



## TEST REPORT

**Analysis No. :** R23-1579/DIW  
**Received Date :** 29/05/23  
**Customer :** Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address :** 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact :** Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385  
**Sample Conditions :** 2305-WW0617 = white turbid/high black sediment

**Report Date :** 13/06/23  
**Analysis Date :** 26/05-06/06/23  
**Job No. :** S660326/May/1  
**Sampling Date \* :** 26/05/23  
**Sampling By \* :** Mr. Witoon Walairat  
**Registration Number :** จ-236-จ-6057  
**Type of Sample :** Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result	Standard	Analysis Date
				2305-WW0617		
				Water Circulate		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	32.4	40	26/05/23
2	pH *	-	Electrometric Method (SM 4500 B)	8.45	5.5-9.0	26/05/23
3	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	327	3,000	30/05/23
4	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	3	20	01-06/06/231
5	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	29	120	30/05/23
6	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	5	30/05/23
7	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	1.30	100	31/05/23
8	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.2	31/05/23
9	Phenol *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	1.0	30/05/23
10	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	1.0	02/06/23
11	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(b)</sup>	< 0.01	1.0	30/05/23
12	Free Chlorine *	mg/L	DPD Ferrous Titrimetric Method (SM 4500-Cl <sub>2</sub> F)	< 0.01	1.0	30/05/23
13	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) <sup>[2]</sup> ; Filtration, Colorimetric Method (SM 3500-Cr B) ; Calculation	< 0.02	0.75	30/05/23
14	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.25	29/05/23
15	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	31/05/23
16	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0020	0.25	02/06/23
17	Se *	mg/L		< 0.0005	0.02	02/06/23

continue

- PRIVATE LABORATORY REGISTERED NO. จ-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No. :** R23-1579/DIW **Report Date :** 13/06/23  
**Received Date :** 29/05/23 **Analysis Date :** 26/05-06/06/23  
**Customer :** Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA **Job No. :** S660326/May/1  
**Address :** 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120 **Sampling Date \* :** 26/05/23  
**Contact :** Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385 **Sampling By \* :** Mr. Witoon Walairat  
**Registration Number :** จ-236-จ-6057  
**Type of Sample :** Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard	Analysis Date
				2305-WW0617		
				Water Circulate		
18	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.08	1.0	30/05/23
19	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	30/05/23
20	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	2.0	30/05/23
21	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.06	5.0	30/05/23
22	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	1.0	30/05/23
23	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	0.2	30/05/23
24	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	5.0	30/05/23

**Remarks :** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"  
Water Circulate = 47P 0671093 UTM 1561035  
**Method (a)** SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
**(b)** คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิทยาลัยเกษตร วิสุทธรักษ์  
**Standard :** Notification of the Ministry of Industry (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory

จ-236-ก-7201  
13/6/23



Approved by

Mrs. Pornpip Pethshee  
Laboratory Manager

จ-236-ก-6047  
13/6/23

..... END OF REPORT .....

- PRIVATE LABORATORY REGISTERED NO. จ-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No.** : R23-1263  
**Received Date** : 02/05/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA

**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120

**Contact** : Tel. (02) 529 0474 # 196 Fax. (02) 529 4385

**Sample Conditions** : 2305-WW0008 = white turbid/high white sediment/covered with oil slick, Flow Rate = 75 m<sup>3</sup>/hr.

2305-WW0009 = clear/slight white sediment, Flow Rate = 75 m<sup>3</sup>/hr.

**Report Date** : 12/05/23  
**Analysis Date** : 28/04-10/05/23  
**Job No.** : S660326/Apr/1  
**Sampling Date \*** : 28/04/23  
**Sampling By \*** : Mr. Rattapon Sukdee  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				Wastewater Surface Treatment Plant			
				(WWTP1)			
				2305-WW0008	2305-WW0009		
				Inlet <sup>(1)</sup>	Outlet		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	29.7	31.7	45	28/04/23
2	pH *	-	Electrometric Method (SM 4500 B)	4.22	7.09	6.0-9.0	28/04/23
3	SS *	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	< 2.5	< 2.5	500	08/05/23
4	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	2,667	2,178	3,000	05/05/23
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	3	2	450	03-08/05/23
6	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	39	22	600	03/05/23
7	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	1.2	0.4	100	05/05/23
8	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	17.19	31.11	100	09/05/23
9	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	0.006	< 0.001	5.0	08/05/23
10	Phenol *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	10	09/05/23
11	Sulfate *	mg/L	Turbidimetric (SM 4500-SO <sub>4</sub> <sup>2-</sup> E)	1,566.96	1,245.97	-	10/05/23
12	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(b)</sup>	0.04	< 0.01	1.0	09/05/23
13	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B) ; Calculation	0.09	< 0.02	0.75	05/05/23
14	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25	05/05/23
15	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.01	08/05/23
16	Se *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	< 0.0005	< 0.0005	1.0	09/05/23

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





## TEST REPORT

**Analysis No.** : R23-1263  
**Received Date** : 02/05/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 196 Fax. (02) 529 4385

**Report Date** : 12/05/23  
**Analysis Date** : 28/04-10/05/23  
**Job No.** : S660326/Apr/1  
**Sampling Date \*** : 28/04/23  
**Sampling By \*** : Mr. Rattapon Sukdee  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				Wastewater Surface Treatment Plant (WWTP1)			
				2305-WW0008	2305-WW0009		
				Inlet <sup>(1)</sup>	Outlet		
17	Al *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	313.35	2.56	5.0	08, 10/05/23
18	Co *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05	-	10/05/23
19	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05	1.0	05/05/23
20	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02	1.0	05/05/23
21	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	1.11	< 0.05	1.0	05/05/23
22	Fe	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	2.29	0.09	5.0	05/05/23
23	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.21	0.06	5.0	05/05/23
24	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	1.96	0.22	1.0	05/05/23
25	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	1.0	05/05/23
26	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.15	< 0.04	5.0	05/05/23

