

ผลวิเคราะห์คุณภาพน้ำทิ้งครัว C



บริษัท เอส.พี.เอส. คอนซัลติ้ง เซอร์วิส จำกัด
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Ref. No. W1310/01/21

Report No. 001

B-Quo-0055/2021

Wastewater Quality Analysis Report

Project : Cape Panwa Hotel	Sampling Date : 28 January 2021
Client Name : Kasemkij Co., Ltd.	Received Date : 29 January 2021
Sampling by : Kasemkij Co., Ltd.	Analytical Date : 29 January-5 February 2021
	Report Date : 9 February 2021

Parameter	Analytical Method	Kitchen C (EFF)	Standard
pH	Electrometric Method (4500-H ⁺ B.)	7.82	5-9
Total Suspended Solids (mg/L)	Total Suspended Solids Dried at 103-105 °C (2540 D.)	18.0	Less than 40
BOD ₅ (mg/L)	5 Day BOD Test (5210 B.) & Azide Modification (4500-O C.)	16	Less than 30
TKN (mg/L)	Macro-Kjeldahl Method (4500-N ₃ B.) & Titrimetric Method (4500-NH ₃ C.)	15	Less than 35
Sulfide (mg/L)	Iodometric Method (4500-S ²⁻ F.)	<0.06	Less than 1.0
Grease & Oil (mg/L)	Liquid-Liquid, Partition-Gravimetric Method (5520 B.)	<2	Less than 20
Fecal Coliform Bacteria (MPN/100 mL)	Multiple-Tube Fermentation Technique (9221 E.)	1,100	-

Remark:

Sample Characteristics: Yellow with slightly precipitate

Standard = Building Effluent Standards (Category B), Notification of the Ministry of Natural Resources and Environment, B.E. 2548

Method = Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

Reported results refer to submitted samples only.

Do not copy partial of this analysis report without official approval.


 (Waranya Champen)
 Scientist


 (Uthumporn Thairong)
 Laboratory Supervisor



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1/1

Ref. No. W1380/02/21

Report No. 001

B-Quo-0231-1/2021

Wastewater Quality Analysis Report

Project : Cape Panwa Hotel
Client Name : Kasemkij Co., Ltd.
Sampling by : Kasemkij Co., Ltd.

Sampling Date : 17 February 2021
Received Date : 19 February 2021
Analytical Date : 19-25 February 2021
Report Date : 3 March 2021

Parameter	Analytical Method	Kitchen C (Eff)	Standard
pH	Electrometric Method (4500-H ⁺ B.)	7.31	5-9
Total Suspended Solids (mg/L)	Total Suspended Solids Dried at 103-105 °C (2540 D.)	17.5	Less than 40
BOD ₅ (mg/L)	5 Day BOD Test (5210 B.) & Azide Modification (4500-O C.)	12	Less than 30
TKN (mg/L)	Macro-Kjeldahl Method (4500-N _{org} B.) & Titrimetric Method (4500-NH ₃ C.)	7.4	Less than 35
Sulfide (mg/L)	Iodometric Method (4500-S ²⁻ F.)	<0.06	Less than 1.0
Grease & Oil (mg/L)	Liquid-Liquid, Partition-Gravimetric Method (5520 B.)	2	Less than 20
Fecal Coliform Bacteria (MPN/100 mL)	Multiple-Tube Fermentation Technique (9221 E.)	1,100	-

Remark:


Sample Characteristics: Yellow with slightly precipitate

Standard = Building Effluent Standards (Category B), Notification of the Ministry of Natural Resources and Environment, B.E. 2548

Method = Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

Reported results refer to submitted samples only.

Do not copy partial of this analysis report without official approval.


