

ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JULY 8, 2022
SAMPLING TIME : 13:20 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR ACHITA SAENGJAN ๖-145-๖-0044
ANALYZED BY : MISS AMONRAT PUTTALEE ๖-145-๖-0009

RECEIVED DATE : JULY 8, 2022
ANALYTICAL DATE : JULY 8-19, 2022
REPORT NO. : 2022-U057017
WORK NO. : 2021-008818
ANALYSIS NO. : T22AN565-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกเก็บตัวอย่าง ด้านหน้าโครงการ (ผ่านการบำบัด) T22AN565-0001		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	6.6 (32°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	8.4	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	5.5	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	1,981	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN		

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

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

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

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

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Benjawan V.

(MISS BENJAWAN VIRIYOTHA)
LABORATORY SUPERVISOR
๖-145-๖-0006
JULY 21, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JULY 8, 2022
SAMPLING TIME : 13:30 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR ACHITA SAENGJAN จ-145-จ-0044
ANALYZED BY : MISS AMONRAT PUTTALEE จ-145-จ-0009

RECEIVED DATE : JULY 8, 2022
ANALYTICAL DATE : JULY 8-19, 2022
REPORT NO. : 2022-U057018
WORK NO. : 2021-008818
ANALYSIS NO. : T22AN565-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกเก็บน้ำหลังโรง ผลิตกรดกำมะถันเก่า T22AN565-0002		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	6.8 (33°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	33.8	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	6.3	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	3,880	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN		

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

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

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

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

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Benjawan V.

(MISS BENJAWAN VIRIYOTHAJ)
LABORATORY SUPERVISOR
จ-145-ค-0006
JULY 21, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JULY 8, 2022
SAMPLING TIME : 13:40 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR ACHITA SAENGJAN จ-145-จ-0044
ANALYZED BY : MISS AMONRAT PUTTALEE จ-145-จ-0009

RECEIVED DATE : JULY 8, 2022
ANALYTICAL DATE : JULY 8-19, 2022
REPORT NO. : 2022-U057019
WORK NO. : 2021-008818
ANALYSIS NO. : T22AN565-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่งชี้คุณภาพน้ำด้านหน้า ท่าเทียบเรือ T22AN565-0003		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	7.4 (32°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	63.2	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	221	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	33.6	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	2,040	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	4	≤ 5	3
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 : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

Benjawan V.

(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR
จ-145-ค-0006
JULY 21, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : AUGUST 10, 2022
SAMPLING TIME : 09:10 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR PIPAT TUNTANAKUL ว-145-จ-0057
ANALYZED BY : MISS AMONRAT PUTTALAE ว-145-จ-0009
RECEIVED DATE : AUGUST 10, 2022
ANALYTICAL DATE : AUGUST 10-17, 2022
REPORT NO. : 2022-U064366
WORK NO. : 2021-008818
ANALYSIS NO. : T22AP703-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกเก็บตัวอย่าง ด้านหน้าโครงการ (ผ่านการบำบัด) T22AP703-0001		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	6.6 (29°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	2.4	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	10.6	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	1,328	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	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.

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Benjawan V.

(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR
ว-145-ค-0006
AUGUST 22, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : AUGUST 10, 2022
SAMPLING TIME : 09:30 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : MR PIPAT TUNTANAKUL จ-145-จ-0057
ANALYZED BY : MISS AMONRAT PUTTALEE จ-145-จ-0009

RECEIVED DATE : AUGUST 10, 2022
ANALYTICAL DATE : AUGUST 10-17, 2022
REPORT NO. : 2022-U064367
WORK NO. : 2021-008818
ANALYSIS NO. : T22AP703-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกเก็บน้ำหลังโรง ผลิตกรดกำมะถันเก่า T22AP703-0002		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	6.4 (30°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	20.5	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	2,603	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	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.

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Benjawan V.

(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR
จ-145-ค-0006
AUGUST 22, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : AUGUST 10, 2022
SAMPLING TIME : 09:20 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR PIPAT TUNTANAKUL จ-145-จ-0057
ANALYZED BY : MISS AMONRAT PUTTALEE จ-145-จ-0009
RECEIVED DATE : AUGUST 10, 2022
ANALYTICAL DATE : AUGUST 10-17, 2022
REPORT NO. : 2022-U064368
WORK NO. : 2021-008818
ANALYSIS NO. : T22AP703-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่งชี้คุณภาพน้ำด้านหน้า ท่าเทียบเรือ T22AP703-0003		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	7.2 (29°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	8.6	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	37.0	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	13.5	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	1,124	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	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.

