AP181-0018		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.2 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	3.8	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	23.5	≤ 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)	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/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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : AUGUST 8, 2023
SAMPLING TIME : 14:40 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : 
ANALYZED BY : 

RECEIVED DATE : AUGUST 8, 2023
ANALYTICAL DATE : AUGUST 8-16, 2023
REPORT NO. : 2023-U068156
WORK NO. : 2023-003345
ANALYSIS NO. : T23AP181-0015

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการสุ่มน้ำ T23AP181-0015		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.0 (33°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	4.3	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	24.5	≤ 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)	>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.

LABORATORY SUPERVISOR

AUGUST 21, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 12:00 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076778
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ค่ามาตรฐาน และพิพจน์ที่ T23AR280-0001		
pH ^c	-	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)	2.8	≤ 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)	>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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 09:00 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076780
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจ T23AR280-0002		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.9 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	82.5	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	29.8	≤ 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)	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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 09:10 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076786
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จดอาคารศูนย์การเรียนรู้ T23AR280-0003		
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)	20.2	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	22.9	≤ 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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 09:20 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076789
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรือนรู้ และวิจัย จดอาคาร พรีคลินิกและศูนย์วิจัย T23AR280-0004		
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)	70.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	27.0	≤ 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			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.

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LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 09:40 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076791
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษา และบุคลากร 1 T23AR280-0005		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.1 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	83.2	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	38.7	≤ 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)	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/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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 09:30 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076793
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษา และบุคลากร 2 T23AR280-0006		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.2 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	81.3	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	44.6	≤ 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)	6	≤ 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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 10:10 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : 
ANALYZED BY : 

RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076795
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษา และบุคลากร 3 T23AR280-0007		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.0 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	80.7	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	28.2	≤ 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)	6	≤ 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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 10:00 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076796
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษา และบุคลากร 4 T23AR280-0008		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.1 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	66.0	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	28.4	≤ 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)	3	≤ 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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 10:20 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076797
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารนี้หน้าการ T23AR280-0009		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.2 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	10.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	13.6	≤ 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)

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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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 11:35 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076798
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0010

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักเจ้าหน้าที่ T23AR280-0010		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.1 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	41.0	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	27.6	≤ 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)

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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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 11:00 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076799
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0011

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารวิศวกรรม บริการ T23AR280-0011		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.0 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	103	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	33.4	≤ 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)	10	≤ 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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 10:50 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076800
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			รับรองผล และข้อมูลปรากฏ T23AR280-0012		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.0 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	107	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	45.3	≤ 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)	10	≤ 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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 11:30 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076807
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0016

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			สถานีไฟฟ้ามอญ T23AR280-0016		
pH ^c	-	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)	6.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	8.3	≤ 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			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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 11:20 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076801
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0013

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการวิเคราะห์ T23AR280-0013		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H+ B)	7.9 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	72.9	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	35.0	≤ 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)	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.

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 11:10 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : 
ANALYZED BY : 

RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076805
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0015

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารศูนย์น้ำ T23AR280-0015		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.2 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	2.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	13.7	≤ 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/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 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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 10:30 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076803
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0014

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการบำบัด น้ำเสียรวม T23AR280-0014		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.8 (33°C)	5-9	-
FLOW RATE °	m ³ /hr	CURRENT METER AND CALCULATION	22	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	3.6	≤ 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)	790	-	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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 11:50 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076808
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0017

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อน้ำทางด้านทิศตะวันตกใกล้กับอาคารโรงพยาบาล T23AR280-0017		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.6 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	3.9	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	26.2	≤ 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)	330	-	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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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 : SEPTEMBER 4, 2023
SAMPLING TIME : 09:50 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : 
ANALYZED BY : 

RECEIVED DATE : SEPTEMBER 4, 2023
ANALYTICAL DATE : SEPTEMBER 4-12, 2023
REPORT NO. : 2023-U076809
WORK NO. : 2023-003345
ANALYSIS NO. : T23AR280-0018

