

# เอกสารแนบ 4

เอกสารการตรวจวัดคุณภาพสิ่งแวดล้อม



# ENVIRONMENTAL MEASUREMENTS CO., LTD.

5/45 Baan Klang Krung Biz Town, Soi Srinagarindra 46/1 (Pramote), NONG BON Sub-district, PRAWET District, BANGKOK 10250

Tel: 0-2716-3506-7 Fax: 0-2716-3507

## ANALYSIS REPORT

Customer Name : Sofitel Bangkok Sukhumvit  
Address : 189 Sukhumvit Road Klong Toei Nuea Watthana Bangkok 10110  
Sample Date : 20/01/2022 Analytical Date : 22-28/01/2022  
Analysis No. : WW 0540 - WW 0543 Report Date : 28/01/2022  
Sample Type : Waste water Customer Code : JP 023-1-00

Parameter	Unit	Method of Analysis	Detection Limit	Result			Regulatory Standard
				St.1	St.2	St.3	
pH	-	Electrometric Method	-	7.2	6.9	7.0	5-9
BOD	mg/L	5 Day BOD Membrane Electrode	<2.0	235	3.9	2.2	20
Suspended Solids	mg/L	Dried at 103-105 °C	<2.5	200	20	12	30
Dissolved Solids	mg/L	Dried at 180 °C	<2.5	423	496	332	500*
Settleable Solids	ml/L	Volumetric Method	<0.1	<0.1	<0.1	<0.1	0.5
Sulfide	mg/L as H <sub>2</sub> S	Iodometric Method	<0.30	2.0	0.4	<0.30	1.0
TKN <sup>2)</sup>	mg/L as N	Macro-Kjeldahl Method	<0.01	59	16	22	35
Oil & Grease	mg/L	Partition - gravimetric method	<2.0	11	<2.0	<2.0	20
Residue Chlorine	mg/L as Cl <sub>2</sub>	DPD Colorimetric Method	<0.10	<0.10	<0.10	<0.10	-
Fecal Coliform Bacteria <sup>2)</sup>	MPN/100ml	MPN Method	<1.8	0.6 x 10 <sup>7</sup>	1.1 x 10 <sup>2</sup>	1.1 x 10 <sup>5</sup>	-
Analysis No.				WW 0540	WW 0541	WW 0542	
Sampling Time				15:35	15:40	15:43	
Sample Condition				Gray Sediment	Yellow Sediment	Yellow Sediment	

Regulatory Standard: Announcement of the Ministry of Science Technology and Environment Subject: Establishing Control Standards Drainage from certain types and sizes of buildings

: <sup>2)</sup> Subcontract: Test Tech

St.1 = Equalization Tank

St.2 = Clear Water Tank

St.3 = Discharged to the public



(Miss Suthida Issara)

Analyst

(Miss Manutruen Longbang)

Laboratory Manager

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## ANALYSIS REPORT

Customer Name : Sofitel Bangkok Sukhumvit  
Address : 189 Sukhumvit Road Klong Toei Nuea Watthana Bangkok 10110  
Sample Date : 24/02/2022 Analytical Date : 25/02-05/03/2022  
Analysis No. : WW 0550 - WW 0553 Report Date : 05/03/2022  
Sample Type : Waste water Customer Code : JP 023-2-00

Parameter	Unit	Method of Analysis	Detection Limit	Result			Regulatory Standard
				St.1	St.2	St.3	
pH	-	Electrometric Method	-	7.0	6.5	7.3	5-9
BOD	mg/L	5 Day BOD Membrane Electrode	<2.0	330	2.4	2.1	20
Suspended Solids	mg/L	Dried at 103-105 °C	<2.5	326	15	10	30
Total Dissolved Solids	mg/L	Dried at 180 °C	<2.5	466	492	326	500*
Settleable Solids	ml/L	Volumetric Method	<0.1	<1.0	<1.0	<1.0	0.5
Sulfide	mg/L as H <sub>2</sub> S	Iodometric Method	<0.30	2.6	0.8	<0.30	1.0
TKN <sup>2)</sup>	mg/L as N	Macro-Kjeldahl Method	<0.01	55	12	11	35
Oil & Grease	mg/L	Partition - gravimetric method	<2.0	6.6	<2.0	<2.0	20
Residue Chlorine	mg/L as Cl <sub>2</sub>	DPD Colorimetric Method	<0.10	<0.10	<0.10	<0.10	-
Fecal Coliform Bacteria <sup>2)</sup>	MPN/100ml	MPN Method	<1.8	2.4 x 10 <sup>6</sup>	1.2 x 10 <sup>2</sup>	3.2 x 10 <sup>4</sup>	-
Analysis No.				WW 0550	WW 0551	WW 0552	
Sampling Time				14:10	14:15	14:20	
Sample Condition				Gray Sediment	Yellow Sediment	Yellow Sediment	