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Benjawan V.

(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR
จ-145-ค-0006
AUGUST 22, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : SEPTEMBER 14, 2022
SAMPLING TIME : 10:10 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR ACHITA SAENGJAN ๖-145-๖-0044
ANALYZED BY : MISS AMONRAT PUTTALEE ๖-145-๖-0009

RECEIVED DATE : SEPTEMBER 14, 2022
ANALYTICAL DATE : SEPTEMBER 14-22, 2022
REPORT NO. : 2022-U074923
WORK NO. : 2021-008818
ANALYSIS NO. : T22AS172-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกเก็บตัวอย่าง ด้านหน้าโครงการ (ผ่านการบำบัด) T22AS172-0001		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	6.6 (31°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	26.0	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	1,402	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
METALS					
ARSENIC ^c	mg/L As	DIGESTION, HYDRIDE GENERATION/ATOMIC ABSORPTION SPECTROMETRIC METHOD (SM: 3114 C)	0.0019	≤ 0.25	0.0003
HEXAVALENT CHROMIUM ^c	mg/L Cr ⁶⁺	FILTRATION, COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	≤ 0.25	0.006
CADMIUM ^c	mg/L Cd	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	ND	≤ 0.03	0.002
LEAD ^c	mg/L Pb	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	ND	≤ 0.2	0.015
MANGANESE ^c	mg/L Mn	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	0.233	≤ 5.0	0.004
NICKEL ^c	mg/L Ni	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	0.285	≤ 1.0	0.005
ZINC ^c	mg/L Zn	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	ND	≤ 5.0	0.003



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกเก็บตัวอย่าง ด้านหน้าโครงการ (ผ่านการบำบัด) T22AS172-0001		
MERCURY ^c	mg/L Hg	DIGESTION, COLD-VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD (SM: 3112 B)	ND	≤ 0.005	0.0005
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 : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Bhuchonk Panichlertumpi

(MR BHUCHONK PANICHLERTUMPI)

LABORATORY SUPERVISOR

ว-145-ค-0020

SEPTEMBER 27, 2022

ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : SEPTEMBER 14, 2022
SAMPLING TIME : 10:20 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR ACHITA SAENGJAN ๖-145-๖-0044
ANALYZED BY : MISS AMONRAT PUTTALEE ๖-145-๖-0009

RECEIVED DATE : SEPTEMBER 14, 2022
ANALYTICAL DATE : SEPTEMBER 14-21, 2022
REPORT NO. : 2022-U074924
WORK NO. : 2021-008818
ANALYSIS NO. : T22AS172-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			มอภกเก็บน้ำหลัง โรงผลิตกรด ท่ามะกัณเภา T22AS172-0002		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	6.2 (31°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	2.4	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	291	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN		

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

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

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

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

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)

LABORATORY SUPERVISOR

๖-145-๖-0004

SEPTEMBER 27, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : SEPTEMBER 14, 2022
SAMPLING TIME : 10:30 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR ACHITA SAENGJAN ๖-145-๖-0044
ANALYZED BY : MISS AMONRAT PUTTALEE ๖-145-๖-0009

RECEIVED DATE : SEPTEMBER 14, 2022
ANALYTICAL DATE : SEPTEMBER 14-21, 2022
REPORT NO. : 2022-U074925
WORK NO. : 2021-008818
ANALYSIS NO. : T22AS172-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกเก็บน้ำด้านหน้าท่าเทียบเรือ T22AS172-0003		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	6.9 (30°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	2.9	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	33.0	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	26.9	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	640	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN		

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

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

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

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

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)

LABORATORY SUPERVISOR

๖-145-๖-0004

SEPTEMBER 27, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : OCTOBER 10, 2022
SAMPLING TIME : 11:00 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR ACHITA SAENGJAN จ-145-จ-0044
ANALYZED BY : MISS AMONRAT PUTTALEE จ-145-จ-0009

RECEIVED DATE : OCTOBER 10, 2022
ANALYTICAL DATE : OCTOBER 10-19, 2022
REPORT NO. : 2022-U082677
WORK NO. : 2021-008818
ANALYSIS NO. : T22AU125-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกเก็บตัวอย่าง ด้านหน้าโครงการ (ผ่านการบำบัด) T22AU125-0001		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	6.4 (30°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	549	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	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.

