

ภาคผนวก

ภาคผนวก ก.

สำเนาหนังสือเห็นชอบ สำนักงานนโยบายและแผน
ทรัพยากรธรรมชาติและสิ่งแวดล้อม
ดำเนินการ



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ទីតាំងស្ថានីយ៍ អត្តសញ្ញាណកម្ម ៖ អត្តសញ្ញាណកម្ម ២០២៤

ប្រភេទការងារស្ថានីយ៍

ស្ថានីយ៍ ៖ អត្តសញ្ញាណកម្ម ២០២៤
 ប្រភេទការងារស្ថានីយ៍ ៖ អត្តសញ្ញាណកម្ម ២០២៤
 ប្រភេទការងារស្ថានីយ៍ ៖ អត្តសញ្ញាណកម្ម ២០២៤

Time	Cloud Humidity(%)	Cloud Temperature(°C)	Relative Humidity	Wind Speed	Direction Wind	Relative Humidity	Hourly Rainfall mm
07:00	47	28.3	78.8	0.7	SW	78.7	0
08:00	58	28.2	78.3	1.7	SW	78.1	0
09:00	66	28.4	78.7	1	SW	78.6	0
10:00	67	28	78.9	0.5	SW	78.5	0
11:00	77	28	78.7	1.4	SW	78.6	0
12:00	87	27.9	79	0	SW	78.9	0
13:00	88	28.0	78.7	0.7	SW	78.4	0
14:00	87	28.7	78.3	0.7	SW	78.1	0
15:00	80	28.7	78.1	0.5	SW	78.0	0
16:00	66	27.8	78.0	0.5	SW	78	0
17:00	74	27.9	78.4	0	SW	78.1	0
18:00	79	27.5	78.0	0	SW	78.1	0
19:00	77	27.5	78.0	0	SW	78.7	0
20:00	78	27.3	78.4	0	SW	78.3	0
21:00	78	27.3	78.4	0	SW	78.2	0
22:00	78	27.3	78.4	0	SW	78.2	0
23:00	78	27.3	78.4	0	SW	78.2	0
00:00	78	27.3	78.4	0	SW	78.2	0
01:00	78	27.3	78.4	0	SW	78.2	0
02:00	78	27.3	78.4	0	SW	78.2	0
03:00	78	27.3	78.4	0	SW	78.2	0
04:00	78	27.3	78.4	0	SW	78.2	0
05:00	78	27.3	78.4	0	SW	78.2	0
06:00	78	27.3	78.4	0	SW	78.2	0
07:00	78	27.3	78.4	0	SW	78.2	0
08:00	78	27.3	78.4	0	SW	78.2	0
09:00	78	27.3	78.4	0	SW	78.2	0
10:00	78	27.3	78.4	0	SW	78.2	0
11:00	78	27.3	78.4	0	SW	78.2	0
12:00	78	27.3	78.4	0	SW	78.2	0
13:00	78	27.3	78.4	0	SW	78.2	0
14:00	78	27.3	78.4	0	SW	78.2	0
15:00	78	27.3	78.4	0	SW	78.2	0
16:00	78	27.3	78.4	0	SW	78.2	0
17:00	78	27.3	78.4	0	SW	78.2	0
18:00	78	27.3	78.4	0	SW	78.2	0
19:00	78	27.3	78.4	0	SW	78.2	0
20:00	78	27.3	78.4	0	SW	78.2	0
21:00	78	27.3	78.4	0	SW	78.2	0
22:00	78	27.3	78.4	0	SW	78.2	0
23:00	78	27.3	78.4	0	SW	78.2	0

ទំព័រ ១

ហត្ថលេខា
 ហត្ថលេខា
 ហត្ថលេខា



ទំព័រ ២

ហត្ថលេខា
 ហត្ថលេខា
 ហត្ថលេខា



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ទីតាំងស្ថានីយ៍ អត្តសញ្ញាណកម្ម ៖ អត្តសញ្ញាណកម្ម ២០២៤

ប្រភេទការងារស្ថានីយ៍

ស្ថានីយ៍ ៖ អត្តសញ្ញាណកម្ម ២០២៤
 ប្រភេទការងារស្ថានីយ៍ ៖ អត្តសញ្ញាណកម្ម ២០២៤
 ប្រភេទការងារស្ថានីយ៍ ៖ អត្តសញ្ញាណកម្ម ២០២៤

Time	Cloud Humidity(%)	Cloud Temperature(°C)	Relative Humidity	Wind Speed	Direction Wind	Relative Humidity	Hourly Rainfall mm
07:00	46	28.6	78.6	1	SW	78.6	0
08:00	57	28.7	78.6	1.4	SW	78.7	0
09:00	65	28.4	78.4	0.7	SW	78.2	0
10:00	65	28.4	78.5	0.7	SW	78.1	0
11:00	68	27.2	78.7	0	SW	78.1	0
12:00	68	28.6	78.0	0.7	SW	78.2	0
13:00	67	28.6	78.7	0.3	SW	78.0	0
14:00	70	27.8	78.1	0	SW	78.1	0
15:00	71	27.8	78.2	0	SW	78.4	0
16:00	74	27.8	78.7	0	SW	78.0	0
17:00	70	27.8	78.1	0.7	SW	78.0	0
18:00	71	27.7	78.1	0	SW	78.0	0
19:00	72	27.8	78.0	0.3	SW	78.1	0
20:00	74	27.3	78.0	0	SW	78.1	0
21:00	80	28.6	78.1	0.7	SW	78.0	0
22:00	80	28.7	78.1	0	SW	78.0	0
23:00	81	28.4	78.1	0	SW	78.0	0
00:00	80	28.5	78.0	0	SW	78.0	0
01:00	80	28.5	78.0	0	SW	78.0	0
02:00	80	28.5	78.0	0	SW	78.0	0
03:00	80	28.5	78.0	0	SW	78.0	0
04:00	80	28.5	78.0	0	SW	78.0	0
05:00	80	28.5	78.0	0	SW	78.0	0
06:00	80	28.5	78.0	0	SW	78.0	0
07:00	80	28.5	78.0	0	SW	78.0	0
08:00	80	28.5	78.0	0	SW	78.0	0
09:00	80	28.5	78.0	0	SW	78.0	0
10:00	80	28.5	78.0	0	SW	78.0	0
11:00	80	28.5	78.0	0	SW	78.0	0
12:00	80	28.5	78.0	0	SW	78.0	0
13:00	80	28.5	78.0	0	SW	78.0	0
14:00	80	28.5	78.0	0	SW	78.0	0
15:00	80	28.5	78.0	0	SW	78.0	0
16:00	80	28.5	78.0	0	SW	78.0	0
17:00	80	28.5	78.0	0	SW	78.0	0
18:00	80	28.5	78.0	0	SW	78.0	0
19:00	80	28.5	78.0	0	SW	78.0	0
20:00	80	28.5	78.0	0	SW	78.0	0
21:00	80	28.5	78.0	0	SW	78.0	0
22:00	80	28.5	78.0	0	SW	78.0	0
23:00	80	28.5	78.0	0	SW	78.0	0

ទំព័រ ១

ហត្ថលេខា
 ហត្ថលេខា
 ហត្ថលេខា



ទំព័រ ២

ហត្ថលេខា
 ហត្ថលេខា
 ហត្ថលេខា



Abstract

^a χ^2 test for independence of variables.

Address	2775 WASHINGTON AVENUE	City/State	MT PLEASANT, MISSOURI 63117
Business/Institution	617 FARM ROAD	Weather Station	WEATHER STATION
Local Name	24 25	Facility	PROFESSIONAL WEATHER STATION 600 000
		Instrument Number	24 104 2015 MTH

Temp	Outdoor Humidity (%)	Outdoor Temperature (°C)	Relative Humidity (average)	Wind (m/s)	Direction (°)	Pressure (average)	Time Elapsed (sec)
15:45	98	38.2	95.8	0.3	45	1013.6	1.4
16:45	98	37.5	95.3	1.4	480	1013.3	11.5
16:50	95	38.2	94.7	0	0	1013.4	0
16:52	93	38.8	94	0	0	1013.6	0
16:55	91	37.8	93.5	0	300	1013.5	0
17:00	87	38.8	93.4	0	300	1013.6	0
17:05	88	37	93.8	0.8	0	1013.7	0
17:10	88	37.3	92.1	0	0	1013.8	0
17:15	87	37.8	90	0.2	40	1013.8	0
17:40	88	37	93.8	0.5	300	1013.6	0
17:45	88	38.8	93.4	0.7	0	1013.6	0
17:47	88	38.4	940.2	0	300	1013	0
17:48	88	38	93.8	0	0	1013.8	0
1:00	88	39.8	940.4	0	0	1013.3	0
2:40	87	39.7	938.8	0	0	1013.3	0
3:40	86	39.3	938.8	0	0	1013.3	0
4:00	87	39.8	938.8	0	0	1013	0
5:40	87	39.8	937	0.2	10	1013.6	0
6:40	87	39.3	937.5	0	300	1013.6	0
7:00	88	39.1	937.8	0	0	1013.7	0
8:40	88	39.5	937.8	0	0	1013.4	0
9:40	88	39.8	938.1	0	300	1013.3	0
10:40	89	39	938.8	1.8	40	1013.8	0
11:40	88	38.7	938.1	0.2	40	1013.9	0

Keywords: *Self-esteem, self-worth, self-concept, self-identity, self-image, self-perception, self-awareness, self-knowledge, self-understanding, self-exploration, self-discovery, self-actualization, self-fulfillment, self-empowerment, self-motivation, self-direction, self-regulation, self-control, self-discipline, self-reliance, self-sufficiency, self-dependence, self-assertion, self-defense, self-protection, self-preservation, self-survival, self-sustainability, self-resilience, self-strength, self-confidence, self-belief, self-trust, self-respect, self-dignity, self-honor, self-pride, self-satisfaction, self-contentment, self-peace, self-harmony, self-unity, self-wholeness, self-completeness, self-fulfillment, self-actualization, self-empowerment, self-motivation, self-direction, self-regulation, self-control, self-discipline, self-reliance, self-sufficiency, self-dependence, self-assertion, self-defense, self-protection, self-preservation, self-survival, self-sustainability, self-resilience, self-strength, self-confidence, self-belief, self-trust, self-respect, self-dignity, self-honor, self-pride, self-satisfaction, self-contentment, self-peace, self-harmony, self-unity, self-wholeness, self-completeness.*