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(Miss Thanutruenan Tongbang)  
Laboratory Manager

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## ANALYSIS REPORT

Customer Name : Sofitel Bangkok Sukhumvit  
Address : 189 Sukhumvit Road Klong Toei Nuea Watthana Bangkok 10110  
Sample Date : 31/03/2022 Analytical Date : 01-11/04/2022  
Analysis No. : WW 0557 - WW 0559 Report Date : 12/04/2022  
Sample Type : Waste water Customer Code : JP 023-3-00

Parameter	Unit	Method of Analysis	Detection Limit	Result			Regulatory Standard
				St.1	St.2	St.3	
pH	-	Electrometric Method	-	7.0	6.4	7.2	5-9
BOD	mg/L	5 Day BOD Membrane Electrode	<2.0	431	2.4	9.4	20
Suspended Solids	mg/L	Dried at 103-105 °C	<2.5	407	18	21	30
Total Dissolved Solids	mg/L	Dried at 180 °C	<2.5	432	564	324	500*
Settleable Solids	mL/L	Volumetric Method	<0.1	<0.1	<0.1	<0.1	0.5
Sulfide	mg/L as H <sub>2</sub> S	Iodometric Method	<0.30	2.8	0.8	0.6	1.0
TKN <sup>2)</sup>	mg/L as N	Macro-Kjeldahl Method	<0.01	61	18	20	35
Oil & Grease	mg/L	Partition - gravimetric method	<2.0	15	<2.0	<2.0	20
Residue Chlorine	mg/L as Cl <sub>2</sub>	DPD Colorimetric Method	<0.10	<0.10	<0.10	<0.10	-
Fecal Coliform Bacteria <sup>2)</sup>	MPN/100ml	MPN Method	<1.8	1.7 x 10 <sup>7</sup>	1.7 x 10 <sup>2</sup>	1.1 x 10 <sup>5</sup>	-
Analysis No.				WW 0557	WW 0558	WW 0559	
Sampling Time				15:15	15:10	15:07	
Sample Condition				Gray	Clear	Clear	
				Sediment	Yellow Sediment	Yellow Sediment	

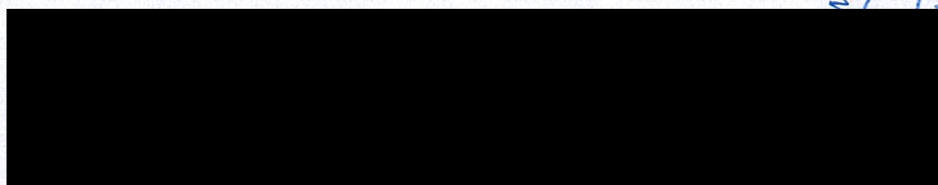
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## ANALYSIS REPORT

Customer Name : Sofitel Bangkok Sukhumvit  
Address : 189 Sukhumvit Road Klong Toei Nuea Watthana Bangkok 10110  
Sample Date : 18/04/2022 Analytical Date : 19/04-03/05/2022  
Analysis No. : WW 0806 - WW 0808 Report Date : 03/05/2022  
Sample Type : Waste water Customer Code : JP 023-5-00

Parameter	Unit	Method of Analysis	Detection Limit	Result			Regulatory Standard
				St.1	St.2	St.3	
pH	-	Electrometric Method	-	6.8	6.9	7.0	5-9
BOD	mg/L	5 Day BOD Membrane Electrode	<2.0	444	30	10	20
Suspended Solids	mg/L	Dried at 103-105 °C	<2.5	250	20	8.3	30
Total Dissolved Solids	mg/L	Dried at 180 °C	<2.5	320	289	278	500*
Settleable Solids	ml/L	Volumetric Method	<0.1	<0.1	<0.1	<0.1	0.5
Sulfide	mg/L as H <sub>2</sub> S	Iodometric Method	<0.30	1.3	0.8	0.5	1.0
TKN <sup>2)</sup>	mg/L as N	Macro-Kjeldahl Method	<0.01	35	13	9.4	35
Oil & Grease	mg/L	Partition - gravimetric method	<2.0	11	7.2	<2.0	20
Residue Chlorine	mg/L as Cl <sub>2</sub>	DPD Colorimetric Method	<0.10	<0.10	<0.10	<0.10	-
Fecal Coliform Bacteria <sup>2)</sup>	MPN/100ml	MPN Method	<1.8	5.4 x 10 <sup>6</sup>	3.5 x 10 <sup>5</sup>	3.5 x 10 <sup>5</sup>	-
Analysis No.				WW 0806	WW 0807	WW 0808	
Sampling Time				14:10	14:06	14:15	
Sample Condition				Black	Yellow	Clear	
				Sediment	Sediment	Yellow Sediment	