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: Wastewater Surface Treatment Plant (WWTP1) Inlet = 47P 0671235 UTM 1561362  
Wastewater Surface Treatment Plant (WWTP1) Outlet = 47P 0671234 UTM 1561351

**Method** (a) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017

(b) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ของชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุมิศักดิ์

**Standard** : Standard of Central Wastewater Treatment Plant in Nava Nakorn Industrial Zone. (2016) (B.E. 2559)

(1) no established standard

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

12, 05, 23



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

12, 05, 23

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





## TEST REPORT

**Analysis No.** : R23-1263  
**Received Date** : 02/05/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 196 Fax. (02) 529 4385

**Report Date** : 12/05/23  
**Analysis Date** : 28/04-10/05/23  
**Job No.** : S660326/Apr/1  
**Sampling Date \*** : 28/04/23  
**Sampling By \*** : Mr. Rattapon Sukdee  
**Type of Sample** : Wastewater

**Sample Conditions** : 2305-WW0006 = yellow turbid/high white and black sediment/covered with oil slick/smell, Flow Rate = 2.5 m<sup>3</sup>/hr.  
2305-WW0007 = clear/slight white sediment, Flow Rate = 2.5 m<sup>3</sup>/hr.

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				PT Wastewater Treatment Plant			
				(WWTP3)			
				2305-WW0006	2305-WW0007		
				Inlet <sup>(1)</sup>	Outlet		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	34.4	33.8	45	28/04/23
2	pH *	-	Electrometric Method (SM 4500 B)	6.88	6.72	6.0-9.0	28/04/23
3	SS *	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	747.3	< 2.5	500	08/05/23
4	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	1,279	291	3,000	05/05/23
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	323	2	450	03-08/05/23
6	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	1,152	22	600	03/05/23
7	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	620.5	0.6	100	05/05/23
8	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method  (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	9.90	0.68	100	09/05/23
9	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	0.006	< 0.001	5.0	08/05/23
10	Phenol *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	10	09/05/23
11	Sulfate *	mg/L	Turbidimetric (SM 4500-SO <sub>4</sub> <sup>2-</sup> E)	239.41	25.68	-	10/05/23
12	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(b)</sup>	0.14	< 0.01	1.0	09/05/23
13	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ;  Filtration, Colorimetric Method (SM 3500-Cr B) ; Calculation	13.22	< 0.02	0.75	05/05/23
14	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	16.21	< 0.02	0.25	05/05/23
15	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.01	08/05/23
16	Se *	mg/L	Digestion, Continuous Hydride generation/AAS Method  (SM 3114C)	< 0.0005	< 0.0005	1.0	09/05/23

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No.** : R23-1263  
**Received Date** : 02/05/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 196 Fax. (02) 529 4385

**Report Date** : 12/05/23  
**Analysis Date** : 28/04-10/05/23  
**Job No.** : S660326/Apr/1  
**Sampling Date \*** : 28/04/23  
**Sampling By \*** : Mr. Rattapon Sukdee  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				PT Wastewater Treatment Plant (WWTP3)			
				2305-WW0006	2305-WW0007		
				Inlet <sup>(1)</sup>	Outlet		
17	Al *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	97.75	0.71	5.0	08/05/23
18	Co *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05	-	10/05/23
19	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.97	0.06	1.0	05/05/23
20	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02	1.0	05/05/23
21	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.07	< 0.05	1.0	05/05/23
22	Fe	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	5.18	0.06	5.0	05/05/23
23	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.16	< 0.02	5.0	05/05/23
24	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.11	< 0.02	1.0	05/05/23
25	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	1.0	05/05/23
26	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	3.95	0.09	5.0	05/05/23

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: PT Wastewater Treatment Plant (WWTP3) Inlet = 47P 0671542 UTM 1561274  
PT Wastewater Treatment Plant (WWTP3) Outlet = 47P 0671541 UTM 1561260

**Method** (a) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017

(b) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ชงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิสักดิ์

**Standard** : Standard of Central Wastewater Treatment Plant in Nava Nakorn Industrial Zone. (2016) (B.E. 2559)

(1) no established standard

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory  
12/05/23



Approved by

Mrs. Porntip Pethshee  
Laboratory Manager  
12/05/23

..... END OF REPORT .....

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No.** : R23-1263/DIW  
**Received Date** : 02/05/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 196 Fax. (02) 529 4385

**Report Date** : 12/05/23  
**Analysis Date** : 28/04-09/05/23  
**Job No.** : S660326/Apr/1  
**Sampling Date \*** : 28/04/23  
**Sampling By \*** : Mr. Rattapon Sukdee  
**Registration Number** : จ-236-จ-6059  
**Type of Sample** : Wastewater

**Sample Conditions** : 2305-WW0008 = white turbid/high white sediment/covered with oil slick  
2305-WW0009 = clear/slight white sediment