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26



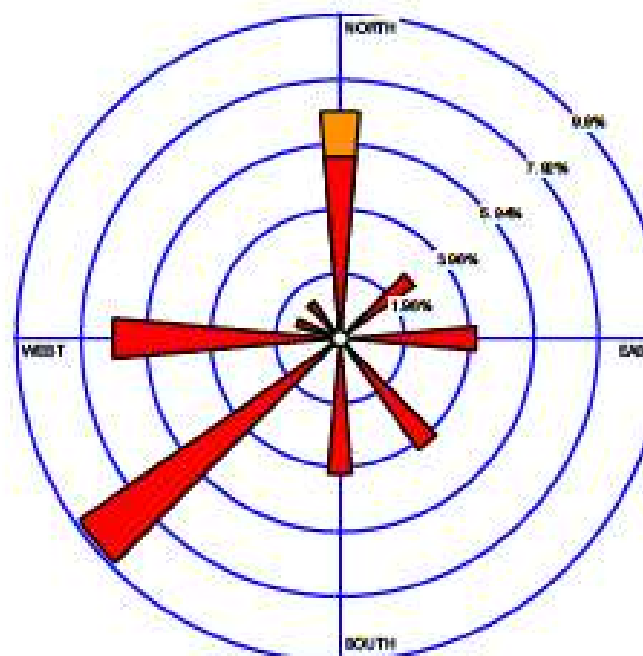
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1. *Identify the problem.*
 2. *Identify the cause.*
 3. *Identify the effect.*
 4. *Identify the solution.*
 5. *Identify the outcome.*
 6. *Identify the feedback.*
 7. *Identify the evaluation.*
 8. *Identify the conclusion.*
 9. *Identify the recommendation.*
 10. *Identify the action plan.*
 11. *Identify the timeline.*
 12. *Identify the resources.*
 13. *Identify the risks.*
 14. *Identify the stakeholders.*
 15. *Identify the communication plan.*
 16. *Identify the monitoring and evaluation plan.*
 17. *Identify the reporting mechanism.*
 18. *Identify the accountability structure.*
 19. *Identify the sustainability plan.*
 20. *Identify the exit strategy.*

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1999-2001
 1998-2000
 1997-2000



WIND SPEED
(mph)

	0.00 - 11.00
	11.00 - 22.00
	22.00 - 33.00
	33.00 - 44.00
	44.00 - 55.00

Colors: 00, 00%

[illegible]

Table 1



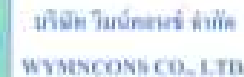
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Abstract

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when business fails (1999) by individual (local) transfer (business) cost

[illegible]

www.elsevier.com/locate/jmb
doi:10.1016/j.jmb.2006.05.006

17 de mayo 2008



1. *Chlorophyta* (green algae)
 2. *Phaeophyta* (brown algae)
 3. *Chlorophyta* (green algae)
 4. *Chlorophyta* (green algae)
 5. *Chlorophyta* (green algae)
 6. *Chlorophyta* (green algae)
 7. *Chlorophyta* (green algae)
 8. *Chlorophyta* (green algae)
 9. *Chlorophyta* (green algae)
 10. *Chlorophyta* (green algae)

white turbot 4/16 (1976) 212; *continguous* 4/16 (1976) 212; *continguous* 4/16 (1976) 212



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Year	Average Annual Rainfall (inches)		
	1980-1989	1990-1999	2000-2009
1980	52.5	53.0	53.5
1981	52.8	53.2	53.8
1982	53.0	53.5	54.0
1983	53.2	53.8	54.2
1984	53.5	54.0	54.5
1985	53.8	54.2	54.8
1986	54.0	54.5	55.0
1987	54.2	54.8	55.2
1988	54.5	55.0	55.5
1989	54.8	55.2	55.8
1990	55.0	55.5	56.0
1991	55.2	55.8	56.2
1992	55.5	56.0	56.5
1993	55.8	56.2	56.8
1994	56.0	56.5	57.0
1995	56.2	56.8	57.2
1996	56.5	57.0	57.5
1997	56.8	57.2	57.8
1998	57.0	57.5	58.0
1999	57.2	57.8	58.2
2000	57.5	58.0	58.5
2001	57.8	58.2	58.8
2002	58.0	58.5	59.0
2003	58.2	58.8	59.2
2004	58.5	59.0	59.5
2005	58.8	59.2	59.8
2006	59.0	59.5	60.0
2007	59.2	59.8	60.2
2008	59.5	60.0	60.5
2009	59.8	60.2	60.8
Average (2010)	57.5	58.0	58.5
Maximum (2010)	60.0	60.5	61.0

 (Signature)

 (Printed Name)

 (Title)



Developmental _____
 (unrelated research)
 (the same thing)

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Received 15 November 2007; accepted 12 February 2008

FERTIGHEIT	WIRTSCHAFTSSEKTOR	Jahresdurchschnitt		
		2000-2004	2005-2009	2010-2014
Landwirtschaft	1000	11,5	11,5	11,54

Q: Is the following statement true or false?
 (A) Corrected birth
 (B) Corrected death



Quesada, J. A. 1999. *El agua en el mundo*.
 1999. *El agua en el mundo*.
 1999. *El agua en el mundo*.

White Paper on the 2000 Census as a watershed event in the history of the census

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87/84 Changpradengrabsaburi 13, Talad Kwan, Mueang, Nonthaburi 11060
Tel : 0-2668-0714, 0-2668-0730-1, 0-2520-1189 Fax : 0-2668-0710
Website : www.envlab.co.th E-mail : service@envlab.co.th



Analysis Report

Customer Name : สหวิทย์ เทคโนโลยี
Address : 111/111 ถนนวิเศษ
4-111/111 ถนนวิเศษ
Tel : 0-2001-0000 Fax : 0-2001-0799

Page 1 of 1
Report No. : 210708015

Sampling Service : City Research Inc. Service

Sampling Date : 08-04-21 Sampling Method : Grab
Received Date : 08-04-21 Sampling By : Customer
Testing Date : Jul 13, 2021 Approval Date : 20-Apr-21

Item	Unit	Method of Analysis	Result	Standard
Sample Name			Effluent	Standard
Sample Type			Wastewater	
Analysis No.			210708015	
Sampling Time			-	
Physical Appearance			Dark yellow colorless	
pH at 25-deg C	-	APHA 4500-H ₂ O	7.4	5.0-9.0
DO at 25-deg C	mg/L	APHA 4500-DO (2104 B)	3.4	≤28
TSS	mg/L	APHA 2540 D	8.0	≤50
OTD ₅₀₀	mg/L	Distal 103-105 C	96	≤500
Free/Total Chlorine	mg/L	APHA 4500-Cl ₂ B	4.4	≤28
Free/Total Chlorine	mg/L	APHA 4500-Cl ₂ B	4.2	≤25
Settleable Solid	ml/L	APHA 2540 F	0.1	0.1
Chloride	mg/L	APHA 4500-Cl ₂ B	1.0	1.0

Remark : The sample was taken from the effluent of the wastewater treatment plant and was analyzed for the parameters listed in the report.

Remark : APHA - Standard Methods for the Examination of Water and Wastewater, 19th ed., APHA, AWWA, WEF, 2005, 21st Edition 2017

1. * The results of the report are not included in the ISO Accreditation Schedule for the Laboratory.

Sampling By Customer - Reported results refer to samples received from customer only.

2. * The sample was analyzed for the parameters listed in the report.

* All pH at 25-deg C unless otherwise noted.

Environment & Laboratory Co., Ltd.

Approved By :

Aisa Sangsriwong
Laboratory Manager



Environment & Laboratory Co., Ltd.

87/84 Changpradengrabsaburi 13, Talad Kwan, Mueang, Nonthaburi 11060
Tel : 0-2668-0714, 0-2668-0730-1, 0-2520-1189 Fax : 0-2668-0710
Website : www.envlab.co.th E-mail : service@envlab.co.th



Analysis Report

Customer Name : สหวิทย์ เทคโนโลยี
Address : 111/111 ถนนวิเศษ
4-111/111 ถนนวิเศษ
Tel : 0-2001-0000 Fax : 0-2001-0799

Page 1 of 1
Report No. : 210708015

Sampling Service : City Research Inc. Service

Sampling Date : 08-04-21 Sampling Method : Grab
Received Date : 08-04-21 Sampling By : Customer
Testing Date : Jul 13, 2021 Approval Date : 20-Apr-21

Item	Unit	Method of Analysis	Result
Sample Name			Effluent
Sample Type			Effluent
Analysis No.			210708015
Sampling Time			-
Physical Appearance			Clear
TDS	mg/L	Distal 103-105 C	150

Remark : Sampling By Customer - Reported results refer to samples received from customer only.

Environment & Laboratory Co., Ltd.

Approved By :

Aisa Sangsriwong
Laboratory Manager



Environment & Laboratory Co., Ltd.

81/101 Longprachangsubhachul 13, Talad Kwan, Muang, Nonthaburi 11000
Tel : 0-2646-0714, 0-2646-0130-1, 0-2626-1140 Fax : 0-2646-0710
Website : www.envilab.com E-mail : service@envilab.com

Envilab

Analysis Report

Customer Name : สหกิจ ซุปเปอร์มาร์เก็ต Page 1 of 1
Address : 125/118 ถนนแจ้งวัฒนะ แขวง
จตุจักร กรุงเทพฯ Report No. 210704010

Tel : 0-2621-4060 Fax : 0-2621-4798

Sampling Source : City River (จ. บางเขน)
-

Sampling Date : 09-Jul-21 Sampling Method : Grab
Received Date : 09-Jul-21 Sampling By : Customer
Testing Date : Jul 9-11, 2021 Approved Date : 20-Jul-21

Item	Unit	Method of Analysis	Result	Standard
Sample Name			แม่น้ำจตุจักร	Standard
Sample Type			น้ำดื่ม	
Analysis No.			210704010	
Sampling Time			-	
Physical Appearance			Clear solution	
Coliform, Total	MPN/100 mL	APHA 9221 B	ND	<10
Coliform, Fecal	MPN/100 mL	APHA 9221 E	ND	ไม่มี

Remark : ตรวจพบแบคทีเรียในน้ำดื่มที่เก็บจากแม่น้ำจตุจักร กรุงเทพมหานคร ไม่พบเชื้อ

Remark : APHA - Standard Method for the Examination of Water and Wastewater, APHA, 1918, 1922, 2nd Edition 2017

Sampling By Customer : "Reported results refer to samples received from customer only"
ND : Not Detected

Environment & Laboratory Co., Ltd.

Approved By :

Aisa Sangmanee
Laboratory Manager



Environment & Laboratory Co., Ltd.