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## ANALYSIS REPORT

Customer Name : Sofitel Bangkok Sukhumvit  
Address : 189 Sukhumvit Road Klong Toei Nuea Watthana Bangkok 10110  
Sample Date : 06/05/2022 Analytical Date : 09-20/05/2022  
Analysis No. : WW 0780 - WW 0782 Report Date : 20/05/2022  
Sample Type : Waste water Customer Code : JP 023-5-00

Parameter	Unit	Method of Analysis	Detection Limit	Result			Regulatory Standard
				St.1	St.2	St.3	
pH	-	Electrometric Method	-	6.7	6.8	7.1	5-9
BOD	mg/L	5 Day BOD Membrane Electrode	<2.0	460	33	12	20
Suspended Solids	mg/L	Dried at 103-105 °C	<2.5	265	17	9.5	30
Total Dissolved Solids	mg/L	Dried at 180 °C	<2.5	312	298	286	500*
Settleable Solids	mL/L	Volumetric Method	<0.1	<0.1	<0.1	<0.1	0.5
Sulfide	mg/L as H <sub>2</sub> S	Iodometric Method	<0.30	1.2	0.7	0.6	1.0
TKN <sup>2)</sup>	mg/L as N	Macro-Kjeldahl Method	<0.01	36	12	9.4	35
Oil & Grease	mg/L	Partition - gravimetric method	<2.0	10	7.3	<2.0	20
Residue Chlorine	mg/L as Cl <sub>2</sub>	DPD Colorimetric Method	<0.10	<0.10	<0.10	<0.10	-
Fecal Coliform Bacteria <sup>2)</sup>	MPN/100ml	MPN Method	<1.8	5.4 x 10 <sup>6</sup>	3.5 x 10 <sup>5</sup>	3.5 x 10 <sup>5</sup>	-
Analysis No.				WW 0780	WW 0781	WW 0782	
Sampling Time				14:10	14:06	14:15	
Sample Condition				Black	Yellow	Clear	
				Sediment	Sediment	Yellow Sediment	

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## ANALYSIS REPORT

Customer Name : Sofitel Bangkok Sukhumvit  
Address : 189 Sukhumvit Road Klong Toei Nuea Watthana Bangkok 10110  
Sample Date : 01/06/2022 Analytical Date : 02-14/06/2022  
Analysis No. : WW 1015 - WW 1016 Report Date : 16/06/2022  
Sample Type : Waste water Customer Code : JP 023-6-00

Parameter	Unit	Method of Analysis	Detection Limit	Result			Regulatory Standard
				St.1	St.2	St.3	
pH	-	Electrometric Method	-	6.8	7.7	7.5	5-9
BOD	mg/L	5 Day BOD Membrane Electrode	<2.0	456	6.5	23	20
Suspended Solids	mg/L	Dried at 103-105 °C	<2.5	177	35	30	30
Total Dissolved Solids	mg/L	Dried at 180 °C	<2.5	330	502	366	500*
Settleable Solids	m/L	Volumetric Method	<0.1	<0.1	<0.1	<0.1	0.5
Sulfide	mg/L as H <sub>2</sub> S	Iodometric Method	<0.30	<0.30	<0.30	<0.30	1.0
TKN <sup>2)</sup>	mg/L as N	Macro-Kjeldahl Method	<0.01	36	16	17	35
Oil & Grease	mg/L	Partition - gravimetric method	<2.0	13	11	6.3	20
Residue Chlorine	mg/L as Cl <sub>2</sub>	DPD Colorimetric Method	<0.10	<0.10	<0.10	<0.10	-
Fecal Coliform Bacteria <sup>2)</sup>	MPN/100ml	MPN Method	<1.8	4.9 x 10 <sup>6</sup>	7.9 x 10 <sup>3</sup>	7.9 x 10 <sup>5</sup>	-
Analysis No.				WW 1015	WW 1016	WW 1017	
Sampling Time				14:30	14:45	14:00	
Sample Condition				Black	Yellow	Yellow	
				Sediment	Sediment	Sediment	

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