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				Wastewater Surface Treatment Plant			
				(WWTP1)			
				2305-WW0008	2305-WW0009		
				Inlet <sup>(1)</sup>	Outlet		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	29.7	31.7	40	28/04/23
2	pH *	-	Electrometric Method (SM 4500 B)	4.22	7.09	5.5-9.0	28/04/23
3	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	2,667	2,178	3,000	05/05/23
4	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	3	2	20	03-08/05/23
5	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	39	22	120	03/05/23
6	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	1.2	0.4	5	05/05/23
7	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	17.19	31.11	100	09/05/23
8	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	0.006	< 0.001	0.2	08/05/23
9	Phenol *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	1.0	09/05/23
10	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(b)</sup>	0.04	< 0.01	1.0	09/05/23
11	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B) ; Calculation	0.09	< 0.02	0.75	05/05/23
12	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25	05/05/23
13	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.005	08/05/23
14	Se *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	< 0.0005	< 0.0005	0.02	09/05/23

continue

- PRIVATE LABORATORY REGISTERED NO. จ-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





## TEST REPORT

**Analysis No.** : R23-1263/DIW  
**Received Date** : 02/05/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 196 Fax. (02) 529 4385

**Report Date** : 12/05/23  
**Analysis Date** : 28/04-09/05/23  
**Job No.** : S660326/Apr/1  
**Sampling Date \*** : 28/04/23  
**Sampling By \*** : Mr. Rattapon Sukdee  
**Registration Number** : ๖-236-๖-6059  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				Wastewater Surface Treatment Plant (WWTP1)			
				2305-WW0008	2305-WW0009		
				Inlet <sup>(1)</sup>	Outlet		
15	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05	1.0	05/05/23
16	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02	0.03	05/05/23
17	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	1.11	< 0.05	2.0	05/05/23
18	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.21	0.06	5.0	05/05/23
19	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	1.96	0.22	1.0	05/05/23
20	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	0.2	05/05/23
21	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.15	< 0.04	5.0	05/05/23

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: Wastewater Surface Treatment Plant (WWTP1) Inlet = 47P 0671235 UTM 1561362  
Wastewater Surface Treatment Plant (WWTP1) Outlet = 47P 0671234 UTM 1561351

**Method** (a) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017

(b) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ของชัย พรหมสวัสดิ์, วิทยาลัยเกษตรและเทคโนโลยีสุพรรณบุรี

**Standard** : Notification of the Ministry of Industry (2017) (B.E. 2560)

(1) no established standard

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory

๖-236-๖-7201

12/05/23



Approved by

Mrs. Pornpip Pethshee  
Laboratory Manager

๖-236-๖-6047

12/05/23

- PRIVATE LABORATORY REGISTERED NO. ๖-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No.** : R23-0917  
**Received Date** : 30/03/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 196 Fax. (02) 529 4385  
**Report Date** : 06/04/23  
**Analysis Date** : 29/03-04/04/23  
**Job No.** : S660326/Mar  
**Sampling Date \*** : 29/03/23  
**Sampling By \*** : TET  
**Type of Sample** : Wastewater  
**Sample Conditions** : 2303-WW0694 = yellow turbid/high white sediment/covered with oil slick/smell  
2303-WW0695 = clear/slight black sediment/covered with oil slick

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				IR Wastewater Treatment Plant			
				(WWTP2)			
				2303-WW0694	2303-WW0695		
				Inlet <sup>(1)</sup>	Outlet		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.8	31.4	40	29/03/23
2	pH *	-	Electrometric Method (SM 4500 B)	8.87	7.49	5.5-9.0	29/03/23
3	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	85	192	3,000	31/03/23
4	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	1,070	3	20	30/03-04/04/23
5	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	3,928	29	120	31/03/23
6	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	3.6	0.9	5	03/04/23
7	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	28.49	2.26	100	31/03/23
8	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	0.001	< 0.001	0.2	30/03/23
9	Phenol *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	1.0	31/03/23
10	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(b)</sup>	27.68	< 0.01	1.0	31/03/23
11	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) <sup>[2]</sup> ; Filtration, Colorimetric Method (SM 3500-Cr B) ; Calculation	< 0.02	< 0.02	0.75	31/03/23
12	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25	31/03/23
13	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.005	31/03/23
14	Se *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	< 0.0005	< 0.0005	0.02	03/04/23

continue

- PRIVATE LABORATORY REGISTERED NO. 2-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No.** : R23-0917 **Report Date** : 06/04/23  
**Received Date** : 30/03/23 **Analysis Date** : 29/03-04/04/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA **Job No.** : S660326/Mar  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120 **Sampling Date \*** : 29/03/23  
**Contact** : Tel. (02) 529 0474 # 196 Fax. (02) 529 4385 **Sampling By \*** : TET  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				IR Wastewater Treatment Plant			
				(WWTP2)			
				2303-WW0694	2303-WW0695		
				Inlet <sup>(1)</sup>	Outlet		
15	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05	1.0	31/03/23
16	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02	0.03	31/03/23
17	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05	2.0	31/03/23
18	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02	5.0	31/03/23
19	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.35	< 0.02	1.0	31/03/23
20	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	0.2	31/03/23
21	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	5.0	31/03/23

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: IR Wastewater Treatment Plant (WWTP2) Inlet = 47P 0671247 UTM 1561369  
IR Wastewater Treatment Plant (WWTP2) Outlet = 47P 0671248 UTM 1561355

**Method** (a) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017

(b) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ชงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธศักดิ์

**Standard** : Notification of the Ministry of Industry (2017) (B.E. 2560)

(1) no established standard

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory  
๖-236-๓-7201  
06/04/23



Approved by

Mrs. Porntip Pethshee  
Laboratory Manager  
๖-236-๓-6047  
06/04/23

- PRIVATE LABORATORY REGISTERED NO. ๖-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





## TEST REPORT

**Analysis No.** : R23-0917 **Report Date** : 06/04/23  
**Received Date** : 30/03/23 **Analysis Date** : 29/03-04/04/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA **Job No.** : S660326/Mar  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120 **Sampling Date \*** : 29/03/23  
**Contact** : Tel. (02) 529 0474 # 196 Fax. (02) 529 4385 **Sampling By \*** : TET  
**Type of Sample** : Wastewater  
**Sample Conditions** : 2303-WW0694 = yellow turbid/high white sediment/covered with oil slick/smell, Flow Rate = 2 m<sup>3</sup>/hr.  
2303-WW0695 = clear/slight black sediment/covered with oil slick, Flow Rate = 2 m<sup>3</sup>/hr.