(Waranya Charanpan)
Scientist


(Uthumporn Thanhong)
Laboratory Supervisor

ANALYSIS REPORT

CUSTOMER NAME : KASEMKI COMPANY LIMITED (CAPE PANWA HOTEL PHUKET)
ADDRESS : 27, 27/2 MOO 8 SAKDIDEJ ROAD WICHIT MUJEANG PHUKET PHUKET 83000
CONTACT INFORMATION : TEL : 0 3831 4288 e-mail : kj-qc@kasemki.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE PANWA HOTEL
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : MARCH 24, 2021
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : MARCH 26, 2021
ANALYTICAL DATE : MARCH 26 - APRIL 1, 2021
REPORT NO. : 2021-U20694
WORK NO. : 2021-001912
ANALYSIS NO. : T21AF225-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT (BUILDING C) T21AF225-0001		
pH ^a	-	ELECTROMETRIC METHOD (SM 4500-H ⁺ B)	7.3 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM 4500-O C AND 5210 B)	13.7	≤ 30	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM 2540 D)	18.2	≤ 40	5.0
SULPHIDE ^c	mg/L	IODOMETRIC METHOD (SM 4500-S ²⁻ F)	ND	≤ 1.0	0.13
TOTAL KJELDAHL NITROGEN ^c	mg/L	IN-HOUSE METHOD UAE.TP.TN.02 (KJELDAHL METHOD): SM 4500-Norg C	< LOQ	≤ 35	1.5
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
Faecal COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM 9221 E)	350	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			BROWN		

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

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

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

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

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

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

500^o : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED (TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).

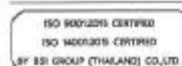
ND : NON-DETECTABLE.

< LOQ : < LEVEL OF QUANTITATION (TOTAL KJELDAHL NITROGEN ≥ 1.5 AND < 5.0 mg/L).



(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 7, 2021



• DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL.

• REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE ONLY.

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ANALYSIS REPORT

CUSTOMER NAME : KASEMKI COMPANY LIMITED (CAPE PANWA HOTEL PHUKET)
ADDRESS : 27, 27/2 MOO 8 SAKDIDEJ ROAD WICHIT MUEANG PHUKET PHUKET 83000
CONTACT INFORMATION : TEL : 0 3831 4288 e-mail : kj-qc@kasemki.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE PANWA HOTEL
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : APRIL 21, 2021
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : APRIL 22, 2021
ANALYTICAL DATE : APRIL 22-29, 2021
REPORT NO. : 2021-U35998
WORK NO. : 2021-002691
ANALYSIS NO. : T21AG723-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT (BUILDING C) T21AG723-0001		
pH °	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	7.0 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^A °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	ND	≤ 30	2.0
SUSPENDED SOLIDS ^A	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	31.5	≤ 40	5.0
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S ²⁻ F)	ND	≤ 1.0	0.13
TOTAL KJELDAHL NITROGEN ^B	mg/L	IN-HOUSE METHOD: UAE.TP.TN.02 (KJELDAHL METHOD); SM: 4500-Norg C	8.9	≤ 35	1.5
FAT, OIL AND GREASE ^B	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT (BUILDING C) T21AG723-0001		
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221E)	< 1.8	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			YELLOW		

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

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

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

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.

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

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

500^c : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED
(TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).

ND : NON-DETECTABLE.

^a : SAMPLING ON MAY 24, 2021. ANALYSIS NO. T21WB37-0001 (ANALYTICAL DATE : MAY 25-31, 2021).

SUBSTITUTED REPORT FOR REPORT NO. 2021-UJ27261, DATED MAY 7, 2021.

Piyapat S.

(MRS PIYAPAT SUJTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 7, 2021

ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED (CAPE PANWA HOTEL PHUKET)
ADDRESS : 27, 27/2 MOO 8 SAKDEJ ROAD WICHIT MUEANG PHUKET PHUKET 83000
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE PANWA HOTEL
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JUNE 24, 2021
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JUNE 25, 2021
ANALYTICAL DATE : JUNE 25-30, 2021
REPORT NO. : 2021-U44341
WORK NO. : 2021-003111
ANALYSIS NO. : T21AL085-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT (BUILDING C) T21AL085-0001		
pH ^a	-	ELECTROMETRIC METHOD (SM 4500-H ⁺ B)	7.6 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O ₂ C AND 5210 B)	8.2	≤ 30	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	7.0	≤ 40	5.0
SULPHIDE ^c	mg/L	IODOMETRIC METHOD (SM 4500-S ²⁻ F)	ND	≤ 1.0	0.13
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE/TP/WAS.001 (KJELDAHL METHOD); SM 4500-Norg C	< LOQ	≤ 35	1.5
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	< 1.8	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			BROWN		

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

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

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

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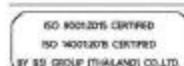
ND : NON-DETECTABLE

< LOQ : < LEVEL OF QUANTIFICATION (TOTAL KJELDAHL NITROGEN ≥ 1.5 AND < 5.0 mg/L).