81/101 Longprachangsubhachul 13, Talad Kwan, Muang, Nonthaburi 11000
Tel : 0-2646-0714, 0-2646-0130-1, 0-2626-1140 Fax : 0-2646-0710
Website : www.envilab.com E-mail : service@envilab.com

Envilab

Analysis Report

Customer Name : สหกิจ ซุปเปอร์มาร์เก็ต Page 1 of 1
Address : 125/118 ถนนแจ้งวัฒนะ แขวง
จตุจักร กรุงเทพฯ Report No. 210704010

Tel : 0-2621-4060 Fax : 0-2621-4798

Sampling Source : City River (จ. บางเขน)
-

Sampling Date : 09-Jul-21 Sampling Method : Grab
Received Date : 09-Jul-21 Sampling By : Customer
Testing Date : Jul 9-11, 2021 Approved Date : 20-Jul-21

Item	Unit	Method of Analysis	Result	Standard
Sample Name			แม่น้ำจตุจักร	Standard
Sample Type			น้ำดื่ม	
Analysis No.			210704010	
Sampling Time			-	
Physical Appearance			Clear solution	
Coliform, Total	MPN/100 mL	APHA 9221 B	ND	<10
Coliform, Fecal	MPN/100 mL	APHA 9221 E	ND	ไม่มี

Remark : ตรวจพบแบคทีเรียในน้ำดื่มที่เก็บจากแม่น้ำจตุจักร กรุงเทพมหานคร ไม่พบเชื้อ

Remark : APHA - Standard Method for the Examination of Water and Wastewater, APHA, 1918, 1922, 2nd Edition 2017

Sampling By Customer : "Reported results refer to samples received from customer only"
ND : Not Detected

Environment & Laboratory Co., Ltd.

Approved By :

Aisa Sangmanee
Laboratory Manager



Analysis Report

Customer Name : *White Industrial Ltd.* Page 1 of 1
Address : *(121/111 Santhachul 1 Road, Santhachul 1 Road)* Report No. : *2108166616*

Tel : 0-2921-6940 Fax : 0-2921-6799

Sampling Source : *City House @ Santhachul 1*
Sampling Date : *08-Aug-21* Sampling Method : *Grab*
Received Date : *09-Aug-21* Sampling By : *Customer*
Testing Date : *14-Aug-2021* Approved Date : *24-Aug-21*

Item	Unit	Method of Analysis	Result
Sample Name			<i>water sample</i>
Sample Type			<i>water</i>
Analysis No.			<i>2108166616</i>
Sampling Time			
Physical Appearance			<i>Clear</i>
Turbidity	MPN/100 mL	APHA-2100 G	<i>ND</i>

Remark : *APHA - Standard Method for the Determination of Water and Wastewater, APHA, AWWA, WEF, 21st Edition, 2017*

Sampling By Customer : *"Reported results only to samples received from customer only"*

ND : Not Detectable

Environment & Laboratory Co., Ltd.

Approved By :
[Signature]
Nitha Tangmanee
Laboratory Manager



Analysis Report

Customer Name : *White Industrial Ltd.* Page 1 of 1
Address : *(121/111 Santhachul 1 Road, Santhachul 1 Road)* Report No. : *2108166617*

Tel : 0-2921-6940 Fax : 0-2921-6799

Sampling Source : *City House @ Santhachul 1*
Sampling Date : *11-Aug-21* Sampling Method : *Grab*
Received Date : *11-Aug-21* Sampling By : *Customer*
Testing Date : *Aug 17-18, 2021* Approval Date : *24-Aug-21*

Item	Unit	Method of Analysis	Result	Standard
Sample Name			<i>water sample</i>	
Sample Type			<i>Water sample</i>	
Analysis No.			<i>2108166617</i>	
Sampling Time				
Physical Appearance			<i>Turbid yellow sediment</i>	
pH at 25 deg C	-	APHA-4500-HBB	<i>7.3</i>	<i>5.0-9.0</i>
BOD 5 days*	mg/L	APHA-5200-DC/5210 B	<i>9.6</i>	<i>≤20</i>
TSS	mg/L	APHA-2540 D	<i>12.3</i>	<i>≤30</i>
#TDS(g)	mg/L	Distil 382-105 C	<i>82</i>	<i>≤500</i>
#Fat, Oil & Grease	mg/L	APHA-5520 B	<i>4.4</i>	<i>≤20</i>
#N,TKN	mg/L N	APHA-4500-Hung/B	<i>26</i>	<i>≤15</i>
#Settleable Solid	mg/L	APHA-2540 F	<i>0.3</i>	<i>≤0.5</i>
#Total Solids	mg/L S	APHA-4500-807	<i><1.0</i>	<i>≤1.0</i>

Standard : *APHA - Standard Method for the Determination of Water and Wastewater, APHA, AWWA, WEF, 21st Edition, 2017*

Remark : *APHA - Standard Method for the Determination of Water and Wastewater, APHA, AWWA, WEF, 21st Edition, 2017*

* : This method is not included in the TSI Accreditation Schedule for our Laboratory.

Sampling By Customer : *"Reported results only to samples received from customer only"*

g : *Grams in analysis (1000 mg = 1g)*

* Add : *MLT of Method in analysis*

Environment & Laboratory Co., Ltd.

Approved By :
[Signature]
Nitha Tangmanee
Laboratory Manager



Analysis Report

Customer Name : **White Industrial Info** Page 1 of 1
Address : **120/178 a Joo Road a Joo** Report No. : **210811009**
white sample

Tel : 0-2921-0980 Fax : 0-2921-0790

Sampling Source : **City River @ Sea Beach**

Sampling Date : **11-Aug-21** Sampling Method : **Grab**
Received Date : **14-Aug-21** Sampling By : **Customer**
Testing Date : **Aug 16, 2021** Approved Date : **18-Aug-21**

Item	Unit	Method of Analysis	Result
Sample Name			น้ำดื่ม
Sample Type			น้ำดื่ม
Analysis No.			210811009
Sampling Time			-
Physical Appearance			Clear
TDS	mg/L	Distill 900-900 °C	138

Remark : Sampling By Customer - "Reported results refer to samples received from customer only"

Environment & Laboratory Co., Ltd.

Approved By :

Aisa Tangmanee
Laboratory Manager



Analysis Report

Customer Name : **White Industrial Info** Page 1 of 1
Address : **120/178 a Joo Road a Joo** Report No. : **210811009**
white sample

Tel : 0-2921-0980 Fax : 0-2921-0790

Sampling Source : **City River @ Sea Beach**

Sampling Date : **11-Aug-21** Sampling Method : **Grab**
Received Date : **11-Aug-21** Sampling By : **Customer**
Testing Date : **Aug 16, 2021** Approved Date : **18-Aug-21**

Item	Unit	Method of Analysis	Result
Sample Name			น้ำดื่ม
Sample Type			น้ำดื่ม
Analysis No.			210811009
Sampling Time			-
Physical Appearance			Clear
Coliform, Total	MPN/100 mL	APHA-9221 B	ND
Coliform, Fecal	MPN/100 mL	APHA-9221 E	ND

Standard : **Water and Wastewater, APHA, AWWA, WEF, Dist. 18th Ed. 2011**

Remark : **APHA - Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, Dist. 18th Ed. 2011**

Sampling By Customer - "Reported results refer to samples received from customer only"

Y/D : Not Detectable

Environment & Laboratory Co., Ltd.

Approved By :

Aisa Tangmanee
Laboratory Manager



Environment & Laboratory Co., Ltd.

40/100 Langsuanvitthayalai 13, Sadao Road, Mueang, Nonthaburi 11000
Tel : 0-2604-0714, 0-2604-0130-1, 0-2526-1149 Fax : 0-2604-0715
Website : www.envirolab.com E-mail : enviro@envirolab.com



Analysis Report

Customer Name : (Date Received Info)
Address : (Date Received Info)
Tel : 0-2601-0940 Fax : 0-2601-0708

Page 1 of 1
Report No. : 210001070

Sampling Source : City River @ San Yotwaka
Sampling Date : 11-Aug-21 Sampling Method : Grab
Received Date : 11-Aug-21 Sampling By : Aisara Chaiyachai
Testing Date : Aug 14-16, 2021 Approved Date : 24-Aug-21

Item	Unit	Method of Analysis	Result	Standard
Sample Name			untreated effluent	Standard
Sample Type			untreated effluent	
Analysis No.			210001070	
Sampling Time			-	
Physical Appearance			Clear	
Coliforms Total	MPN/100 mL	APHA 9221 B	ND	≤10
Coliforms Fecal	MPN/100 mL	APHA 9221 E	ND	≤10/100 mL

Standard : (Date Received Info) (Date Received Info) (Date Received Info) (Date Received Info) (Date Received Info) (Date Received Info)

Remark : APHA - Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 19th Edition, 2017

Sampling By Customer : "Reported results refer to samples received from customer only"

ND - Not Detected

Environment & Laboratory Co., Ltd.

Approved By :

Aisara Chaiyachai
Laboratory Manager

210001070 - 7 February, 2021



Environment & Laboratory Co., Ltd.

40/100 Langsuanvitthayalai 13, Sadao Road, Mueang, Nonthaburi 11000
Tel : 0-2604-0714, 0-2604-0130-1, 0-2526-1149 Fax : 0-2604-0715
Website : www.envirolab.com E-mail : enviro@envirolab.com



Analysis Report

Customer Name : (Date Received Info)
Address : (Date Received Info)
Tel : 0-2601-0940 Fax : 0-2601-0708

Page 1 of 1
Report No. : 210001029

Sampling Source : City River @ San Yotwaka
Sampling Date : 07-Sep-21 Sampling Method : Grab
Received Date : 07-Sep-21 Sampling By : Customer
Testing Date : Sep 8-11, 2021 Approved Date : 13-Sep-21

Item	Unit	Method of Analysis	Result	Standard
Sample Name			untreated effluent	Standard
Sample Type			untreated effluent	
Analysis No.			210001029	
Sampling Time			-	
Physical Appearance			Clear yellow sediment	
pH at 25 deg C	-	APHA 4590-HB	7.2	5.0-9.0
AMOD 1 Day*	mg/L	APHA 4590-OCY/5210 B	<2.0	≤20
ATSS	mg/L	APHA 2540 D	<5.0	≤20
ATSS2	mg/L	Dried 100-105 C	95	≤500
ATSS3	mg/L	APHA 5520 B	1.6	≤20
ATSS4	mg/L	APHA 4500-NorgB	12	≤35
Settleable Solid	mL	APHA 2540 F	<0.1	≤0.5
Sulfide	mg/L S	APHA 4500-SF	<1.0	≤1.0

Standard : (Date Received Info) (Date Received Info) (Date Received Info) (Date Received Info) (Date Received Info) (Date Received Info)

Remark : APHA - Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 19th Edition, 2017

* The method of this report are not included in the TIS Accreditation Schedule for our Laboratory

Sampling By Customer : "Reported results refer to samples received from customer only"

g - (Date Received Info) (Date Received Info) (Date Received Info) (Date Received Info) (Date Received Info) (Date Received Info)

* Add 10% of Stabilization solution

Environment & Laboratory Co., Ltd.