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				IR Wastewater Treatment Plant			
				(WWTP2)			
				2303-WW0694	2303-WW0695		
				Inlet <sup>(1)</sup>	Outlet		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.8	31.4	45	29/03/23
2	pH *	-	Electrometric Method (SM 4500 B)	8.87	7.49	6.0-9.0	29/03/23
3	SS *	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	17.2	3.4	500	31/03/23
4	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	85	192	3,000	31/03/23
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	1,070	3	450	30/03-04/04/23
6	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	3,928	29	600	31/03/23
7	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	3.6	0.9	100	03/04/23
8	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	28.49	2.26	100	31/03/23
9	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	0.001	< 0.001	5.0	30/03/23
10	Phenol *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	10	31/03/23
11	Sulfate *	mg/L	Turbidimetric (SM 4500-SO <sub>4</sub> <sup>2-</sup> E)	7.01	85.38	-	30/03/23
12	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(b)</sup>	27.68	< 0.01	1.0	31/03/23
13	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B) ; Calculation	< 0.02	< 0.02	0.75	31/03/23
14	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25	31/03/23
15	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.01	31/03/23
16	Se *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	< 0.0005	< 0.0005	1.0	03/04/23

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No.** : R23-0917  
**Received Date** : 30/03/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 196 Fax. (02) 529 4385

**Report Date** : 06/04/23  
**Analysis Date** : 29/03-04/04/23  
**Job No.** : S660326/Mar  
**Sampling Date \*** : 29/03/23  
**Sampling By \*** : TET  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				IR Wastewater Treatment Plant			
				(WWTP2)			
				2303-WW0694	2303-WW0695		
				Inlet <sup>(1)</sup>	Outlet		
17	Al *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	1.55	< 0.20	5.0	31/03/23
18	Co *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05	-	31/03/23
19	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05	1.0	31/03/23
20	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02	1.0	31/03/23
21	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05	1.0	31/03/23
22	Fe	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	1.53	< 0.05	5.0	31/03/23
23	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02	5.0	31/03/23
24	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.35	< 0.02	1.0	31/03/23
25	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	1.0	31/03/23
26	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	5.0	31/03/23

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: IR Wastewater Treatment Plant (WWTP2) Inlet = 47P 0671247 UTM 1561369  
IR Wastewater Treatment Plant (WWTP2) Outlet = 47P 0671248 UTM 1561355

**Method** (a) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017

(b) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิทยาลัยเกษตรและเทคโนโลยีสุพรรณบุรี

**Standard** : Standard of Central Wastewater Treatment Plant in Nava Nakorn Industrial Zone. (2016) (B.E. 2559)

(1) no established standard

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory  
06/04/23



Approved by

Mrs. Pornpip Pethshee  
Laboratory Manager  
06/04/23

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





## TEST REPORT

**Analysis No.** : R23-1263/DIW  
**Received Date** : 02/05/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 196 Fax. (02) 529 4385

**Report Date** : 12/05/23  
**Analysis Date** : 28/04-09/05/23  
**Job No.** : S660326/Apr/1  
**Sampling Date \*** : 28/04/23  
**Sampling By \*** : Mr. Rattapon Sukdee  
**Registration Number** : จ-236-จ-6059  
**Type of Sample** : Wastewater

**Sample Conditions** : 2305-WW0006 = yellow turbid/high white and black sediment/covered with oil slick/smell  
2305-WW0007 = clear/slight white sediment

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				PT Wastewater Treatment Plant			
				(WWTP3)			
				2305-WW0006	2305-WW0007		
				Inlet <sup>(1)</sup>	Outlet		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	34.4	33.8	40	28/04/23
2	pH *	-	Electrometric Method (SM 4500 B)	6.88	6.72	5.5-9.0	28/04/23
3	TDS *	mg/L	Dried at 180 <sup>0</sup> C (SM 2540 C)	1,279	291	3,000	05/05/23
4	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	323	2	20	03-08/05/23
5	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	1,152	22	120	03/05/23
6	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	620.5	0.6	5	05/05/23
7	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	9.90	0.68	100	09/05/23
8	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	0.006	< 0.001	0.2	08/05/23
9	Phenol *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	1.0	09/05/23
10	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(b)</sup>	0.14	< 0.01	1.0	09/05/23
11	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B) ; Calculation	13.22	< 0.02	0.75	05/05/23
12	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	16.21	< 0.02	0.25	05/05/23
13	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.005	08/05/23
14	Se *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	< 0.0005	< 0.0005	0.02	09/05/23

continue

- PRIVATE LABORATORY REGISTERED NO. จ-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





## TEST REPORT

**Analysis No.** : R23-1263/DIW **Report Date** : 12/05/23  
**Received Date** : 02/05/23 **Analysis Date** : 28/04-09/05/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
 For Tostem Thai Co., Ltd./North Factory/EIA **Job No.** : S660326/Apr/1  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
 Klongnueng, Klongluang, Pathumthani 12120 **Sampling Date \*** : 28/04/23  
**Contact** : Tel. (02) 529 0474 # 196 Fax. (02) 529 4385 **Sampling By \*** : Mr. Rattapon Sukdee  
**Registration Number** : ๖-236-๖-6059  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				PT Wastewater Treatment Plant (WWTP3)			
				2305-WW0006	2305-WW0007		
				Inlet <sup>(1)</sup>	Outlet		
15	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.97	0.06	1.0	05/05/23
16	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02	0.03	05/05/23
17	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.07	< 0.05	2.0	05/05/23
18	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.16	< 0.02	5.0	05/05/23
19	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.11	< 0.02	1.0	05/05/23
20	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	0.2	05/05/23
21	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	3.95	0.09	5.0	05/05/23