(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JULY 7, 2021



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ANALYSIS REPORT

CUSTOMER NAME : KASEMKI COMPANY LIMITED (CAPE PANWA HOTEL PHUKET)
ADDRESS : 27, 27/2 MOO 8 SAKDIDEJ ROAD WICHIT MUEANG PHUKET PHUKET 83000
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemki.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE PANWA HOTEL
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JUNE 24, 2021
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS AMONRAT PUTTALAE
RECEIVED DATE : JUNE 25, 2021
ANALYTICAL DATE : JUNE 25-30, 2021
REPORT NO. : 2021-U44371
WORK NO. : 2021-003867
ANALYSIS NO. : T21AL065-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT (BUILDING C) T21AL065-0001		
pH ^c	-	ELECTROMETRIC METHOD (SM 4500-H ⁺ B)	7.6 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^d	mg/L	AZIDE MODIFICATION METHOD (SM 4500-O C AND 5210 B)	8.0	≤ 30	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM 2540 D)	6.8	≤ 40	5.0
SULPHIDE ^e	mg/L	IODOMETRIC METHOD (SM 4500-S ²⁻ F)	ND	≤ 1.0	0.13
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAETP-WAS.001 (KJELDAHL METHOD); SM 4500-Norg C	< LOQ	≤ 35	15
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 ml	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM 9221 E)	< 18	-	18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/CLEAR		
SEDIMENT			BROWN		

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

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500^a : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED (TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).

ND : NON-DETECTABLE.

< LOQ : < LEVEL OF QUANTITATION (TOTAL KJELDAHL NITROGEN ≥ 1.5 AND < 5.0 mg/L).



(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JULY 7, 2021



ผลวิเคราะห์คุณภาพน้ำทิ้งครัว E



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1/1

Ref. No. W1311/01/21

Report No. 001

B-Quo-0056/2021

Wastewater Quality Analysis Report

Project : Cape Panwa Hotel
Client Name : Kasemkij Co., Ltd.
Sampling by : Kasemkij Co., Ltd.

Sampling Date : 28 January 2021
Received Date : 29 January 2021
Analytical Date : 29 January-5 February 2021
Report Date : 9 February 2021

Parameter	Analytical Method	Kitchen E (EF)	Standard
pH	Electrometric Method (4500-H ⁺ B.)	7.78	5-9
Total Suspended Solids (mg/L)	Total Suspended Solids Dried at 103-105 °C (2540 D.)	25.0	Less than 40
BOD ₅ (mg/L)	5 Day BOD Test (5210 B.) & Azide Modification (4500-O C.)	8	Less than 30
TKN (mg/L)	Macro-Kjeldahl Method (4500-N _{org} B.) & Titrimetric Method (4500-NH ₃ C.)	7.3	Less than 35
Sulfide (mg/L)	Iodometric Method (4500-S ²⁻ F.)	<0.06	Less than 1.0
Grease & Oil (mg/L)	Liquid-Liquid, Partition-Gravimetric Method (5520 B.)	<2	Less than 20
Fecal Coliform Bacteria (MPN/100 mL)	Multiple-Tube Fermentation Technique (9221 E.)	220	-

Remark:

Sample Characteristics: Yellow with slightly precipitate

Standard = Building Effluent Standards (Category B), Notification of the Ministry of Natural Resources and Environment, B.E. 2548

Method = Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

Reported results refer to submitted samples only.

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(Waranya Chansapen)
Scientist


(Uthumporn Thanthong)
Laboratory Supervisor



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7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol Chulachak, Bangkok 10900
Tel : (062) 939-4370-72, Fax : (062) 513-4221, E-mail : sales@spscon.com, www.spscon.com

1/1

Ref. No. W1381/02/21

Report No. 001

B-Quo-0231-1/2021

Wastewater Quality Analysis Report

Project : Capo Panwa Hotel
Client Name : Kasemkij Co., Ltd.
Sampling by : Kasemkij Co., Ltd.