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR
จ-145-ค-0004
OCTOBER 27, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : OCTOBER 10, 2022
SAMPLING TIME : 11:10 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR ACHITA SAENGJAN จ-145-จ-0044
ANALYZED BY : MISS AMONRAT PUTTALEE จ-145-จ-0009

RECEIVED DATE : OCTOBER 10, 2022
ANALYTICAL DATE : OCTOBER 10-19, 2022
REPORT NO. : 2022-U082678
WORK NO. : 2021-008818
ANALYSIS NO. : T22AU125-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกรักเก็บน้ำทิ้ง โรงผลิตกรด ท่ามะกันเก่า T22AU125-0002		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	6.4 (29°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	15.1	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	939	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	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.

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR
จ-145-ค-0004
OCTOBER 27, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : OCTOBER 10, 2022
SAMPLING TIME : 11:20 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR ACHITA SAENGJAN จ-145-จ-0044
ANALYZED BY : MISS AMONRAT PUTTALEE จ-145-จ-0009

RECEIVED DATE : OCTOBER 10, 2022
ANALYTICAL DATE : OCTOBER 10-19, 2022
REPORT NO. : 2022-U082679
WORK NO. : 2021-008818
ANALYSIS NO. : T22AU125-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกรักเก็บน้ำด้านหน้าท่าเทียบเรือ T22AU125-0003		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	7.0 (29°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	2.0	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	13.6	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	439	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	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.

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR
จ-145-ค-0004
OCTOBER 27, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : NOVEMBER 11, 2022
SAMPLING TIME : 09:00 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR ACHITA SAENGJAN ๖-145-๖-0044
ANALYZED BY : MISS AMONRAT PUTTALAE ๖-145-๖-0009

RECEIVED DATE : NOVEMBER 11, 2022
ANALYTICAL DATE : NOVEMBER 11-18, 2022
REPORT NO. : 2022-U092225
WORK NO. : 2021-008818
ANALYSIS NO. : T22AW547-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกเก็บตัวอย่าง ด้านหน้าโครงการ (ผ่านการบำบัด) T22AW547-0001		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	7.0 (30°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	3.2	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	43.6	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	9.8	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	455	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN		

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

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

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

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

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.



(MISS PAWEENA CHARASCHOTEPINIT)
LABORATORY SUPERVISOR
๖-145-๖-0013
NOVEMBER 23, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : NOVEMBER 11, 2022
SAMPLING TIME : 09:10 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR ACHITA SAENGJAN จ-145-จ-0044
ANALYZED BY : MISS AMONRAT PUTTALAE จ-145-จ-0009

RECEIVED DATE : NOVEMBER 11, 2022
ANALYTICAL DATE : NOVEMBER 11-18, 2022
REPORT NO. : 2022-U092226
WORK NO. : 2021-008818
ANALYSIS NO. : T22AW547-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกรักเก็บน้ำหลัง โรงผลิตกรด ก้ามกะทัน T22AW547-0002		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	6.5 (29°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	27.7	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	9.2	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	1,072	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN		

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

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

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

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

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Paewee Ch.

(MISS PAWEENA CHARASCHOTEPINIT)

LABORATORY SUPERVISOR

จ-145-ก-0013

NOVEMBER 23, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : NOVEMBER 11, 2022
SAMPLING TIME : 09:20 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR ACHITA SAENGJAN จ-145-จ-0044
ANALYZED BY : MISS AMONRAT PUTTALEE จ-145-จ-0009

RECEIVED DATE : NOVEMBER 11, 2022
ANALYTICAL DATE : NOVEMBER 11-18, 2022
REPORT NO. : 2022-U092227
WORK NO. : 2021-008818
ANALYSIS NO. : T22AW547-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกรักเก็บน้ำด้านหน้าหาเทียมเรือ T22AW547-0003		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	7.0 (29°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	2.2	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	42.8	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	22.8	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	250	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN		

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

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

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

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

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Paewana Ch.