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"  
 : PT Wastewater Treatment Plant (WWTP3) Inlet = 47P 0671542 UTM 1561274  
 PT Wastewater Treatment Plant (WWTP3) Outlet = 47P 0671541 UTM 1561260  
**Method** (a) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
 (b) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ชงชัย พรหมสวัสดิ์, วิทยาลัยเกษตร วิสุทธรักษ์  
**Standard** : Notification of the Ministry of Industry (2017) (B.E. 2560)  
 (1) no established standard

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

๖-236-๖-7201

12.05.23



Approved by

Mrs. Pornip Pethshee

Laboratory Manager

๖-236-๖-6047

12.05.23

..... END OF REPORT .....

- PRIVATE LABORATORY REGISTERED NO. ๖-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No.** : R23-1579 **Report Date** : 13/06/23  
**Received Date** : 01/06/23 **Analysis Date** : 31/05-14/06/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA **Job No.** : S660326/May/1  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120 **Sampling Date \*** : 31/05/23  
**Contact** : Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385 **Sampling By \*** : TET  
**Type of Sample** : Wastewater  
**Sample Conditions** : 2306-WW0005 = white turbid/high white sediment/covered with oil slick/smell, Flow Rate = 70 m<sup>3</sup>/hr.  
2306-WW0006 = clear/slight black sediment, Flow Rate = 70 m<sup>3</sup>/hr.

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				Wastewater Surface Treatment Plant			
				(WWTP1)			
				2306-WW0005	2306-WW0006		
				Inlet <sup>(1)</sup>	Outlet		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	29.9	30.3	45	31/05/23
2	pH *	-	Electrometric Method (SM 4500 B)	4.08	7.74	6.0-9.0	31/05/23
3	SS *	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	25.3	< 2.5	500	06/06/23
4	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	2,029	2,483	3,000	02/06/23
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	2	5	450	01-06/06/23
6	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	25	57	600	08/06/23
7	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	1.2	0.6	100	07/06/23
8	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	11.71	17.62	100	02/06/23
9	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	< 0.001	5.0	06, 08/06/23
10	Phenol *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	10	09/06/23
11	Sulfate *	mg/L	Turbidimetric (SM 4500-SO <sub>4</sub> <sup>2-</sup> E)	1,711.46	1,871.47	-	08/06/23
12	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(b)</sup>	< 0.01	< 0.01	1.0	09/06/23
13	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B) ; Calculation	0.05	0.02	0.75	06/06/23
14	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25	01/06/23
15	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.01	07/06/23
16	Se *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	< 0.0005	< 0.0005	1.0	02/06/23

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





## TEST REPORT

**Analysis No.** : R23-1579  
**Received Date** : 01/06/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385

**Report Date** : 13/06/23  
**Analysis Date** : 31/05-14/06/23  
**Job No.** : S660326/May/1  
**Sampling Date \*** : 31/05/23  
**Sampling By \*** : TET  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				Wastewater Surface Treatment Plant (WWTP1)			
				2306-WW0005	2306-WW0006		
				Inlet <sup>(1)</sup>	Outlet		
17	Al *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	140.49	1.01	5.0	02, 14/06/23
18	Co *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05	-	02/06/23
19	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	0.10	1.0	02/06/23
20	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02	1.0	02/06/23
21	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.55	< 0.05	1.0	02/06/23
22	Fe	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	1.71	< 0.05	5.0	06/06/23
23	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.11	0.06	5.0	02/06/23
24	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	3.32	0.07	1.0	02/06/23
25	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	1.0	06/06/23
26	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.12	0.04	5.0	02/06/23

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: Wastewater Surface Treatment Plant (WWTP1) Inlet = 47P 0671235 UTM 1561362, Analysis Date Cyanide = 06/06/23, Al = 02/06/23  
Wastewater Surface Treatment Plant (WWTP1) Outlet = 47P 0671234 UTM 1561351, Analysis Date Cyanide = 08/06/23, Al = 14/06/23

**Method** (a) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
(b) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมผลสวัสดิ์, วิทยาลัยเกษตรและเทคโนโลยีสุพรรณบุรี

**Standard** : Standard of Central Wastewater Treatment Plant in Nava Nakorn Industrial Zone. (2016) (B.E. 2559)  
(1) no established standard

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory  
13/06/23



Approved by

Mrs. Porntip Pethshee  
Laboratory Manager  
13/06/23

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





## TEST REPORT

**Analysis No.** : R23-1579  
**Received Date** : 01/06/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385  
**Report Date** : 13/06/23  
**Analysis Date** : 31/05-09/06/23  
**Job No.** : S660326/May/1  
**Sampling Date \*** : 31/05/23  
**Sampling By \*** : TET  
**Type of Sample** : Wastewater  
**Sample Conditions** : 2306-WW0001 = yellow turbid/slight black sediment/covered with oil slick/smell, Flow Rate = 2.5 m<sup>3</sup>/hr.  
2306-WW0002 = clear/slight black sediment, Flow Rate = 2.5 m<sup>3</sup>/hr.