Sampling Date : 17 February 2021
Received Date : 19 February 2021
Analytical Date : 19-25 February 2021
Report Date : 3 March 2021

Parameter	Analytical Method	Kitchen E (EIT)	Standard
pH	Electrometric Method (4500-H ⁺ B.)	7.32	5-9
Total Suspended Solids (mg/L)	Total Suspended Solids Dried at 103-105 °C (2540 D.)	11.5	Less than 40
BOD ₅ (mg/L)	5 Day BOD Test (5210 B.) & Azide Modification (4500-O C.)	2	Less than 30
TKN (mg/L)	Macro-Kjeldahl Method (4500-N _{org} B.) & Titrimetric Method (4500-NH ₃ C.)	9.3	Less than 35
Sulfide (mg/L)	Iodometric Method (4500-S ²⁻ F.)	<0.06	Less than 1.0
Grease & Oil (mg/L)	Liquid-Liquid, Partition-Gravimetric Method (5520 B.)	<2	Less than 20
Fecal Coliform Bacteria (MPN/100 mL)	Multiple-Tube Fermentation Technique (9221 E.)	110	-

Remark:

Sample Characteristics: Yellow with slightly precipitate

Standard = Building Effluent Standards (Category B), Notification of the Ministry of Natural Resources and Environment, B.E. 2548

Method = Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

Reported results refer to submitted samples only.

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(Wanyan Chanapan)
Scientist


(Uthumporn Thantong)
Laboratory Supervisor

FLB02/10-11-15/1082104

ANALYSIS REPORT

CUSTOMER NAME : KASEMKI COMPANY LIMITED (CAPE PANWA HOTEL PHUKET)
ADDRESS : 27, 27/2 MOO 8 SAKDIDEJ ROAD WICHIT MUEANG PHUKET PHUKET 83000
CONTACT INFORMATION : TEL : 0 3831 4288 e-mail : kj-qc@kasemki.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE PANWA HOTEL
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : MARCH 24, 2021
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS AMONRAT PUTTALAE

RECEIVED DATE : MARCH 26, 2021
ANALYTICAL DATE : MARCH 26 - APRIL 1, 2021
REPORT NO. : 2021-U20695
WORK NO. : 2021-001912
ANALYSIS NO. : T21AF225-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT (BUILDING E) T21AF225-0002		
pH ^a	-	ELECTROMETRIC METHOD (SM 4500-H ⁺ B)	7.4 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^b	mg/L	AZIDE MODIFICATION METHOD (SM 4500-O ₂ C AND 5210 B)	ND	≤ 30	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM 2540 D)	28.1	≤ 40	5.0
SULPHIDE ^c	mg/L	IODOMETRIC METHOD (SM 4500-S ²⁻ F)	ND	≤ 1.0	0.13
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD UAE/TP.N.02 (KJELDAHL METHOD); SM 4500-Norg C	< LOQ	≤ 35	1.5
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM 9221 E)	790	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			BROWN		

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

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

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

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.

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

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

500^a : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED (TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).

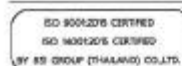
ND : NON-DETECTABLE.

< LOQ : < LEVEL OF QUANTITATION (TOTAL KJELDAHL NITROGEN ≥ 1.5 AND < 5.0 mg/L).



(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 7, 2021



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* REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE ONLY.

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ANALYSIS REPORT

CUSTOMER NAME : KASEMKI COMPANY LIMITED (CAPE PANWA HOTEL PHUKET)
ADDRESS : 27, 27/2 MOO 8 SAKDIDEJ ROAD WICHIT MUEANG PHUKET PHUKET 83000
CONTACT INFORMATION : TEL : 0 3831 4288 e-mail : kj-qc@kasemki.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE PANWA HOTEL
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : APRIL 21, 2021
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : APRIL 22, 2021
ANALYTICAL DATE : APRIL 22-29, 2021
REPORT NO. : 2021-U27262
WORK NO. : 2021-002691
ANALYSIS NO. : T21AG723-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT (BUILDING E) T21AG723-0002		
pH ^a	-	ELECTROMETRIC METHOD (SM 4500-H ⁺ B)	8.0 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM 4500-O C AND 5210 B)	ND	≤ 30	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM 2540 D)	ND	≤ 40	5.0
SULPHIDE ^c	mg/L	IODOMETRIC METHOD (SM 4500-S ²⁻ F)	ND	≤ 1.0	0.15
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAETP.TN.02 (KJELDAHL METHOD); SM 4500-Norg C	< LOQ	≤ 35	1.5
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM 9221 E)	< 1.8	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/CLEAR		
SEDIMENT			YELLOW		

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

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

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

500* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED (TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).

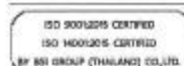
ND : NON-DETECTABLE.

< LOQ : < LEVEL OF QUANTITATION (TOTAL KJELDAHL NITROGEN ≥ 1.5 AND < 5.0 mg/L).



(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 7, 2021



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* REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE ONLY.