Approved By :

Aisara Chaiyachai
Laboratory Manager

210001029 - 8 February, 2021

**Environment & Laboratory Co., Ltd.**

41/54 Changsupanjanthaburi 15, Talad Kwan, Mueang, Nonthaburi 11000
Tel : 0-2944-0714, 0-2944-0715, 0-2924-1149 Fax : 0-2944-0715
Website : www.envlab.co.th E-mail : envlab@envlab.co.th

EnvLab**Analysis Report**

Customer Name : สหวิทย์ อินเตอร์เทรด จำกัด Page 1 of 1
Address : 221/16 ซ.เทศบาล 4 ตำบล
วัดใหม่บางทรายใหญ่ อำเภอบางพลี จังหวัดสมุทรปราการ
Tel : 0-2921-4940 Fax : 0-2921-4790
Report No. : 210907010

Sampling Source : City River @ San Sathuk
Sampling Date : 07-Sep-21 Sampling Method : Grab
Received Date : 07-Sep-21 Sampling By : Customer
Testing Date : Sep 8, 2021 Approved Date : 15-Sep-21

Item	Unit	Method of Analysis	Result
Sample Name			น้ำผิวน้ำ
Sample Type			น้ำผิวน้ำ
Analysis No.			210907010
Sampling Date			-
Physical Appearance			Clear
TDS	mg/L	Distil 100-100°C	335

Remark : Sampling By Customer : "Reported results refer to samples received from customer only"

Environment & Laboratory Co., Ltd.

Approved By :

Aisa Hongwan
Laboratory Manager

**Environment & Laboratory Co., Ltd.**

41/54 Changsupanjanthaburi 15, Talad Kwan, Mueang, Nonthaburi 11000
Tel : 0-2944-0714, 0-2944-0715, 0-2924-1149 Fax : 0-2944-0715
Website : www.envlab.co.th E-mail : envlab@envlab.co.th

EnvLab**Analysis Report**

Customer Name : สหวิทย์ อินเตอร์เทรด จำกัด Page 1 of 1
Address : 221/16 ซ.เทศบาล 4 ตำบล
วัดใหม่บางทรายใหญ่ อำเภอบางพลี จังหวัดสมุทรปราการ
Tel : 0-2921-4940 Fax : 0-2921-4790
Report No. : 210907010

Sampling Source : City River @ San Sathuk
Sampling Date : 07-Sep-21 Sampling Method : Grab
Received Date : 07-Sep-21 Sampling By : Customer
Testing Date : Sep 8-10, 2021 Approved Date : 15-Sep-21

Item	Unit	Method of Analysis	Result
Sample Name			น้ำผิวน้ำ/น้ำผิวน้ำ Standard
Sample Type			น้ำผิวน้ำ
Analysis No.			210907010
Sampling Date			-
Physical Appearance			Clear
Coliform, Fecal	MPN/100 mL	APHA-9221 E	ND
Coliform, Total	MPN/100 mL	APHA-9221 B	ND

Remark : Report of this test is for information only. (This is a reference test and not a standard test for drinking water quality.)

Remark : APHA : Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition 2017

Sampling By Customer : "Reported results refer to samples received from customer only"

NR : Not Detectable

Environment & Laboratory Co., Ltd.

Approved By :

Aisa Hongwan
Laboratory Manager



Environment & Laboratory Co., Ltd.

40/50 Changrasongroonsuburi 15, Talad Kwan, Mueang, Nonthaburi 11000
Tel : 0-2969-0714, 0-2969-0715, 0-2969-1149 Fax : 0-2969-0715
Website : www.envirolab.com E-mail : enviro@envirolab.com



Analysis Report

Customer Name : *White Industrial Park* Page 1 of 1
Address : *125/19 A Santhachulalongkornrajavidyalaya University (SNU) Campus* Report No. : 21002006

Tel : 0-2969-0714 Fax : 0-2969-0715

Sampling Source : *City River @ Santhachulalongkornrajavidyalaya University (SNU) Campus*

Sampling Date : 07-Sep-21 Sampling Method : *Grab*
Received Date : 07-Sep-21 Sampling By : *Customer*
Testing Date : Sep 9-10, 2021 Approval Date : 15-Sep-21

Item	Unit	Method of Analysis	Result	Standard
Sample Name			<i>Santhachulalongkornrajavidyalaya University (SNU) Campus</i>	
Sample Type			<i>Water sample</i>	
Analysis No.			21002006	
Sampling Time				
Physical Appearance			<i>Clear</i>	
Coliform, Faecal	MPN/100 mL	APHA 9221 E	ND	<i>0/100 mL</i>
Coliform, Total	MPN/100 mL	APHA 9221 B	ND	<i>≤10</i>

Remark : *Water sample was collected from the city river @ Santhachulalongkornrajavidyalaya University (SNU) Campus*

Remark : *APHA - Standard Method for the Examination of Water and Wastewater, APHA, 1998, 19th Edition, 2017*

Sampling By Customer : *"Reported results refer to samples received from customer only"*

ND : Not Detectable

Environment & Laboratory Co., Ltd.

Approved By :

[Signature]
Nitha Sangsriwong
Laboratory Manager

ET000051 - 1 February, 2018



Environment & Laboratory Co., Ltd.

40/50 Changrasongroonsuburi 15, Talad Kwan, Mueang, Nonthaburi 11000
Tel : 0-2969-0714, 0-2969-0715, 0-2969-1149 Fax : 0-2969-0715
Website : www.envirolab.com E-mail : enviro@envirolab.com



Analysis Report

Customer Name : *White Industrial Park* Page 1 of 1
Address : *125/19 A Santhachulalongkornrajavidyalaya University (SNU) Campus* Report No. : 211021006

Tel : 0-2969-0714 Fax : 0-2969-0715

Sampling Source : *City River @ Santhachulalongkornrajavidyalaya University (SNU) Campus*

Sampling Date : 20-Sep-21 Sampling Method : *Grab*
Received Date : 21-Sep-21 Sampling By : *Customer*
Testing Date : Oct 21-27, 2021 Approval Date : 04-Oct-21

Item	Unit	Method of Analysis	Result	Standard
Sample Name			<i>Santhachulalongkornrajavidyalaya University (SNU) Campus</i>	
Sample Type			<i>Water sample</i>	
Analysis No.			211021006	
Sampling Time				
Physical Appearance			<i>Clear yellow sediment</i>	
pH at 25 deg C	-	APHA 4500-HITE	7.3	5.0-9.0
BOD 5 Days*	mg/L	APHA 4500-OC/5210 B	5.1	≤20
TS	mg/L	APHA 2540 D	<1.0	≤50
TDS	mg/L	Distill 103-104 C	136	≤500
Oil & Grease	mg/L	APHA 5520 B	1.6	≤20
Ammonia-N	mg/L N	APHA 4500-NorgB	24	≤35
Suspendable Solid	mL	APHA 2540 F	<0.1	≤0.5
Sulfide	mg/L S	APHA 4500-SF	<1.0	≤1.0

Remark : *Water sample was collected from the city river @ Santhachulalongkornrajavidyalaya University (SNU) Campus*

Remark : *APHA - Standard Method for the Examination of Water and Wastewater, APHA, 1998, 19th Edition, 2017*

* : Test method P in this report is not included in the ISO Accreditation Certificate for our Laboratory

Sampling By Customer : *"Reported results refer to samples received from customer only"*

ND : Not Detectable

* Add : AOT of Nonthaburi Province

Environment & Laboratory Co., Ltd.

Approved By :

[Signature]
Nitha Sangsriwong
Laboratory Manager

ET000051 - 1 February, 2018



Environment & Laboratory Co., Ltd.

333 Moo 5, Taki Road, Muang, Nonthaburi 11000

Tel : 0-2949-0714, 0-2949-0700-L, 0-2526-1149

Fax : 0-2949-0717, E-mail : service@enviro-lab.com



Analysis Report

Customer Name : **วัดป่าสุเมธวิถี** Page 1 of 1
Address : **(21178 n.lee road n.lee) n.lee road** Report No. : **211021087**

Tel : 0-2949-0714 Fax : 0-2949-0717

Sampling Source : **City Road (n.lee road)**

Sampling Date : **20-Oct-21** Sampling Method : **Grab**
Received Date : **21-Oct-21** Sampling By : **Customer**
Testing Date : **Oct 26, 2021** Approval Date : **04-Nov-21**

Item	Unit	Method of Analysis	Result
Sample Name			วัดป่าสุเมธวิถี
Sample Type			วัดป่าสุเมธวิถี
Analysis No.			211021087
Sampling Time			
Physical Appearance			Clear
TDS	mg/L	Distill 100-100°C	134

Remark : Sampling By Customer - "Reported results refer to sample received from customer only"

Environment & Laboratory Co., Ltd.

Approved By :

Nisa Sangsornrat
Laboratory Manager

TT0401/1 - February, 2019



Environment & Laboratory Co., Ltd.

333 Moo 5, Taki Road, Muang, Nonthaburi 11000

Tel : 0-2949-0714, 0-2949-0700-L, 0-2526-1149

Fax : 0-2949-0717, E-mail : service@enviro-lab.com



Analysis Report

Customer Name : **วัดป่าสุเมธวิถี** Page 1 of 1
Address : **(21178 n.lee road n.lee) n.lee road** Report No. : **211021088**

Tel : 0-2949-0714 Fax : 0-2949-0717

Sampling Source : **City Road (n.lee road)**

Sampling Date : **20-Oct-21** Sampling Method : **Grab**
Received Date : **21-Oct-21** Sampling By : **Customer**
Testing Date : **Oct 25, 2021** Approval Date : **14-Nov-21**

Item	Unit	Method of Analysis	Result		Standard
Sample Name			วัดป่าสุเมธวิถี	วัดป่าสุเมธวิถี	
Sample Type			วัดป่าสุเมธวิถี	วัดป่าสุเมธวิถี	
Analysis No.			211021088	211021088	
Sampling Time			-	-	
Physical Appearance			Clear	Clear	
Combine Chlorine	mg/L	DPD	<0.1	<0.1	0.5-1.0
Alkalinity, Total	mg/L CaCO ₃	APHA 2320 B	16	16	80-160
Calcium-H	mg/L CaCO ₃	APHA 3100-Ca(B)	50	52	250-600
Cyanuric acid	mg/L	Columetric	62	61	10-60
Chloride	mg/L Cl	APHA 4500-Cl(B)	186	187	<600
N-Ammonia	mg/L N	APHA 4500-NH ₃ (C)	<0.14	<0.14	<20
Nitrate	mg/L	APHA 4500-NO ₃ (D)	4.0	3.5	<50
Coliform, Total	MPN/100 mL	APHA 9221 B	ND	ND	<10
Coliform, Fecal	MPN/100 mL	APHA 9221 E	ND	ND	ตรวจไม่พบ
E. coli	MPN/100 mL	APHA 9221 G	ND	ND	ตรวจไม่พบ
Salmon	100 mL	APHA 2012 - 9213 B	ND	ND	ตรวจไม่พบ
Paratyphus	100 mL	APHA 2012 - 9213 E	ND	ND	ตรวจไม่พบ
Total Hardness	mg/L CaCO ₃	APHA 2340 C	72	72	-

Remark : ตรวจพบสารปนเปื้อนในน้ำดื่มเกินค่ามาตรฐานที่กำหนดโดยกรมอนามัย กระทรวงสาธารณสุข, ไม่สามารถบริโภค

Remark : APHA - Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 19th Edition 2017

Sampling By Customer - "Reported results refer to sample received from customer only" - ND - Not Detectable

Environment & Laboratory Co., Ltd.