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				IR Wastewater Treatment Plant			
				(WWTP2)			
				2306-WW0001	2306-WW0002		
				Inlet <sup>(1)</sup>	Outlet		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	32.2	32.2	45	31/05/23
2	pH *	-	Electrometric Method (SM 4500 B)	5.68	7.95	6.0-9.0	31/05/23
3	SS *	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	3.2	< 2.5	500	06/06/23
4	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	138	292	3,000	02/06/23
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	1,300	1	450	01-06/06/23
6	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	5,868	10	600	06/06/23
7	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	1.4	1.0	100	07/06/23
8	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	41.16	2.72	100	02/06/23
9	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	< 0.001	5.0	06/06/23
10	Phenol *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	10	09/06/23
11	Sulfate *	mg/L	Turbidimetric (SM 4500-SO <sub>4</sub> <sup>2-</sup> E)	11.22	78.79	-	08/06/23
12	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(b)</sup>	46.27	0.35	1.0	09/06/23
13	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B) ; Calculation	< 0.02	< 0.02	0.75	06/06/23
14	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25	01/06/23
15	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.01	07/06/23
16	Se *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	< 0.0005	< 0.0005	1.0	02/06/23

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No.** : R23-1579  
**Received Date** : 01/06/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385

**Report Date** : 13/06/23  
**Analysis Date** : 31/05-09/06/23  
**Job No.** : S660326/May/1  
**Sampling Date \*** : 31/05/23  
**Sampling By \*** : TET  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				IR Wastewater Treatment Plant			
				(WWTP2)			
				2306-WW0001	2306-WW0002		
				Inlet <sup>(1)</sup>	Outlet		
17	Al *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.75	0.22	5.0	02/06/23
18	Co *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05	-	02/06/23
19	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.18	0.07	1.0	02/06/23
20	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02	1.0	02/06/23
21	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05	1.0	02/06/23
22	Fe	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	2.37	< 0.05	5.0	06/06/23
23	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.05	< 0.02	5.0	02/06/23
24	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.87	< 0.02	1.0	02/06/23
25	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	1.0	06/06/23
26	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	5.0	02/06/23

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"  
: IR Wastewater Treatment Plant (WWTP2) Inlet = 47P 0671247 UTM 1561369  
IR Wastewater Treatment Plant (WWTP2) Outlet = 47P 0671248 UTM 1561355

**Method** (a) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
(b) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ของ พ.ร.บ. ควบคุมมลพิษ, วิทยาลัยเทคนิค วิศวกรรมศาสตร์

**Standard** : Standard of Central Wastewater Treatment Plant in Nava Nakorn Industrial Zone. (2016) (B.E. 2559)  
(1) no established standard

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory  
13/06/23



Approved by

Mrs. Pornpip Pethshee  
Laboratory Manager  
13/06/23

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





## TEST REPORT

**Analysis No.** : R23-1579  
**Received Date** : 01/06/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385

**Report Date** : 13/06/23  
**Analysis Date** : 31/05-09/06/23  
**Job No.** : S660326/May/1  
**Sampling Date \*** : 31/05/23  
**Sampling By \*** : TET  
**Type of Sample** : Wastewater

**Sample Conditions** : 2306-WW0003 = gray turbid/high black sediment/covered with oil slick/smell, Flow Rate = 2.5 m<sup>3</sup>/hr.  
2306-WW0004 = yellow turbid/slight black sediment, Flow Rate = 2.5 m<sup>3</sup>/hr.

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				PT Wastewater Treatment Plant			
				(WWTP3)			
				2306-WW0003	2306-WW0004		
				Inlet <sup>(1)</sup>	Outlet		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	32.2	31.3	45	31/05/23
2	pH *	-	Electrometric Method (SM 4500 B)	7.43	7.54	6.0-9.0	31/05/23
3	SS *	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	85.2	< 2.5	500	06/06/23
4	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	935	192	3,000	02/06/23
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	198	4	450	01-06/06/23
6	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	626	33	600	06/06/23
7	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	42.6	0.8	100	07/06/23
8	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method  (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	12.12	1.77	100	02/06/23
9	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	< 0.001	5.0	06/06/23
10	Phenol *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	0.011	< 0.001	10	09/06/23
11	Sulfate *	mg/L	Turbidimetric (SM 4500-SO <sub>4</sub> <sup>2-</sup> E)	156.90	44.41	-	08/06/23
12	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(b)</sup>	< 0.01	< 0.01	1.0	09/06/23
13	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ;  Filtration, Colorimetric Method (SM 3500-Cr B) ; Calculation	4.20	0.05	0.75	06/06/23
14	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	0.14	< 0.02	0.25	01/06/23
15	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.01	07/06/23
16	Se *	mg/L	Digestion, Continuous Hydride generation/AAS Method  (SM 3114C)	< 0.0005	< 0.0005	1.0	02/06/23

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





## TEST REPORT

**Analysis No.** : R23-1579  
**Received Date** : 01/06/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385

**Report Date** : 13/06/23  
**Analysis Date** : 31/05-09/06/23  
**Job No.** : S660326/May/1  
**Sampling Date \*** : 31/05/23  
**Sampling By \*** : TET  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result		Standard	Analysis Date
				PT Wastewater Treatment Plant (WWTP3)			
				2306-WW0003	2306-WW0004		
				Inlet <sup>(1)</sup>	Outlet		
17	Al *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	8.21	2.89	5.0	02/06/23
18	Co *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05	-	02/06/23
19	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	4.44	0.15	1.0	02/06/23
20	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02	1.0	02/06/23
21	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05	1.0	02/06/23
22	Fe	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	1.46	0.13	5.0	06/06/23
23	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.04	< 0.02	5.0	02/06/23
24	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.03	0.09	1.0	02/06/23
25	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	1.0	06/06/23
26	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	1.36	0.04	5.0	02/06/23