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ANALYSIS REPORT

CUSTOMER NAME : KASEMKI COMPANY LIMITED (CAPE PANWA HOTEL PHUKET)
ADDRESS : 27, 27/2 MOO 8 SAKDIDEJ ROAD WICHIT MUEANG PHUKET PHUKET 83000
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemki.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE PANWA HOTEL
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JUNE 24, 2021
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JUNE 25, 2021
ANALYTICAL DATE : JUNE 25-30, 2021
REPORT NO. : 2021-LH4342
WORK NO. : 2021-003111
ANALYSIS NO. : T21AL085-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT (BUILDING E) T21AL085-0002		
pH ^a	-	ELECTROMETRIC METHOD (SM 4500-H ⁺ B)	8.3 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^b	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	ND	≤ 30	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	18.7	≤ 40	5.0
SULPHIDE ^c	mg/L	IODOMETRIC METHOD (SM: 4500-S ²⁻ F)	ND	≤ 1.0	0.13
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	< LOQ	≤ 35	1.5
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^c	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	< 1.8	-	18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			YELLOW		

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

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

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IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.

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

500* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED (TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1000 mg/L).

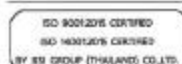
ND : NON-DETECTABLE

< LOQ : < LEVEL OF QUANTITATION (TOTAL KJELDAHL NITROGEN ≥ 1.5 AND < 5.0 mg/L).

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
 LABORATORY SUPERVISOR

JULY 7, 2021



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ANALYSIS REPORT

CUSTOMER NAME : KASEMKI COMPANY LIMITED (CAPE PANWA HOTEL PHUKET)
ADDRESS : 27, 27/2 MOO 8 SAKDIDEJ ROAD WICHIT MUEANG PHUKET PHUKET 83000
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemki.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE PANWA HOTEL
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JUNE 24, 2021
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS AMONIRAT PUTTALEE

RECEIVED DATE : JUNE 25, 2021
ANALYTICAL DATE : JUNE 25-30, 2021
REPORT NO. : 2021-U44372
WORK NO. : 2021-003867
ANALYSIS NO. : T21AL065-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT (BUILDING E) T21AL065-0002		
pH ^a	-	ELECTROMETRIC METHOD (SM 4500-H ⁺ B)	8.2 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM 4500-O C AND 5210 B)	ND	≤ 30	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM 2540 D)	20.2	≤ 40	5.0
SULPHIDE ^a	mg/L	IODOMETRIC METHOD (SM 4500-S ²⁻ F)	ND	≤ 1.0	0.13
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAETP-WAS.001 (KJELDAHL METHOD); SM 4500-Norg C	< LOQ	≤ 35	1.5
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
Faecal COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM 9221 E)	< 1.8	-	1.6
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/CLEAR		
SEDIMENT			BROWN		

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

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

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

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

500^a : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED (TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).

ND : NON-DETECTABLE.

< LOQ : < LEVEL OF QUANTITATION (TOTAL KJELDAHL NITROGEN ≥ 1.5 AND < 5.0 mg/L).



(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JULY 7, 2021



ผลวิเคราะห์คุณภาพน้ำทิ้งเรือนเพาะชำ



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 7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chaituchak, Bangkok 10900
 Tel : (662) 939-4370-72, Fax : (662) 513-4221 E-mail : sale@spscon.com, www.spscon.com

1/1

Ref. No. W1312/01/21

Report No. 001

B-Quo-0055/2021

Wastewater Quality Analysis Report

Project : Cape Panwa Hotel
 Client Name : Kasemkij Co., Ltd.
 Sampling by : Kasemkij Co., Ltd.

Sampling Date : 28 January 2021
 Received Date : 29 January 2021
 Analytical Date : 29 January-5 February 2021
 Report Date : 9 February 2021

Parameter	Analytical Method	Nursery Plant (Eff)	Standard
pH	Electrometric Method (4500-H ⁺ B.)	7.84	5-9
Total Suspended Solids (mg/L)	Total Suspended Solids Dried at 103-105 °C (2540 D.)	15.8	Less than 40
BOD ₅ (mg/L)	5 Day BOD Test (5210 B.) & Azide Modification (4500-O C.)	5	Less than 30
TKN (mg/L)	Macro-Kjeldahl Method (4500-N _{org} B.) & Titrimetric Method (4500-NH ₄ C.)	5.4	Less than 35
Grease & Oil (mg/L)	Liquid-Liquid, Partition-Gravimetric Method (5520 B.)	<2	Less than 20
Sulfide (mg/L)	Iodometric Method (4500-S ²⁻ F.)	<0.06	Less than 1.0
Fecal Coliform Bacteria (MPN/100 mL)	Multiple-Tube Fermentation Technique (9221 E.)	2,200	-

Remark:

Sample Characteristics: Slightly precipitate

Standard = Building Effluent Standards (Category B), Notification of the Ministry of Natural Resources and Environment, B.E. 2548

Method = Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

Reported results refer to submitted samples only.