Approved By :

Nisa Sangsornrat
Laboratory Manager

TT0401/1 - February, 2019



Environment & Laboratory Co., Ltd.

40 Set Longprongprathaburi 13, Salad River, Mueang, Nonthaburi 11000
Tel : 0-2669-0714, 0-2669-0710-1, 0-2669-1149 Fax : 0-2669-0711
Website : www.envilab.com E-mail : envilab@envilab.com



Analysis Report

Customer Name : *White Industrial Park* Page 1 of 1
Address : *125179 6, Set Longprongprathaburi 13, Salad River, Mueang, Nonthaburi 11000*
Report No. : *2111100004*

Tel : 0-2669-0714 Fax : 0-2669-0711

Sampling Source : *City River @ Set Longprongprathaburi 13*

Sampling Date : *16-Nov-21*

Sampling Method : *Grab*

Received Date : *16-Nov-21*

Sampling By : *Customer*

Testing Date : *Nov 17-22, 2021*

Approved Date : *25-Nov-21*

Item	Unit	Method of Analysis	Result	Standard
Sample Name			<i>Industrial effluent</i>	Standard
Sample Type			<i>Industrial effluent</i>	
Analysis No.			<i>2111100004</i>	
Sampling Time			-	
Physical Appearance			<i>Turbid yellow when undiluted</i>	
pH at 25 deg C	-	APHA 4100-DRB	7.2	5.0-9.0
BOD 5 Days*	mg/L	APHA 4100-DR/5210 B	6.8	<20
TSS	mg/L	APHA 2540 D	8.4	<30
#TDSg	mg/L	Dried 105-105 C	123	<500
#Fet.Oil & Grease	mg/L	APHA 5120 B	3.6	<20
#N-TKN	mg/L N	APHA 4100-NorgB	20	<15
#Ammonia Nitrate	mg/L	APHA 2540 F	<0.1	<0.5
#Nitrite	mg/L N	APHA 4100-NIT	<1.0	<1.0

Remark : *For every sampling source and data received from customer, we will ensure the data is accurate and correct and will be used for the next data received.*

Remark : *APHA - Standard Method for the Examination of Water and Wastewater, APHA, 1995, 19th Edition, 1997*

1. "Test method 4 in this report are not included in the TDS Accreditation Schedule for our Laboratory."

Sampling By Customer - "Reported results refer to samples received from customer only"

2. "The test results of these items (TSS, BOD, and TDS) are not included in the TDS Accreditation Schedule for our Laboratory."

** Add 10% of Nitrite in the water*

Environment & Laboratory Co., Ltd.

Approved By :

[Signature]
Atisa Sangsriwong
Laboratory Manager

PTM001 - 1 February, 2018



Environment & Laboratory Co., Ltd.

40 Set Longprongprathaburi 13, Salad River, Mueang, Nonthaburi 11000
Tel : 0-2669-0714, 0-2669-0710-1, 0-2669-1149 Fax : 0-2669-0711
Website : www.envilab.com E-mail : envilab@envilab.com



Analysis Report

Customer Name : *White Industrial Park* Page 1 of 1
Address : *125179 6, Set Longprongprathaburi 13, Salad River, Mueang, Nonthaburi 11000*
Report No. : *2111100004*

Tel : 0-2669-0714 Fax : 0-2669-0711

Sampling Source : *City River @ Set Longprongprathaburi 13*

Sampling Date : *16-Nov-21*

Sampling Method : *Grab*

Received Date : *16-Nov-21*

Sampling By : *Customer*

Testing Date : *Nov 18, 2021*

Approved Date : *25-Nov-21*

Item	Unit	Method of Analysis	Result
Sample Name			<i>Industrial effluent</i>
Sample Type			<i>Industrial effluent</i>
Analysis No.			<i>2111100004</i>
Sampling Time			-
Physical Appearance			<i>Clear</i>
TDS	mg/L	Dried 105-105 C	100

Remark : *Sampling By Customer - "Reported results refer to samples received from customer only"*

Environment & Laboratory Co., Ltd.

Approved By :

[Signature]
Atisa Sangsriwong
Laboratory Manager

PTM001 - 1 February, 2018

**Environment & Laboratory Co., Ltd.**

41/50 Changsupanpradit Road 15, Tada Nong, Mueang, Nonthaburi 11000
Tel : 0-2964-0714, 0-2964-0130-1, 0-2924-1148 Fax : 0-2964-0713
Website : www.envirolab.com E-mail : enviro@envirolab.com

**Analysis Report**

Customer Name : **วัดบ้านโพนเมืองคำ** Page 1 of 1
Address : **121/154 ซ.สุริยวงษ์ 4 ตำบล
วัดบ้านโพนเมืองคำ** Report No. **211116867**

Tel : 0-2924-0686 Fax : 0-2924-0780

Sampling Point : **1 City Road 21 San Borom**

Sampling Date : **16-Nov-21** Sampling Method : **Grab**
Received Date : **16-Nov-21** Sampling By : **Customer**
Testing Date : **Nov 17-09-2021** Approved Date : **25-Nov-21**

Item	Unit	Method of Analysis	Result	
Sample Name			น้ำดื่มบรรจุขวด	Standard
Sample Type			ดื่ม	
Analysis No.			211116867	
Sampling Date			-	
Physical Appearance			Clear	
Coliform, Total	MPN/100 mL	APHA/9221 B	ND	<10
Coliform, Fecal	MPN/100 mL	APHA/9221 E	ND	ตรวจไม่พบ

Remark : **ผลการวิเคราะห์ตามวิธีมาตรฐานของกรมอนามัย กระทรวงสาธารณสุข พบว่า น้ำดื่มบรรจุขวด**

Remark : **APHA - Standard Method for the Examination of Water and Wastewater, APHA, 1998, 1917, 2017 Edition, 2017**

Sampling By Customer : **"Reported results refer to samples received from customer only"**

ND : Not Detectable

Environment & Laboratory Co., Ltd.

Approved By :

Aisa Intongpanon
Laboratory Manager

FD00011 - 1 February, 2018

**Environment & Laboratory Co., Ltd.**

41/50 Changsupanpradit Road 15, Tada Nong, Mueang, Nonthaburi 11000
Tel : 0-2964-0714, 0-2964-0130-1, 0-2924-1148 Fax : 0-2964-0713
Website : www.envirolab.com E-mail : enviro@envirolab.com

**Analysis Report**

Customer Name : **วัดบ้านโพนเมืองคำ** Page 1 of 1
Address : **121/154 ซ.สุริยวงษ์ 4 ตำบล
วัดบ้านโพนเมืองคำ** Report No. **211116868**

Tel : 0-2924-0686 Fax : 0-2924-0780

Sampling Point : **1 City Road 21 San Borom**

Sampling Date : **16-Nov-21** Sampling Method : **Grab**
Received Date : **16-Nov-21** Sampling By : **Customer**
Testing Date : **Nov 17-09-2021** Approved Date : **25-Nov-21**

Item	Unit	Method of Analysis	Result	
Sample Name			น้ำดื่มบรรจุขวด	Standard
Sample Type			ดื่ม	
Analysis No.			211116868	
Sampling Date			-	
Physical Appearance			Clear	
Coliform, Total	MPN/100 mL	APHA/9221 B	ND	<10
Coliform, Fecal	MPN/100 mL	APHA/9221 E	ND	ตรวจไม่พบ

Remark : **ผลการวิเคราะห์ตามวิธีมาตรฐานของกรมอนามัย กระทรวงสาธารณสุข พบว่า น้ำดื่มบรรจุขวด**

Remark : **APHA - Standard Method for the Examination of Water and Wastewater, APHA, 1998, 1917, 2017 Edition, 2017**

Sampling By Customer : **"Reported results refer to samples received from customer only"**

ND : Not Detectable

Environment & Laboratory Co., Ltd.

Approved By :

Aisa Intongpanon
Laboratory Manager

FD00011 - 1 February, 2018



Environment & Laboratory Co., Ltd.

42/101 Longprongvithakun 15, Sakhon Nakhon, Thailand 17000
Tel : 0-2944-0734, 0-2944-0330-3, 0-2944-1149 Fax : 0-2944-0733
Website : www.envilab.com E-mail : envilab@envilab.com



Analysis Report

Customer Name : สหพันธ์สหประชาชาติ
Address : 101/101 ถนนสุขุมวิท แขวงคลองเตย เขตคลองเตย กรุงเทพมหานคร 10110
Tel : 0-2944-0734 Fax : 0-2944-0733

Page 1 of 1
Report No. : 211100009

Sampling Source : City Water @ New Structure
Sampling Date : 06-Nov-21 Sampling Method : Grab
Received Date : 06-Nov-21 Sampling By : Customer
Testing Date : Nov 17-09-2021 Approval Date : 25-Nov-21

Item	Unit	Method of Analysis	Result
Sample Name			City Water
Sample Type			Water
Analysis No.			211100009
Sampling Time			
Physical Appearance			Clear
EC (25°C)	µS/cm	APHA 2540 E	ND

Remark : APHA - Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 21st Edition 2017
Sampling By Customer : "Reported results refer to samples received from customer only"
ND - Not Detectable

Environment & Laboratory Co., Ltd.

Approved By :
A
Aisa Sangmanee
Laboratory Manager



Environment & Laboratory Co., Ltd.