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อน้ำทางด้านทิศตะวันออกใกล้กับอาคารนันทนาการ T23AR280-0018		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.2 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	3.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	15.1	≤ 30	5.0
FREE CHLORINE ^c	mg/L Cl ₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	2.2	-	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)	310	-	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 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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 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** : SEPTEMBER 4, 2023
SAMPLING DATE : - **ANALYTICAL DATE** : SEPTEMBER 4-12, 2023
SAMPLING TIME : - **REPORT NO.** : 2023-U076811
SAMPLING METHOD : - **WORK NO.** : 2023-003345
SAMPLING BY : - **ANALYSIS NO.** : 2023-FB0865, 2023-TB0810
ANALYZED BY : MISS AKSARIN BUNKONG

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			1 2023-FB0865	2 2023-TB0810	
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.

LABORATORY SUPERVISOR

SEPTEMBER 14, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 10:20 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090663
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศาลาประชาม และพิธีภักดิ์ T23AT938-0001		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.4 (27°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	3.2	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	16.7	≤ 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)	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.

LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 10:30 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090664
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารจลตรก T23AT938-0002		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.3 (26°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	16.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	36.9	≤ 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.

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LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 10:00 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090665
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จุฬาลงกรณ์มหาวิทยาลัย การเรียนรู้ T23AT938-0003		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.2 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	7.8	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	17.9	≤ 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 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.

LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 5142 5492 e-mail : Natthathida.nan@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 10:10 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : 
ANALYZED BY : 

RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090666
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้ และวิจัย จุดอาคาร พรีคลินิกและศูนย์วิจัย T23AT938-0004		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.3 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	108	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	39.7	≤ 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)	6	≤ 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.

LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 12:20 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090667
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษา และบุคลากร 1 T23AT938-0005		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.2 (27°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	75.8	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	34.1	≤ 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/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.

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LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 12:10 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : [REDACTED]
ANALYZED BY : [REDACTED]

RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090668
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษา และบุคลากร 2 T23AT938-0006		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.6 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	65.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	33.8	≤ 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)	3	≤ 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.

LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 12:00 HOUR
SAMPLING METHOD ^c : GRAB. GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090669
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษา และบุคลากร 3 T23AT938-0007		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.5 (27°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	25.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	37.7	≤ 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.

LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 11:50 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090670
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษา และบุคลากร 4 T23AT938-0008		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.5 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	8.5	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	31.9	≤ 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.

LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 11:40 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090671
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจวิเคราะห์ T23AT938-0009		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.2 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	14.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	12.6	≤ 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 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.

LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 09 5142 5492 e-mail : Natthathida.nan@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 11:30 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : 
ANALYZED BY : 

RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090672
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0010

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ขอפקเจ้าหน้าที่ T23AT938-0010		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.5 (27°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	28.7	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	34.8	≤ 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)	>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.

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 LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 11:15 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090673
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0011

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารวิศวกรรม บริการ T23AT938-0011		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.2 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	4.8	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	45.1	≤ 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/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.

(M) _____
LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 10:40 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : 
ANALYZED BY : 
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090674
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			รับรองครุฑ และซ่อมบำรุงรถ T23AT938-0012		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.4 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	16.3	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	18.2	≤ 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/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.

LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 11:20 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090678
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0016

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			สถานีไฟฟ้าขอม T23AT938-0016		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.4 (27°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.

LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 11:10 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090675
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0013

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการวิเคราะห์ T23AT938-0013		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.1 (28°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 ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	40.4	≤ 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.

LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 10:45 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090676
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0014

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารบำบัด น้ำเสียรวม T23AT938-0014		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H+ B)	7.2 (28°C)	5-9	-
FLOW RATE °	m³/hr	CURRENT METER AND CALCULATION	54	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	3.5	≤ 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)	270	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/CLEAR		
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.

LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 10:55 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090677
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0015

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารศูนย์น้ำ T23AT938-0015		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.2 (28°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)	60.2	≤ 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)	7,000	-	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.

LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 12:30 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090679
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0017

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อน้ำทางด้าน ทิศตะวันตกใกล้กับ อาคารโรงพยาบาล T23AT938-0017		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.4 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	2.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	16.8	≤ 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)	2,400	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/CLEAR		
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.

LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : OCTOBER 6, 2023
SAMPLING TIME : 12:40 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090680
WORK NO. : 2023-003345
ANALYSIS NO. : T23AT938-0018

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ป้อนช่วงน้ำทางด้าน ที่ติดตั้งนอกใกล้กับ อาคารนั้นหนนาการ T23AT938-0018		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	7.6 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	3.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	16.3	≤ 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)	1,700	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/CLEAR		
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.

LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : -
SAMPLE TYPE : BLANK (EFFLUENT)
SAMPLING DATE : -
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : -
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : OCTOBER 6, 2023
ANALYTICAL DATE : OCTOBER 6-18, 2023
REPORT NO. : 2023-U090681
WORK NO. : 2023-003345
ANALYSIS NO. : 2023-FB1016, 2023-TB0957

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			1 2023-FB1016	2 2023-TB0957	
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.

.....
[Signature]
.....
LABORATORY SUPERVISOR

OCTOBER 30, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 10:25 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : 
ANALYZED BY : 
RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103766
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศาลาประชาม และ พิพิธภัณฑฯ T23AV826-0001		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	8.4 (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.

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LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 10:45 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103767
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจ T23AV826-0002		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 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)	63.0	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	31.2	≤ 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)	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 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.

LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 10:20 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103768
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จุฬาลงกรณ์มหาวิทยาลัย การเรียนรู้ T23AV826-0003		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	8.5 (30°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)	28.6	≤ 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.

LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 11:30 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : [REDACTED]
ANALYZED BY : [REDACTED]

RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103769
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จุฬาลงกรณ์มหาวิทยาลัย และศูนย์วิจัย T23AV826-0004		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	8.1 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	915	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	32.8	≤ 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.

LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 11:00 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103770
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและบุคลากร 1 T23AV826-0005		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	8.4 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	91.8	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	42.0	≤ 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)	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.

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[Signature]
LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 11:05 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : 
ANALYZED BY : 

RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103771
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 2 T23AV826-0006		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	8.4 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	100	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	74.8	≤ 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.

LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 11:10 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103772
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและบุคลากร 3 T23AV826-0007		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	8.4 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	85.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	66.4	≤ 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)	3	≤ 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.

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LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 11:15 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : N
ANALYZED BY : N
RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103773
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและบุคลากร 4 T23AV826-0008		
pH °	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H* B AND 1060 B	8.4 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	87.3	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	44.5	≤ 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)	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.

LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 10:55 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : 
ANALYZED BY : 

RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103774
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการวิเคราะห์ T23AV826-0009		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	8.1 (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)	28.5	≤ 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)	9	≤ 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.

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LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 10:40 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103775
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0010

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักเจ้าหน้าที่ T23AV826-0010		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 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)	72.9	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	29.4	≤ 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)	6	≤ 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.

LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 09:00 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103776
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0011

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารวิศวกรรม บริการ T23AV826-0011		
pH °	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H* B AND 1060 B	8.0 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	128	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	40.7	≤ 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)	11	≤ 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.

LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 09:05 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103777
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			รับรองผล และขอ ปำรุง T23AV826-0012		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	8.1 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	130	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	286	≤ 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.

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[Signature]
LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 09:20 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103778
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0013

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			สถานีไฟฟ้าผอม T23AV826-0013		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	8.3 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	3.7	≤ 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)	17,000	-	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.

LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 09:15 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103779
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0014

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการวิเคราะห์ T23AV826-0014		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	8.0 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	140	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	84.8	≤ 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)	6	≤ 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.

LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 10:35 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-21, 2023
REPORT NO. : 2023-U103780
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0015

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารบำบัด น้ำเสียรวม T23AV826-0015		
pH °	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H* B AND 1060 B	8.0 (31°C)	5-9	-
FLOW RATE °	m ³ /hr	CURRENT METER AND CALCULATION	22	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	3.0	≤ 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)	810	-	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.

LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 09:30 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103790
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0016

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อน้ำทางด้าน ทิศตะวันตกใกล้กับ อาคารโรงพยาบาล T23AV826-0016		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	8.5 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	2.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	18.4	≤ 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)	1,700	-	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
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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.

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LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 11:20 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : 
ANALYZED BY : 

RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103791
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0017

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ป้อนวงน้ำทางด้าน หัตถะวันออกใกล้กับ อาคารนันทนาการ T23AV826-0017		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	8.2 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	2.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	25.3	≤ 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)	1,700	-	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.

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : NOVEMBER 2, 2023
SAMPLING TIME : 09:10 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : NOVEMBER 2, 2023
ANALYTICAL DATE : NOVEMBER 2-9, 2023
REPORT NO. : 2023-U103792
WORK NO. : 2023-003345
ANALYSIS NO. : T23AV826-0018

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารสูงน้ำ T23AV826-0018		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H* B AND 1060 B	7.8 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	6.7	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	11.0	≤ 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)	17,000	-	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.

....
LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : -
SAMPLE TYPE : BLANK (EFFLUENT) **RECEIVED DATE** : NOVEMBER 2, 2023
SAMPLING DATE : - **ANALYTICAL DATE** : NOVEMBER 2-21, 2023
SAMPLING TIME : - **REPORT NO.** : 2023-U103793
SAMPLING METHOD : - **WORK NO.** : 2023-003345
SAMPLING BY : - **ANALYSIS NO.** : 2023-FB1136, 2023-TB1078
ANALYZED BY : MISS AKSARIN BUNKONG

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			1 2023-FB1136	2 2023-TB1078	
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.

[Signature]

LABORATORY SUPERVISOR

DECEMBER 1, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 09:35 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : [REDACTED]
ANALYZED BY : [REDACTED]

RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110790
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ค่ามาตรฐาน และ พิพจน์เกณฑ์ T23AY217-0001		
pH °	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 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)	7,900	-	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.

([REDACTED])
LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 09:45 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : [REDACTED]
ANALYZED BY : [REDACTED]

RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110793
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจวัด T23AY217-0002		
pH °	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	7.5 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	24.3	≤ 20	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	33.2	≤ 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)	3	≤ 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.

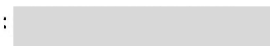

ND : NON-DETECTABLE.

([REDACTED])
LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 09:30 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : 
ANALYZED BY : 

RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110795
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จุฬาลงกรณ์มหาวิทยาลัย การเรียนรู้ T23AY217-0003		
pH °	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 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)	90.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	56.1	≤ 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)	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.

LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 11:20 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : [REDACTED]
ANALYZED BY : [REDACTED]

RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110796
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ศูนย์การเรียนรู้และวิจัย จุฬาลงกรณ์มหาวิทยาลัย และศูนย์วิจัย T23AY217-0004		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 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)	44.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	66.0	≤ 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)	6	≤ 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 PITAPAT SUTTHAMANTWONG)
LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 10:50 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : [REDACTED]
ANALYZED BY : [REDACTED]

RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110797
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและบุคลากร 1 T23AY217-0005		
pH °	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	7.6 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	55.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	34.8	≤ 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)	6	≤ 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.

LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 10:45 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : [REDACTED]
ANALYZED BY : [REDACTED]

RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110799
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและ บุคลากร 2 T23AY217-0006		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 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)	55.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	40.1	≤ 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.

LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 10:40 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110800
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและบุคลากร 3 T23AY217-0007		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 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)	59.0	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	35.2	≤ 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)	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			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.

LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 10:35 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110802
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักนักศึกษาและบุคลากร 4 T23AY217-0008		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 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)	40.6	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	35.8	≤ 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)	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.

LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 11:00 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c : 
ANALYZED BY : 

RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110803
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการตรวจวิเคราะห์ T23AY217-0009		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 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)	33.8	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	45.7	≤ 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)	7	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221E)	>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.

LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 10:30 HOUR
SAMPLING METHOD ^c : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ^c :
ANALYZED BY :
RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110804
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0010

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			หอพักเจ้าหน้าที่ T23AY217-0010		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 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)	30.9	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	38.8	≤ 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)	6	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221E)	>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.

LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 09:50 HOUR
SAMPLING METHOD ° : GRAB. GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110805
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0011

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารวิศวกรรม บริการ T23AY217-0011		
pH °	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H* B AND 1060 B	7.0 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	96.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	113	≤ 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/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.

LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 09:55 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110806
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0012

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			โรงจลตรก และซ่อม ปรารุรก T23AY217-0012		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	7.0 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	85.4	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	74.6	≤ 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.

LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 10:10 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110807
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0013

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			สถานีฟิฟายลอบ T23AY217-0013		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 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)	12.0	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	15.7	≤ 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)	10	≤ 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.

LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 10:05 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° :
ANALYZED BY :
RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110822
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0014

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ผลการทดสอบ T23AY217-0014		
pH °	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 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)	51.5	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	39.0	≤ 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)	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

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ND : NON-DETECTABLE.

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[Signature]
LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 11:30 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-20, 2023
REPORT NO. : 2023-U110823
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0015

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารพาณิชย์ น้ำเสียนรวม T23AY217-0015		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	7.2 (30°C)	5-9	-
FLOW RATE ^c	m ³ /hr	CURRENT METER AND CALCULATION	21	-	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	2.0	≤ 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)	2,100	-	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 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.

LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 10:20 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110836
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0016

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ป้อนหน่วยงานด้าน ทดสอบวิเคราะห์ อาคารโรงพยาบาล T23AY217-0016		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	7.1 (29°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)	20.5	≤ 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)	70	-	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.

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LABORATORY SUPERVISOR

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 11:10 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : [REDACTED]
ANALYZED BY : [REDACTED]

RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110837
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0017

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อนำทางด้าน ทิศตะวันออกใกล้กับ อาคารนันทนาการ T23AY217-0017		
pH °	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 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)	2.5	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	19.1	≤ 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 ^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.

DECEMBER 28, 2023



ANALYSIS REPORT

CUSTOMER NAME : CHAKRI NARUEBODINDRA MEDICAL INSTITUTE
ADDRESS : 111 MOO 14 BANG PLA BANG PHLI SAMUT PRAKAN 10540
CONTACT INFORMATION : TEL : 0 2839 5131 e-mail : Natchapon.kad@mahidol.edu
SAMPLING SOURCE : RAMADHIBODI CHAKRI NARUEBODINDRA HOSPITAL
SAMPLE TYPE : BUILDING EFFLUENT
SAMPLING DATE : DECEMBER 4, 2023
SAMPLING TIME : 10:00 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY :
ANALYZED BY :
RECEIVED DATE : DECEMBER 4, 2023
ANALYTICAL DATE : DECEMBER 4-12, 2023
REPORT NO. : 2023-U110838
WORK NO. : 2023-003345
ANALYSIS NO. : T23AY217-0018

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			อาคารสูงน้ำ T23AY217-0018		
pH ^c	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H ⁺ B AND 1060 B	6.9 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	2.5	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	8.6	≤ 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)	2,200	-	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)

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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.

LABORATORY SUPERVISOR

DECEMBER 28, 2023