Do not copy partial of this analysis report without official approval.


 (Waranya Champan)
 Scientist


 (Uthumporn Thunhong)
 Laboratory Supervisor

FLB05/10-11-15/0082101

ANALYSIS REPORT

CUSTOMER NAME : KASEMIJ COMPANY LIMITED (CAPE PANWA HOTEL PHUKET)
ADDRESS : 27, 27/2 MOD 8 SAKDIDEJ ROAD WICHIT MUEANG PHUKET PHUKET 83000
CONTACT INFORMATION : TEL : 0 3831 4288 e-mail : kj-qc@kasemij.com
SAMPLING SOURCE : WASTEWATER TREATMENT PLANT OF CAPE PANWA HOTEL
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : APRIL 21, 2021
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : APRIL 22, 2021
ANALYTICAL DATE : APRIL 22-29, 2021
REPORT NO. : 2021-U35999
WORK NO. : 2021-002691
ANALYSIS NO. : T21AG723-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT (เจ็ลลุ่มน้ำ) T21AG723-0003		
pH °	-	ELECTROMETRIC METHOD (SM: 4500-H ⁺ B)	6.9 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	8.2	≤ 30	2.0
SUSPENDED SOLIDS ^a °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	16.1	≤ 40	5.0
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S ²⁻ F)	ND	≤ 1.0	0.13
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE.TP.TN.02 (KJELDAHL METHOD); SM: 4500-Norg C	5.7	≤ 35	1.5
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT (โรงงานอุตสาหกรรม) T21AG723-0003		
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM 9221E)	< 1.8	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			BROWN		

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

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

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

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

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

500[°] : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED
(TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).

ND : NON-DETECTABLE.

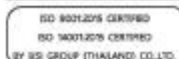
^a : SAMPLING ON MAY 24, 2021, ANALYSIS NO. T21AG723-0002 (ANALYTICAL DATE : MAY 25-28, 2021).

SUBSTITUTED REPORT FOR REPORT NO. 2021-U27263, DATED MAY 7, 2021.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 7, 2021



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2021-U35999

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 7 Soi Phaholyothin 24, Phaholyothin Rd., Jampol, Chatuchak, Bangkok 10900
 Tel : (662) 939-4370-72, Fax : (662) 513-4223, E-mail : sale@spscon.com, www.spscon.com

1/1

Ref. No. W056/02/21

Report No. 001

B-Quo-0056/2021

Sea Water Quality Analysis Report

Project : Cape Panwa Hotel
 Client Name : Kasemkij Co., Ltd.
 Sampling by : Kasemkij Co., Ltd.

Sampling Date : 28 January 2021
 Received Date : 1 February 2021
 Analytical Date : 1-8 February 2021
 Report Date : 9 February 2021

Parameter	Analytical Method	North of Project	Standard
Total Solids (mg/L)	Total Solids Dried at 103-105 °C (2540 B.)	46,240	-
Total Suspended Solids (mg/L)	Total Suspended Solids Dried at 103-105 °C (2540 D.)	14.7	-
Dissolved Oxygen (mg/L)	Azide Modification (4500-O C.)	6.3	More than 4
Grease & Oil (mg/L)	Liquid-Liquid, Partition-Gravimetric Method (5520 B.)	<2	-
Total Coliform Bacteria (MPN/100 mL)	Multiple-Tube Fermentation Technique (9221 B.)	110	Less than 1,000

Remark:

Sample Characteristics: Slightly precipitate


Standard = Sea Water Quality (Category 4), Notification of the National Environment Board, B.E. 2560

Method = Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

Reported results refer to submitted samples only.

Do not copy partial of this analysis report without official approval.


 (Waranya Champan)
 Scientist


 (Wasinee Singuth)
 Laboratory Supervisor

PLB02/10-11-15/J083102



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7 Soi Phaholyothin 24, Phaholyothin Rd., Jompol, Chatuchak, Bangkok 10900
Tel : (662) 939-4370-72 Fax : (662) 513-4221 E-mail : sales@spscon.com, www.spscon.com

1/1

Ref. No. W1388/02/21

Report No. 001

B-Quo-0232/2021

Sea Water Quality Analysis Report

Project : Cape Panwa Hotel
Client Name : Kasemkij Co., Ltd.
Sampling by : Kasemkij Co., Ltd.

Sampling Date : 17 February 2021
Received Date : 19 February 2021
Analytical Date : 19-25 February 2021
Report Date : 3 March 2021

Parameter	Analytical Method	North of Project	Standard
Total Solids (mg/L)	Total Solids Dried at 103-105 °C (2540 B.)	32,802	-
Total Suspended Solids (mg/L)	Total Suspended Solids Dried at 103-105 °C (2540 D.)	21.3	-
Dissolved Oxygen (mg/L)	Azide Modification (4500-O C.)	4.6	More than 4
Grease & Oil (mg/L)	Liquid-Liquid, Partition-Gravimetric Method (5520 B.)	<2	-
Total Coliform Bacteria (MPN/100 mL)	Multiple-Tube Fermentation Technique (9221 B.)	9.2	Less than 1,000

Remark:

Sample Characteristics: Slightly precipitate

Standard = Sea Water Quality (Category 4), Notification of the National Environment Board, B.E. 2560

Method = Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017.

Reported results refer to submitted samples only.

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(Waranya Chanapan)
Scientist


(Uthumporn Thantong)
Laboratory Supervisor

FL002/10-11-15/JOE2103

ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED (CAPE PANWA HOTEL PHUKET)
ADDRESS : 27, 27/2 MOO 8 SAKDIDEJ ROAD WICHIT MUEANG PHUKET PHUKET 83000
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : CAPE PANWA HOTEL
SAMPLE TYPE : SEAWATER
SAMPLING DATE : MARCH 24, 2021
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : MARCH 26, 2021
ANALYTICAL DATE : MARCH 26 - APRIL 1, 2021
REPORT NO. : 2021-U20708
WORK NO. : 2021-001918
ANALYSIS NO. : T21AF226-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ผ่านเกณฑ์ตามข้อกำหนด T21AF226-0001	
DISSOLVED OXYGEN ^c	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G)	7.7	0.5
SUSPENDED SOLIDS ^c	mg/L	GRAVIMETRIC METHOD (SM: 2540 D)	9.4	1.0
TOTAL SOLIDS ^c	mg/L	TOTAL SOLIDS DRIED AT 103-105 °C (SM: 2540 B)	38,890	25
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
MICROBIOLOGY				
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	220	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR YELLOW	

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

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

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

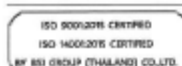
SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.

ND : NON-DETECTABLE.

(Signature)

(MISS CHAWEEWAN BOONLA)
LABORATORY SUPERVISOR

APRIL 8, 2021



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ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED (CAPE PANWA HOTEL PHUKET)
ADDRESS : 27, 27/2 MOO 8 SAKDIDEJ ROAD WICHIT MUEANG PHUKET PHUKET 83000
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : CAPE PANWA HOTEL
SAMPLE TYPE : SEAWATER
SAMPLING DATE : APRIL 21, 2021
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ITSARIYAPORN BUATIB
RECEIVED DATE : APRIL 22, 2021
ANALYTICAL DATE : APRIL 22-29, 2021
REPORT NO. : 2021-U27846
WORK NO. : 2021-002694
ANALYSIS NO. : T21AG721-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			นำหระเลทางด้านคิตเนอ T21AG721-0001	
DISSOLVED OXYGEN ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G)	7.7	0.5
SUSPENDED SOLIDS ^c	mg/L	GRAVIMETRIC METHOD (SM: 2540 D)	3.9	1.0
TOTAL SOLIDS ^c	mg/L	TOTAL SOLIDS DRIED AT 103-105 °C (SM: 2540 B)	37,860	25
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
MICROBIOLOGY				
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	13	1.8
SAMPLE CONDITION				
WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR YELLOW	

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

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

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

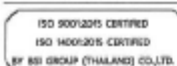
SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

ND : NON-DETECTABLE.