42/101 Longprongvithakun 15, Sakhon Nakhon, Thailand 17000
Tel : 0-2944-0734, 0-2944-0330-3, 0-2944-1149 Fax : 0-2944-0733
Website : www.envilab.com E-mail : envilab@envilab.com



Analysis Report

Customer Name : สหพันธ์สหประชาชาติ
Address : 101/101 ถนนสุขุมวิท แขวงคลองเตย เขตคลองเตย กรุงเทพมหานคร 10110
Tel : 0-2944-0734 Fax : 0-2944-0733

Page 1 of 1
Report No. : 211207004

Sampling Source : City Water @ New Structure
Sampling Date : 06-Dec-21 Sampling Method : Grab
Received Date : 07-Dec-21 Sampling By : Customer
Testing Date : Dec 8-13, 2021 Approval Date : 21-Dec-21

Item	Unit	Method of Analysis	Result	Standard
Sample Name			City Water	Standard
Sample Type			Water	
Analysis No.			211207004	
Sampling Time				
Physical Appearance			Clear yellow color solution	
pH at 25 deg.C	-	APHA 4500-HM	7.1	5.0-9.0
BOD 5 Days*	mg/L	APHA 4500-5B (21.0 B)	5.7	≤20
TSS	mg/L	APHA 2540 D	6.4	≤10
#TDSg	mg/L	Dried 103-105 C	119	≤500
#Hg, Cd & Cr (mg)	mg/L	APHA 5520 B	<0.5	≤20
#N-TKN	mg/L, N	APHA 4500-Norg(B)	23	≤35
#Sulfide Solid	mg/L	APHA 2540 F	<0.1	≤0.5
#Sulfide	mg/L, S	APHA 4500-SF	<1.0	≤1.0

Remark : APHA - Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 21st Edition 2017
Sampling By Customer : "Reported results refer to samples received from customer only"

Remark : APHA - Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 21st Edition 2017

* "T" Test method is in this report are not included in the TDS Accreditation Schedule for our Laboratory.

Sampling By Customer : "Reported results refer to samples received from customer only"

@ - Parameter and/or Unit is not included in the TDS Accreditation Schedule for our Laboratory

* Add - Add of Water Quality Index

Environment & Laboratory Co., Ltd.

Approved By :
A
Aisa Sangmanee
Laboratory Manager



Environment & Laboratory Co., Ltd.

47/34 Langsuanpuri Sublot 15, Thong Koen, Mueang, Nonthaburi 10800
Tel : 0-2969-0714, 0-2969-0130-1, 0-2926-1149 Fax : 0-2969-0715
Website : www.envlab.co.th E-mail : service@envlab.co.th



Analysis Report

Customer Name : *Chia's Fresh Food* Page 1 of 1
Address : *125/76 Chaiyachong Road, Suan
Kiat Suburb* Report No. : 211207016

Tel : 0-2921-4999 Fax : 0-2921-4998

Sampling Source : *City Road in Suan Kiat*
Sampling Date : *04-Dec-21* Sampling Method : *Grab*
Received Date : *07-Dec-21* Sampling By : *Customer*
Testing Date : *Dec 13, 2021* Approved Date : *21-Dec-21*

Item	Unit	Method of Analysis	Result
Sample Name			<i>Chaiyachong</i>
Sample Type			<i>Chaiyachong</i>
Analysis No.			211207016
Sampling Time			-
Physical Appearance			<i>Clear</i>
TDS	mg/L	Distill 100-200 °C	106

Remark : *Sampling By Customer : "Reported results refer to samples received from customer only"*

Environment & Laboratory Co., Ltd.

Approved By :
[Signature]
Athen Sangmanee
Laboratory Manager



Environment & Laboratory Co., Ltd.

47/34 Langsuanpuri Sublot 15, Thong Koen, Mueang, Nonthaburi 10800
Tel : 0-2969-0714, 0-2969-0130-1, 0-2926-1149 Fax : 0-2969-0715
Website : www.envlab.co.th E-mail : service@envlab.co.th



Analysis Report

Customer Name : *Chia's Fresh Food* Page 1 of 1
Address : *125/76 Chaiyachong Road, Suan
Kiat Suburb* Report No. : 211207016

Tel : 0-2921-4999 Fax : 0-2921-4998

Sampling Source : *City Road in Suan Kiat*
Sampling Date : *04-Dec-21* Sampling Method : *Grab*
Received Date : *07-Dec-21* Sampling By : *Customer*
Testing Date : *Dec 13, 2021* Approved Date : *21-Dec-21*

Item	Unit	Method of Analysis	Result
Sample Name			<i>Chaiyachong</i> Standard
Sample Type			<i>Chaiyachong</i>
Analysis No.			211207016
Sampling Time			-
Physical Appearance			<i>Clear</i>
Coliforms/Total	MPN/100 mL	APHA 9221 B	ND ≤ 10
Coliforms/Fecal	MPN/100 mL	APHA 9221 E	ND <i>ไม่พบเชื้อ</i>

Remark : *Reported results refer to samples received from customer only*

Method : *PHA : Standard Method for the Examination of "Water and Wastewater, APHA, AWWA, WEF, 23rd Edition 2017"*
Sampling By : *Customer : "Reported results refer to samples received from customer only"*
ND : Not Detectable

Environment & Laboratory Co., Ltd.

Approved By :
[Signature]
Athen Sangmanee
Laboratory Manager



Customer Name :	Alpha Industrial Park	Page 1 of 1		
Address :	123456 Main Street, New York 10001, NY 10001	Report No. : 20240001		
Lab :	0-2025-0000	Rev. : 0-2025-0000		
Sampling Source :	City River @ New York			
Sampling Date :	18-Dec-23	Sampling Method :	Grab	
Received Date :	19-Dec-23	Sampling By :	Customer	
Testing Date :	Date: 15-01-2024	Approved Date :	20-Dec-23	
Item	Unit	Method of Analysis	Result	Standard
Sample Source			0017000-070000	Standard
Sample Type			0000000000	
Analysis No.			20240001	
Sampling Time			-	
Physical Appearance			Clear	
Coliforms Total	MPN/100 mL	APHA-9223 B	NB	100
Coliforms Total	MPN/100 mL	APHA-9223 E	NB	1000000
Method:	Based on membrane filtration method (APHA 9223 B) for water samples and membrane filtration method (APHA 9223 E) for wastewater.			
Remark:	APHA - Standard Method for the Examination of Water and Wastewater, APHA, C1891, 20th Edition, 2017			
Sampling By Customer:	"Theoretical results refer to samples received from customer only"			
Note: Not for Decision				

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Approved By:

Alice Thompson
Laboratory Manager

Received 15 February 2006; accepted 15 February 2006

[illegible]

ภาคผนวก ค.

สำเนา Certificate Calibration ห้องปฏิบัติการ

CERTIFICATE OF CALIBRATION

Prior to building your Secador® Desiccator, the hygrometer in this unit was tested and calibrated against a NIST certified hygrometer in a low humidity environment.

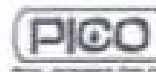
To ensure that the hygrometer is accurately reading the humidity within the desiccator cabinet, we advise that calibration be checked at least once every 6 months. Ideally this hygrometer should be calibrated to the reading of a hygrometer with known accuracy that has been placed inside the cabinet that has been allowed to dehumidify overnight. Adjusting the calibration requires a small flat blade screwdriver to turn a small adjusting screw in the backside of the hygrometer. The reading on the dial hygrometer supplied with this cabinet does not in any way affect the dehumidifying performance of the desiccator.

We anticipate that your Secador® desiccator Cabinet will provide you with exceptional performance and our customer service and technical support departments are available to help you with any questions. Please call 800-423-5278 or 973-694-0900.


Mike Anderson Manager

BEI-Art Products

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บริษัท ปิโก อินสตรูเมนต์ จำกัด

PETRO-INSTRUMENTS CORP., LTD.

1700 104 Village Road, 14 Village Road, Bangkok, Thailand

Tel: (662) 879 9711 (10 Lines), 879 9719 (10 Lines), 879 9754 Fax: (662) 132 5755, 879 4288

Web: <http://www.pico.co.th> Email: info@pico.co.th

SERVICE REPORT

Job No./reference:	JD1600882	Customer name/Station:	PTT (Petroleum) PTT
Equipment Name:	SO ₂ Analyzer	Station name/Location:	-
Manufacturer/Type:	TRIMAC	Location/Issue:	Normal
Model /n:	43	Contact name/Address:	equivalent instrument
Serial No./Accessories:	CN08100074	Telephone Number:	081-055-8552
Working date/Period:	7 September 2014	Fax /Phone:	-
Working Hour/Status:	2hr	Mileage/Status:	-

SCOPE OF WORK (Reference)	<input type="checkbox"/> Service <input type="checkbox"/> Urgent <input checked="" type="checkbox"/> Other : Calibrate SO ₂ Analyzer
FUNCTION CHECKS CORRECT ACTION (Reference/Manufacturer's Ref)	<input checked="" type="checkbox"/> Check diagnostic of SO ₂ analyser. <ul style="list-style-type: none"> Normal <input checked="" type="checkbox"/> Check the general condition of analyser. <ul style="list-style-type: none"> Normal <input checked="" type="checkbox"/> Calibrate zero/span for SO ₂ analyser. <ul style="list-style-type: none"> see the Calibrate adjustment <input checked="" type="checkbox"/> Adjust span calibrate for SO ₂ analyser. <ul style="list-style-type: none"> see the Calibrate adjustment
PART REPLACING (Reference/Manufacturer's Ref)	
RECOMMENDATION (Reference)	

Test By / reference:	MR. Nongchai Anantvit	PICO	Test Date / reference:	7 September 2014
Notify By / reference:		BGA1	Notify Date / reference:	
Approved By / reference:		PICO	Approved Date / Test by:	8/9/14



บริษัท เพตโร-อินสตรูเมนต์ จำกัด

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http://www.pico.co.th E-mail:service@pico.co.th

SO₂ Analyzer

Equipment:	Sulfur Dioxide analyzer	Model:	43
Serial Number:	CNCB 100074	Manufacturer:	Thermo Scientific

Parameter	Diagnostic test value			Nominal range
	Before	After	Unit	
Sample reading	5.8	1.3	ppb	0.0 to 300.0 ppb
Range	800	500	ppb	0.0 to 800.0 ppb
Averaging Time	30	30	sec	10 to 300 sec
Calibration factor				
SO ₂ Slope	33.8	30.3	ppb	0 to 35 ppb
SO ₂ COEF	1.134	0.776	-	1.0 ± 0.3
Instrument Control				
Temp Correction	On	On	On/Off	On
Pressure Correction	On	On	On/Off	On
High Limit	On	On	On/Off	On
Flow Rate	5400	5400	lpm	5400 to 11000
Instrument ID	43	43	-	0 to 99
Screen Brightness	80	80	%	0 to 100
Service Mode	Off	Off	On/Off	Up to user
Diagnosics				
Voltages				
Motherboard voltages				
3.3 Supply	3.3	3.3	Vdc	3.3 ± 0.3 Vdc
5.0 Supply	5.0	5.0	Vdc	5.0 ± 0.3 Vdc
15.0 Supply	15.0	15.0	Vdc	15.0 ± 1.0 Vdc
24.0 Supply	24.2	24.0	Vdc	24.0 ± 2.0 Vdc
-5.3 Supply	-5.2	-5.2	Vdc	-5.2 ± 0.3 Vdc
Interface Board voltages				
PW1 Supply	-443.2	-443.4	Vdc	-400 to -1200 Vdc
Pwr1 Supply	808	41.0	Vdc	750 to 1,000 Vdc
3.3 Supply	3.5	3.5	Vdc	3.3 ± 0.3 Vdc
5.0 Supply	5.0	5.0	Vdc	5.0 ± 0.3 Vdc
15.0 Supply	14.7	14.7	Vdc	15.0 ± 1.0 Vdc
-15.0 Supply	-15.1	-15.1	Vdc	-15.0 ± 1.0 Vdc
24.0 Supply	24.1	24.1	Vdc	24.0 ± 2.0 Vdc
Temperatures				
Internal	31.1	33.1	°C	30 - 45 °C
Chamber	40.2	43.2	°C	40°C ± 2°C
Pressure	756.7	755.8	mmHg	650 - 750 mmHg
Flow	0.447	0.502	L/min	0.500 ± 0.100 L/min
Lamp Intensity	88	92	%	80 - 100 %

Page 2



บริษัท เพตโร-อินสตรูเมนต์ จำกัด

PETRO-INSTRUMENTS CORP., LTD.