(MISS PAWEENA CHARASCHOTEPINIT)

LABORATORY SUPERVISOR

จ-145-ค-0013

NOVEMBER 23, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : DECEMBER 14, 2022
SAMPLING TIME : 10:40 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR ACHITA SAENGJAN ๖-145-๖-0044
ANALYZED BY : MISS AMONRAT PUTTALEE ๖-145-๖-0009

RECEIVED DATE : DECEMBER 14, 2022
ANALYTICAL DATE : DECEMBER 14-22, 2022
REPORT NO. : 2022-U102732
WORK NO. : 2021-008818
ANALYSIS NO. : T22AY879-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกเก็บตัวอย่าง ด้านหน้าโครงการ (ผ่านการบำบัด) T22AY879-0001		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	7.0 (30°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	2.0	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	27.4	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	10.0	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	1,708	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
METALS					
ARSENIC °	mg/L As	DIGESTION, HYDRIDE GENERATION/ATOMIC ABSORPTION SPECTROMETRIC METHOD (SM: 3114 C)	0.0019	≤ 0.25	0.0003
HEXAVALENT CHROMIUM °	mg/L Cr ⁶⁺	FILTRATION, COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	≤ 0.25	0.006
CADMIUM °	mg/L Cd	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	ND	≤ 0.03	0.002
LEAD °	mg/L Pb	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	ND	≤ 0.2	0.015
MANGANESE °	mg/L Mn	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	0.455	≤ 5.0	0.004
NICKEL °	mg/L Ni	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	ND	≤ 1.0	0.005
ZINC °	mg/L Zn	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	ND	≤ 5.0	0.003



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกเก็บตัวอย่าง ด้านหน้าโครงการ (ผ่านการนำวัด) T22AY879-0001		
MERCURY ^c	mg/L Hg	DIGESTION, COLD-VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD (SM: 3112 B)	ND	≤ 0.005	0.0005
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 : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Bhuchonk p.

(MR BHUCHONK PANICHLERTUMPI)

LABORATORY SUPERVISOR

ว-145-ค-0020

DECEMBER 27, 2022

ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY

ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290

CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th

SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY

SAMPLE TYPE : EFFLUENT

SAMPLING DATE : DECEMBER 14, 2022

SAMPLING TIME : 10:50 HOUR

SAMPLING METHOD ^c : GRAB

SAMPLING BY ^c : MR ACHITA SAENGJAN ๖-145-๖-0044

ANALYZED BY : MISS AMONRAT PUTTALEE ๖-145-๖-0009

RECEIVED DATE : DECEMBER 14, 2022

ANALYTICAL DATE : DECEMBER 14-21, 2022

REPORT NO. : 2022-U102735

WORK NO. : 2021-008818

ANALYSIS NO. : T22AY879-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บอกเก็บน้ำหลัง โรงผลิตกรด ก้นบ่อ T22AY879-0002		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	6.7 (28°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	10.5	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	1,824	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	3
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN		

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

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

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

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

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)

LABORATORY SUPERVISOR

๖-145-๖-0004

DECEMBER 27, 2022



ANALYSIS REPORT

CUSTOMER NAME : SIAM CHEMICALS PUBLIC COMPANY
ADDRESS : 196 MOO 1 SUK SAWAT ROAD PAK KHLONG BANG PLA KOT PHRA SAMUT CHEDI SAMUT PRAKAN 10290
CONTACT INFORMATION : TEL : 0 2815 6980 e-mail : Chamaiporn_J@siamchemicals.co.th
SAMPLING SOURCE : SIAM CHEMICALS PUBLIC COMPANY
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : DECEMBER 14, 2022
SAMPLING TIME : 11:00 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR ACHITA SAENGJAN ๖-145-๖-0044
ANALYZED BY : MISS AMONRAT PUTTALEE ๖-145-๖-0009

RECEIVED DATE : DECEMBER 14, 2022
ANALYTICAL DATE : DECEMBER 14-21, 2022
REPORT NO. : 2022-U102736
WORK NO. : 2021-008818
ANALYSIS NO. : T22AY879-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			มอกกเก็บน้ำด้านหน้าท่าเทียบเรือ T22AY879-0003		
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM: 4500-H ⁺ B)	7.1 (29°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: 5210 B AND 4500-O G)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: 2540 D)	29.9	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: 2540 C)	1,415	≤ 3,000	25
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 5	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.

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)

LABORATORY SUPERVISOR

๖-145-๖-0004

DECEMBER 27, 2022