(MISS CHAWEEVAN BOONLA)
LABORATORY SUPERVISOR

MAY 7, 2021



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Tel. 0 2763 2828 Fax 0 2763 2800 www.uaeconsultant.com E-mail: uae@uaeconsultant.com



TESTING
No.0063

ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED (CAPE PANWA HOTEL PHUKET)
ADDRESS : 27, 27/2 MOO 8 SAKDIDEJ ROAD WICHIT MUEANG PHUKET PHUKET 83000
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : CAPE PANWA HOTEL
SAMPLE TYPE : SEAWATER
SAMPLING DATE : JUNE 24, 2021
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ITSARIYAPORN BUATIB

RECEIVED DATE : JUNE 25, 2021
ANALYTICAL DATE : JUNE 25 - JULY 1, 2021
REPORT NO. : 2021-U44584
WORK NO. : 2021-003112
ANALYSIS NO. : T21AL080-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ค่าที่ได้จากการทดสอบ T21AL080-0001	
DISSOLVED OXYGEN ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G)	6.8	0.5
SUSPENDED SOLIDS ^c	mg/L	GRAVIMETRIC METHOD (SM: 2540 D)	3.5	1.0
TOTAL SOLIDS ^c	mg/L	TOTAL SOLIDS DRIED AT 103-105 °C (SM: 2540 B)	40,150	25
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
MICROBIOLOGY				
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	33	1.8
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			YELLOW	

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

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

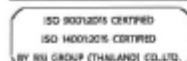
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SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

ND : NON-DETECTABLE.

(MISS CHAWEEVAN BOONLA)
LABORATORY SUPERVISOR

JULY 8, 2021



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TESTING
No.0063

ANALYSIS REPORT

CUSTOMER NAME : KASEMKIJ COMPANY LIMITED (CAPE PANWA HOTEL PHUKET)
ADDRESS : 27, 27/2 MOO 8 SAKDIDEJ ROAD WICHIT MUEANG PHUKET PHUKET 83000
CONTACT INFORMATION : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com
SAMPLING SOURCE : CAPE PANWA HOTEL
SAMPLE TYPE : SEAWATER
SAMPLING DATE : JUNE 24, 2021
SAMPLING TIME : -
SAMPLING METHOD : -
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS ITSARIYAPORN BUATTIB

RECEIVED DATE : JUNE 25, 2021
ANALYTICAL DATE : JUNE 25 - JULY 1, 2021
REPORT NO. : 2021-U44581
WORK NO. : 2021-003883
ANALYSIS NO. : T21AL064-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			นำผลเลขทางด้านทิศเหนือ T21AL064-0001	
DISSOLVED OXYGEN ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G)	6.6	0.5
SUSPENDED SOLIDS ^c	mg/L	GRAVIMETRIC METHOD (SM: 2540 D)	3.9	1.0
TOTAL SOLIDS ^c	mg/L	TOTAL SOLIDS DRIED AT 103-105 °C (SM: 2540 B)	40,950	25
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
MICROBIOLOGY				
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	11	1.8
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			YELLOW	

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

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

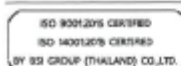
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ND : NON-DETECTABLE.

(MISS CHAWEEVAN BOONLA)
LABORATORY SUPERVISOR

JULY 7, 2021



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ANALYSIS REPORT

CUSTOMER NAME	: KASEMKIJ COMPANY LIMITED (CAPE PANWA HOTEL PHUKET)	RECEIVED DATE	: APRIL 22, 2021
ADDRESS	: 27, 27/2 MOO 8 SAKDIDEJ ROAD WICHIT MUEANG PHUKET PHUKET 83000	ANALYTICAL DATE	: APRIL 22-29, 2021
CONTACT INFORMATION	: TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com	REPORT NO.	: 2021-U27253
SAMPLING SOURCE	: CAPE PANWA HOTEL	WORK NO.	: 2021-002697
SAMPLE TYPE	: WATER	ANALYSIS NO.	: T21AG720-0001
SAMPLING DATE	: APRIL 21, 2021		
SAMPLING TIME	: -		
SAMPLING METHOD	: GRAB		
SAMPLING BY	: CUSTOMER		
ANALYZED BY	: MISS PORNPIMOL WAENTHONG		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ค่าทางสารเคมี T21AG720-0001	
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM 4500-O C AND 5210 B)	ND	2.0
TOTAL SOLIDS	mg/L	TOTAL SOLIDS DRIED AT 103-105 °C (SM 2540 B)	110	25
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
SEDIMENT			YELLOW	

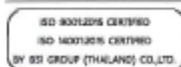
SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 7, 2021



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