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http://www.pico.co.th E-mail:service@pico.co.th

SINGLE-POINT GAS CALIBRATION

Standard gas concentration			Cylinder detail	
Sulfur Dioxide (SO ₂)	50.70	ppm	Cylinder NO.:	CC4771-68
Nitric Oxide (NO)	47.50	ppm	Manufacturer:	Thermo
Ethane (C ₂ H ₆)	-	ppm	Model:	1.05
Carbon Monoxide (CO)	5000	ppm	Serial number:	1204134518
Expiration Date:	Nov 05, 2019			

CALIBRATION RESULT

PARAMETER	ZERO			SPAN			ADJUSTMENT
	IDEAL	ACTUAL	ERROR	IDEAL	ACTUAL	ERROR	
SO ₂ 50ppm	0.00	1.50	1.50	400.00	401.00	0.20	pass



Multi-point Gas Test Report

PICO-INSTRUMENTS CORP., LTD.

7488 Soi Vibhavadi-Rangit 36 Vibhavadi-Rangit Rd., Chabua, Bangkok 10300, Thailand
Tel: (662) 606 8701 (2 lines), (662) 606 8702 (2 lines), (662) 606 8703 Fax: (662) 615 3793, 615 4308
http://www.pico.co.uk Email: sales@pico.co.uk

MULTI-POINT GAS TEST REPORT

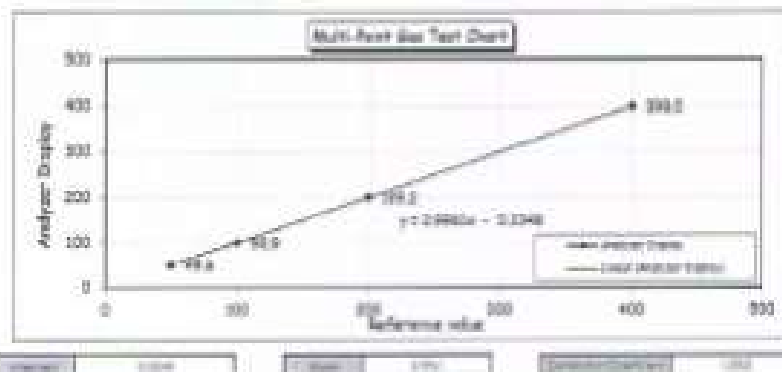
STATION ID: STATION NAME: LOCATION:

Equipment: SO₂ Analyzer Model: 43
Manufacturer: Thermo scientific Serial number: CH08100074

Standard gas concentration			Cylinder detail	
Sulfur Dioxide (SO ₂)	50.75	ppm	Cylinder NO:	CC077148
White Oxide (NO)	41.70	ppm	Manufacturer:	Thermo
Methane (CH ₄)	-	ppm	Model:	148
Carbon Monoxide (CO)	50.00	ppm	Serial number:	1224154515
Expiration Date:	Mar 05, 2017			

Multi-point gas test data

Reference Value (ppm)	Analyzer Display (ppm)	Difference (ppm)	Percent Error	Percent Error (ppm)
Level 1	50.0	49.4	-0.60	-0.80
Level 2	100.0	99.7	-0.30	-0.30
Level 3	200.0	199.2	-0.40	-0.20
Level 4	400.0	399.0	-0.25	-0.30
Measuring Range		Average Difference (%)		-0.70



Remark: Percent Error per point must be less than ± 1 %

Note



RATA CLASS

Substandard ± 1% Accuracy

Site: Baton Rouge, Louisiana, LA 70803

Phone: 214-758-0800

Fax: 214-758-0800

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Customer:
AIR LIQUIDE THAILAND LIMITED
AIR LIQUIDE THAILAND LTD
8th FLOOR VICHITRA BLDG. UNIT 1401-1402
Bulwer Road, Bangkok
Bangkok, TH 10330
TH

ANALYST/ANALYST/ANALYST/ANALYST
AIR LIQUIDE America Eastern Sales LLC
6141 Baton Road
Pittsburgh, PA 15206

Lot No: 405-009415
P.O. No.: 112000000
Page # 00110000
Sales Order #: 200000

ANALYTICAL INFORMATION

Gas Type: CO, SO₂, NO, BATH

This certification was performed according to EPA Testability Protocol For Analytical Certification of Gas in Calibration Standards, Procedure 2.1.2, 2/4/2004 (2004), Rev. 2015. Do not use the standard if pressure is less than 100 psig.

Cylinder Number: CC077148

Certification Date: 04/04/2016

Expiration Date: 03/04/2017

Cylinder Pressure: 1679 PSIG

Lot No: 405-009415

Component Name	Concentration (ppm)	Accuracy (Absolute / Relative)
Carbon Monoxide	50.0 ppm	0.0 ppm / 0.0 %
White Oxide	41.7 ppm	0.0 ppm / 0.0 %
Sulfur Dioxide	50.7 ppm	0.0 ppm / 0.0 %
White Oxide	50.0 ppm	0.0 ppm / 0.0 %
Carbon Monoxide	41.7 ppm	0.0 ppm / 0.0 %

TRACEABILITY

ANALYTICAL TRACEABILITY

Reference Standard	Concentration	Manufacturer	Calculated	Date	Exp. Date
Carbon Monoxide	50.0000 ppm	50.0000	50.0000	04/04/2016	03/04/2017
White Oxide	41.7000 ppm	41.7000	41.7000	04/04/2016	03/04/2017
Sulfur Dioxide	50.7000 ppm	50.7000	50.7000	04/04/2016	03/04/2017

ANALYTICAL METHOD

COMPONENT	INSTRUMENT	ANALYTICAL PRINCIPLE	CALIBRATION	CONCENTRATION
Carbon Monoxide	440 000 PPM	FTIR	0.00000	50.0000 ppm
White Oxide	440 000 PPM	FTIR	0.00000	41.7000 ppm
Sulfur Dioxide	440 000 PPM	FTIR	0.00000	50.7000 ppm

Gross Weight: 21.6 Kg

Net Weight: 4.7 Kg

APPROVED BY:

[Signature]
Michael A. Miller

DATE: 04/04/2016

Page 1 of 1





บริษัท เพตโร-อินสตรูเมนต์ จำกัด

PETRO-INSTRUMENTS CORP., LTD.

1499 Soi Vibhavadi-Rangit 35 Vibhavadi-Rangit Rd., Chatuchak, Bangkok 10900, Thailand

Tel.: (662) 809 5751 (12 Lines), 812 2233 (12 Lines), 813 8875-8 Fax: (662) 813 3793, 838 4208

http://www.pico.co.th E-mail: info@pico.co.th, service@pico.co.th

SERVICE REPORT

Job No./งานเลขที่	J01600533	Customer name/ลูกค้า	Utility National m/s
Equipment /เครื่องมือ	CO Analyzer	Station name/สถานี	-
Manufacturer/ยี่ห้อ	Thermo	Location/จุด	Northcourt
Model /รุ่น	48	Contact name/ผู้ติดต่อ	suatuforn thirawat
Serial No./หมายเลขตัว	000413248	Telephone /โทรศัพท์	087-001-8303
Working date/ปฏิบัติงาน	7 September 2016	Fuel /เชื้อเพลิง	-
Working Hour/ชั่วโมง	8 hr.	Mileage/ไมล์	-

SCOPE OF WORK (ขอบเขตงาน)	<input type="checkbox"/> Service <input type="checkbox"/> Urgent <input checked="" type="checkbox"/> Other: Calibrate CO Analyzer
FUNCTION CHECK CORRECTION (การตรวจสอบและแก้ไข)	<input checked="" type="checkbox"/> Check diagnostic of CO analyzers. • Normal <input checked="" type="checkbox"/> Check the general condition of analyzers. • Normal <input checked="" type="checkbox"/> Calibrate description for CO analyzers. • sets Calibrate as standard <input checked="" type="checkbox"/> outpoint calibrate for CO analyzers. • sets Calibrate as standard
PART REPLACEMENT (การเปลี่ยนอะไหล่)	
RECOMMENDATION (คำแนะนำ)	

Test By / ตรวจสอบ	Mr. Nongnuch Juntorn	PICO	Test Date / ตรวจสอบ	7 September 2016
Notify By / แจ้ง		PICAT	Notify Date / แจ้ง	
Approved By / อนุมัติ	<i>Service</i>	PICO	Approved Date / อนุมัติ	9/9/16



บริษัท เพตโร-อินสตรูเมนต์ จำกัด

PETRO-INSTRUMENTS CORP., LTD.