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: PT Wastewater Treatment Plant (WWTP3) Inlet = 47P 0671542 UTM 1561274  
PT Wastewater Treatment Plant (WWTP3) Outlet = 47P 0671541 UTM 1561260

**Method** (a) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
(b) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิทยาลัยเกษตรและเทคโนโลยีสุพรรณบุรี

**Standard** : Standard of Central Wastewater Treatment Plant in Nava Nakorn Industrial Zone. (2016) (B.E. 2559)  
(1) no established standard

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

13/06/23



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

13/06/23

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No.** : R23-1579  
**Received Date** : 29/05/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385

**Report Date** : 13/06/23  
**Analysis Date** : 26/05-06/06/23  
**Job No.** : S660326/May/1  
**Sampling Date \*** : 26/05/23  
**Sampling By \*** : TET  
**Type of Sample** : Wastewater

**Sample Conditions** : 2305-WW0617 = white turbid/high black sediment

Item	Parameter	Unit	Method <sup>(a)</sup>	Result	Analysis Date
				2304-WW0617	
				Water Circulate	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	32.4	26/05/23
2	pH *	-	Electrometric Method (SM 4500 B)	8.45	26/05/23
3	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	327	30/05/23
4	SS *	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	< 2.5	30/05/23
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	3	01-06/06/231
6	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	29	30/05/23
7	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	30/05/23
8	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	1.30	31/05/23
9	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	31/05/23
10	Phenol *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	30/05/23
11	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	02/06/23
12	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(b)</sup>	< 0.01	30/05/23
13	Free Chlorine *	mg/L	DPD Ferrous Titrimetric Method (SM 4500-Cl <sub>2</sub> F)	< 0.01	30/05/23
14	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) <sup>[2]</sup> ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	30/05/23
15	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	29/05/23
16	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	31/05/23
17	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0020	02/06/23
18	Se *	mg/L			

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No.** : R23-1579  
**Received Date** : 29/05/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385

**Report Date** : 13/06/23  
**Analysis Date** : 26/05-06/06/23  
**Job No.** : S660326/May/1  
**Sampling Date \*** : 26/05/23  
**Sampling By \*** : TET  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Analysis Date
				2304-WW0617	
				Water Circulate	
19	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.08	30/05/23
20	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	30/05/23
21	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	30/05/23
22	Fe	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.31	30/05/23
23	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.06	30/05/23
24	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	30/05/23
25	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	30/05/23
26	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	30/05/23

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: Water Circulate = 47P 0671093 UTM 1561035

**Method** (a) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017

(b) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ชงชัย พรหมสวัสดิ์, วิทยาลัยกษัตริย์ วสุทศศักดิ์

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory

13/06/23



Approved by

Mrs. Pornpip Pethshee  
Laboratory Manager

13/06/23

..... END OF REPORT .....

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





## TEST REPORT

**Analysis No.** : R23-1579/DIW  
**Received Date** : 01/06/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385  
**Sample Conditions** : 2306-WW0006 = clear/slight black sediment

**Report Date** : 13/06/23  
**Analysis Date** : 31/05-09/06/23  
**Job No.** : S660326/May/1  
**Sampling Date \*** : 31/05/23  
**Sampling By \*** : Mr. Witoon Walairat  
**Registration Number** : จ-236-จ-6057  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result	Standard	Analysis Date
				Wastewater Surface Treatment Plant (WWTP1)		
				2306-WW0006		
				Outlet		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.3	40	31/05/23
2	pH *	-	Electrometric Method (SM 4500 B)	7.74	5.5-9.0	31/05/23
3	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	2,483	3,000	02/06/23
4	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	5	20	01-06/06/23
5	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	57	120	08/06/23
6	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	5	07/06/23
7	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	17.62	100	02/06/23
8	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.2	08/06/23
9	Phenol *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	1.0	09/06/23
10	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(b)</sup>	< 0.01	1.0	09/06/23
11	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B) ; Calculation	0.02	0.75	06/06/23
12	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.25	01/06/23
13	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	07/06/23
14	Se *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	< 0.0005	0.02	02/06/23

continue

- PRIVATE LABORATORY REGISTERED NO. จ-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No.** : R23-1579/DIW **Report Date** : 13/06/23  
**Received Date** : 01/06/23 **Analysis Date** : 31/05-09/06/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA **Job No.** : S660326/May/1  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120 **Sampling Date \*** : 31/05/23  
**Contact** : Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385 **Sampling By \*** : Mr. Witon Walairat  
**Registration Number** : ๓-236-๖-6057  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result	Standard	Analysis Date
				Wastewater Surface Treatment Plant (WWTP1)		
				2306-WW0006		
				Outlet		
15	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.10	1.0	02/06/23
16	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	02/06/23
17	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	2.0	02/06/23
18	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.06	5.0	02/06/23
19	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.07	1.0	02/06/23
20	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	0.2	06/06/23
21	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.04	5.0	02/06/23

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"  
: Wastewater Surface Treatment Plant (WWTP1) Outlet = 47P 0671234 UTM 1561351  
**Method** (a) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
(b) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิทยาลัยเกษตรและเทคโนโลยีสุพรรณบุรี  
**Standard** : Notification of the Ministry of Industry (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory

๓-236-๖-7201  
13/06/23



Approved by

Mrs. Porntip Pethshee  
Laboratory Manager

๓-236-๖-6047  
13/06/23

- PRIVATE LABORATORY REGISTERED NO. ๓-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No.** : R23-1579/DIW  
**Received Date** : 01/06/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385  
**Sample Conditions** : 2306-WW0002 = clear/slight black sediment