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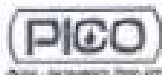
Tel.: (662) 809 5751 (12 Lines), 812 2233 (12 Lines), 813 8875-8 Fax: (662) 813 3793, 838 4208

http://www.pico.co.th E-mail: info@pico.co.th, service@pico.co.th

CO Analyzer

Equipment :	CO Analyzer	Model :	48	
Manufacturer :	Thermo Scientific	Serial number :	000413248	
Diagnostic test value				
Parameter	Observed value		Unit	Nominal range
	Before	After		
Sample reading	0.368	0.331	ppm	0.00 to 50.0 ppm
Range	50	50	ppm	1 to 10000 ppm
Averaging Time	30	30	Sec	10 to 300 Sec
Calibration Factors				
CO-ECG PPM	0.000	-0.755	ppm	0 to 30
CO-COF	1.130	1.040	-	1.0 ± 0.2
Instrument Control				
Temp Compensation	On	On	On/Off	On
Pressure Compensation	On	On	On/Off	On
Diagnostics				
Voltage				
Motherboard	Pass	Pass	Pass/Not pass	Pass
Interface board	Pass	Pass	Pass/Not pass	Pass
Temperatures				
Internal	39.3	35.4	°C	15°C to 45°C
Chamber	47.9	48.3	°C	30°C ± 3°C
Pressure	726.8	750.3	mmHg	760 ± 100 mmHg
Flow	0.923	0.919	lpm	1.00 ± 0.5 lpm
L/R Ratio	1.1708320	1.1708700	-	1.14 ~ 1.18 @ ZERO
AGC Intensity	198342	198437	Hz	150,000 ~ 300,000 Hz
Motor speed	100.01	100.00	°/s	95-100 °/s

Notes :



บริษัท เพตโร-อินสตรูเมนต์ จำกัด

PETRO-INSTRUMENTS CORP., LTD.

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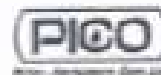
Web: <http://www.pico.co.th> E-mail: info@pico.co.th, service@pico.co.th

SINGLE-POINT GAS CALIBRATION

Standard gas concentration			Detector detail	
Sulfur Dioxide (SO ₂)	50.70	ppm	Cylinder NO.:	CC477148
Nitric Oxide (NO)	49.90	ppm	Manufacturer:	Thermo
Methane (CH ₄)	-	ppm	Model:	145
Carbon Monoxide (CO)	30.00	ppm	Serial number:	1234134515
Expiration Date:	Mar 05, 2019			

CALIBRATION RESULT

PARAMETER	ZERO		SPAN			ADJUSTMENT
	DATA	ACTUAL	SETPOINT	DATA	ACTUAL	DIFFERENCE
CO (ppm)	0.00	0.10	0.10	40.00	40.70	0.70



บริษัท เพตโร-อินสตรูเมนต์ จำกัด

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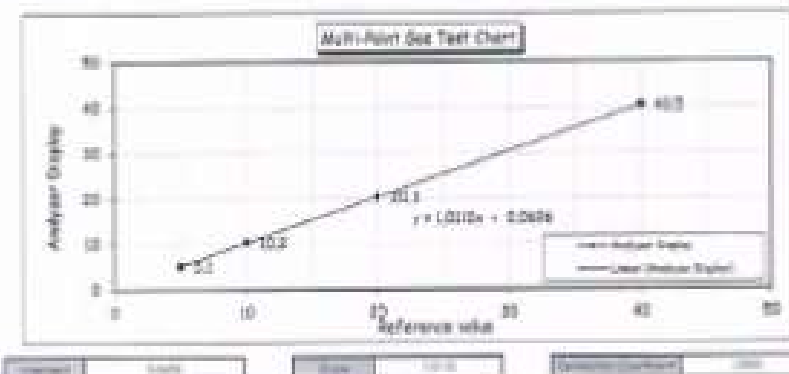
MULTI-POINT GAS TEST REPORT

STATION ID:	STATION NAME:	LOCATION:
Equipment:	CO Analyser	Model:
Manufacturer:	Thermo scientific	Serial number:
		6000412048

Standard gas concentration			Detector detail	
Sulfur Dioxide (SO ₂)	50.70	ppm	Cylinder NO.:	CC477148
Nitric Oxide (NO)	49.90	ppm	Manufacturer:	Thermo
Methane (CH ₄)	-	ppm	Model:	145
Carbon Monoxide (CO)	30.00	ppm	Serial number:	1234134515
Expiration Date:	Mar 05, 2019			

Multi-point gas test data

Reference value (ppm)	Analyzer Display (ppm)	Difference (ppm)	Percent Error	Percent Error (ideal)
Level 1	5.0	5.1	0.10	2.00
Level 2	10.0	10.3	0.30	3.00
Level 3	20.0	20.3	0.30	1.50
Level 4	40.0	40.7	0.70	1.75
Measuring Range		Average Difference (ppm)		1.25



Remark: Percent Error per point must be less than 4.5 %

Scale

รายละเอียดแบบฟอร์มใบรับรองการปฏิบัติการทดสอบ
ใบรับรองเลขที่ 207191/1169

ชื่อของผู้อนุมัติ

การปฏิบัติการทดสอบ

บริษัท เอ็มโกลด์เมทัล จำกัด เลขที่ 4/1

ที่อยู่

เลขที่ 40 ซอยเชียงใหม่ถนนพหลโยธิน 13 ตำบลคลองหลวง อำเภอเมืองนนทบุรี จังหวัดนนทบุรี

หมายเลขการรับรอง

ทดสอบ 0240

สถานะการของผู้อนุมัติ

☒ การ ☐ นอกสถานที่ ☐ ชั่วคราว ☐ เสร็จสิ้น

รายการทดสอบ	รายการทดสอบ	วิธีทดสอบ
<p>สารเคมีและของเสีย</p> <p>1. น้ำและน้ำเสีย (water and wastewater)</p>	<p>- pH 4.0 to 10.0</p> <p>- Total suspended solids (TSS) 5.0 mg/L to 1 000 mg/L</p> <p>- Copper (Cu) 0.030 mg/L to 5.00 mg/L</p> <p>- Biochemical oxygen demand (BOD) 5.0 mg/L to 2 000 mg/L</p>	<p>- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 4500-H⁺ B</p> <p>- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 2540 D</p> <p>- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 3111 B and part 3030 E</p> <p>- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 5210 B and part 4500-C C</p>

รายละเอียดแบบฟอร์มใบรับรองการปฏิบัติการทดสอบ
ใบรับรองเลขที่ 207191/1169

หมายเลขการรับรอง

ทดสอบ 0240

สถานะการของผู้อนุมัติ

☒ การ ☐ นอกสถานที่ ☐ ชั่วคราว ☐ เสร็จสิ้น

รายการทดสอบ	รายการทดสอบ	วิธีทดสอบ
<p>สารเคมีและของเสีย</p> <p>2. น้ำเสีย (wastewater)</p>	<p>- Chemical oxygen demand (COD) 40.0 to 4 000 mg/L</p>	<p>- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd edition, 2017, part 5220 C</p>

ฉบับที่ 1 : วันที่ 15/11/2562 หน้า 2/2

กรมส่งเสริมการค้าระหว่างประเทศ
กระทรวงพาณิชย์



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a. whether the animal had a normal life and its continued effort in staying alive

គណៈកម្មាធិការការងារសាងសង់ ថែទាំ និង គ្រប់គ្រងប្រព័ន្ធបណ្តាញទឹកស្អាត
ក្រុងភ្នំពេញ បានប្រើប្រាស់ប្រព័ន្ធបណ្តាញទឹកស្អាត ប្រភេទមេ ប្រភេទ ៤ ក្នុង
ក្រុងភ្នំពេញ ដើម្បីបង្កើនប្រសិទ្ធភាពការងារសាងសង់ និង ថែទាំប្រព័ន្ធបណ្តាញទឹកស្អាត។

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ခပ်ပင်လိပ်စာ အကျဉ်းချုပ်	အကျဉ်းချုပ်	၁-၀၀၀ ခု-၀၀၀

၁) မဟာသီလိ အိမ်	မဟာသီလိ	၁-၀၀၀-၁၀၀၀
၂) မဟာသီလိ သီတာ	မဟာသီလိ	၁-၀၀၀-၁၀၀၀
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၄) မဟာသီလိ နာမ	မဟာသီလိ	၁-၀၀၀-၁၀၀၀
၅) မဟာသီလိ ဝိညာ	မဟာသီလိ	၁-၀၀၀-၁၀၀၀
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၉) မဟာသီလိ ဝိညာ	မဟာသီလိ	၁-၀၀၀-၁၀၀၀
၁၀) မဟာသီလိ ဝိညာ	မဟာသီလိ	၁-၀၀၀-၁၀၀၀

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(นางสาวกานดา มาตมาพันธุ์)
ผู้อำนวยการศูนย์ส่งเสริมและพัฒนาอาชีพของเกษตรกร
ศูนย์ส่งเสริมและพัฒนาอาชีพของเกษตรกร จังหวัดสุพรรณบุรี

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Parameter	Method
1. Arsenic	Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ²³
2. Biochemical Oxygen Demand	5-Day (BOD) Test, Azide Modification Method ²⁴
3. Cadmium	Digestion, Direct Air-Acetylene Flame Method ²⁵
4. Chemical Oxygen Demand	Closed Reflux, Titrimetric Method ²⁶
5. Color	APHA Weighted-Ordinate Spectrophotometric Method ²⁷
6. Copper	Digestion, Direct Air-Acetylene Flame Method ²⁵
7. Cyanide	Distillation, Colorimetric Method ²⁸
8. Formaldehyde	Distillation, Colorimetric Method ²⁹
9. Free Chlorine	Iodometric Method ³⁰
10. Residual Chlorine	Colorimetric Method ³¹
11. Lead	Digestion, Direct Air-Acetylene Flame Method ²⁵
12. Manganese	Digestion, Direct Air-Acetylene Flame Method ²⁵
13. Mercury	Digestion, Cold Vapor Atomic Absorption Spectrometric Method ³²
14. Nickel	Digestion, Direct Air-Acetylene Flame Method ²⁵
15. Oil & Grease	1) Liquid-Liquid Partition-Gravimetric Method ³³ 2) Soxhlet Extraction Method ³⁴
16. pH	Electrometric method ³⁵
17. Phenols	Distillation, Direct Photometric Method ³⁶
18. Selenium	Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ³⁷
19. Sulfide	1) Iodometric Method ³⁸ 2) Methylene Blue Method ³⁹
20. Temperature	Laboratory and Field Methods ⁴⁰
21. Total Dissolved Solids	Dried at 180 °C ⁴¹
22. Total Kjeldahl Nitrogen	Nesslerization Method ⁴²
23. Total Suspended Solids	Dried at 105-106 °C ⁴³

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20. <http://www.chemed.org>

ลำดับ	สารเคมี	วิธีการวิเคราะห์
24	Trivalent Chromium	Digestion, Direct Air-Acetylene Flame Method, Colorimetric Method Calculation ^{II}
25	Zinc	Digestion, Direct Air-Acetylene Flame Method ^{II}

1. การควบคุมการเปลี่ยนแปลงปริมาณการบริโภคของ ผู้บริโภคสามารถทำได้โดย 4. การควบคุมการเปลี่ยนแปลงการบริโภค 2507

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លោកជំទាវ ជីវិត កុមារី
 អគ្គនាយកដ្ឋាន ក្រសួងសេដ្ឋកិច្ច និងហិរញ្ញវត្ថុ
 លេខ: ២២២/២០១៩

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