**Report Date** : 13/06/23  
**Analysis Date** : 31/05-09/06/23  
**Job No.** : S660326/May/1  
**Sampling Date \*** : 31/05/23  
**Sampling By \*** : Mr. Witoon Walairat  
**Registration Number** : จ-236-จ-6057  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result	Standard	Analysis Date
				IR Wastewater Treatment Plant		
				(WWTP2)		
				2306-WW0002		
				Outlet		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	32.2	40	31/05/23
2	pH *	-	Electrometric Method (SM 4500 B)	7.95	5.5-9.0	31/05/23
3	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	< 2.5	3,000	02/06/23
4	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	1	20	01-06/06/23
5	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	10	120	06/06/23
6	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	1.0	5	07/06/23
7	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	2.72	100	02/06/23
8	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.2	06/06/23
9	Phenol *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	1.0	09/06/23
10	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(b)</sup>	0.35	1.0	09/06/23
11	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) <sup>[2]</sup> ; Filtration, Colorimetric Method (SM 3500-Cr B) ; Calculation	< 0.02	0.75	06/06/23
12	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.25	01/06/23
13	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	07/06/23
14	Se *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	< 0.0005	0.02	02/06/23

continue

- PRIVATE LABORATORY REGISTERED NO. จ-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





## TEST REPORT

**Analysis No.** : R23-1579/DIW **Report Date** : 13/06/23  
**Received Date** : 01/06/23 **Analysis Date** : 31/05-09/06/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA **Job No.** : S660326/May/1  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120 **Sampling Date \*** : 31/05/23  
**Contact** : Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385 **Sampling By \*** : Mr. Witoon Walairat  
**Registration Number** : จ-236-จ-6057  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result	Standard	Analysis Date
				IR Wastewater Treatment Plant		
				(WWTP2)		
				2306-WW0002		
				Outlet		
15	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.07	1.0	02/06/23
16	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	02/06/23
17	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	2.0	02/06/23
18	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	5.0	02/06/23
19	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	1.0	02/06/23
20	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	0.2	06/06/23
21	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	5.0	02/06/23

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"  
: IR Wastewater Treatment Plant (WWTP2) Outlet = 47P 0671248 UTM 1561355  
**Method** (a) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
(b) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ชงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธีศักดิ์  
**Standard** : Notification of the Ministry of Industry (2017) (B.E. 2560)  
(1) no established standard

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory  
จ-236-ก-7201  
13/06/23



Approved by

Mrs. Porntip Pethshee  
Laboratory Manager  
จ-236-ก-6047  
13/06/23

- PRIVATE LABORATORY REGISTERED NO. จ-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No.** : R23-1579/DIW  
**Received Date** : 01/06/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120  
**Contact** : Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385  
**Sample Conditions** : 2306-WW0004 = yellow turbid/slight black sediment

**Report Date** : 13/06/23  
**Analysis Date** : 31/05-09/06/23  
**Job No.** : S660326/May/1  
**Sampling Date \*** : 31/05/23  
**Sampling By \*** : Mr. Witon Walairat  
**Registration Number** : จ-236-จ-6057  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result	Standard	Analysis Date
				PT Wastewater Treatment Plant		
				(WWTP3)		
				2306-WW0004		
				Outlet		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.3	40	31/05/23
2	pH *	-	Electrometric Method (SM 4500 B)	7.54	5.5-9.0	31/05/23
3	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	192	3,000	02/06/23
4	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	4	20	01-06/06/23
5	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	33	120	06/06/23
6	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	5	07/06/23
7	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	1.77	100	02/06/23
8	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.2	06/06/23
9	Phenol *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	1.0	09/06/23
10	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(b)</sup>	< 0.01	1.0	09/06/23
11	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B) ; Calculation	0.05	0.75	06/06/23
12	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.25	01/06/23
13	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	07/06/23
14	Se *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	< 0.0005	0.02	02/06/23

continue

- PRIVATE LABORATORY REGISTERED NO. จ-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



## TEST REPORT

**Analysis No.** : R23-1579/DIW **Report Date** : 13/06/23  
**Received Date** : 01/06/23 **Analysis Date** : 31/05-09/06/23  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For Tostem Thai Co., Ltd./North Factory/EIA **Job No.** : S660326/May/1  
**Address** : 101/104 Moo 20, Soi Navanakorn 1, Phaholyothin Road,  
Klongnueng, Klongluang, Pathumthani 12120 **Sampling Date \*** : 31/05/23  
**Contact** : Tel. (02) 529 0474 # 1965 Fax. (02) 529 4385 **Sampling By \*** : Mr. Witoon Walairat  
**Registration Number** : จ-236-จ-6057  
**Type of Sample** : Wastewater

Item	Parameter	Unit	Method <sup>(a)</sup>	Result	Standard	Analysis Date
				PT Wastewater Treatment Plant (WWTP3)		
				2306-WW0003		
				Outlet		
15	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.15	1.0	02/06/23
16	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	02/06/23
17	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	2.0	02/06/23
18	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	5.0	02/06/23
19	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.09	1.0	02/06/23
20	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	0.2	06/06/23
21	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.04	5.0	02/06/23

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"  
: PT Wastewater Treatment Plant (WWTP3) Outlet = 47P 0671541 UTM 1561260  
**Method** (a) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
(b) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิศักดิ์  
**Standard** : Notification of the Ministry of Industry (2017) (B.E. 2560)  
(1) no established standard

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory  
จ-236-ก-7201  
13/06/23



Approved by

Mrs. Porntip Pethshee  
Laboratory Manager  
จ-236-ก-6047  
13/06/23

- PRIVATE LABORATORY REGISTERED NO. จ-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL