

List of Instruments Certification for Air & Noise Quality Analysis

No.	Instrument/Equipment	Parameter	Manufacturer	Model/Serial No.	Calibrator	Certification No.	Date of Calibration	Due date of Calibration	Remark
Ambient									
1	Orifice Transfer Standard Calibrator	Total Suspended Particulate (TSP) Particulate Matter < 10 µm (PM ₁₀)	Tisch Environmental,Inc.	TE-5025A 3393	Jiranatee Associates Co., Ltd.	CL-004-65	26 Jul 22	25 Jul 24	-
2	U-Tube Manometer	Total Suspended Particulate (TSP) Particulate Matter < 10 µm (PM ₁₀)	Dwyer	1221-36-W/M -	Technology Promotion Association (Thailand-Japan)	22P918	11 Jul 22	10 Jul 23	-
3	Air Flow Meter	Particular Matter (PM _{2.5})	Mesa Labs	DeltaCal DC1 158850	Innovative Instrument Co.,Ltd.	22-AFM-116	16 Aug 22	15 Aug 23	-
4	Aneroid Barometer	Total Suspended Particulate (TSP) Particulate Matter < 10 µm (PM ₁₀) Particular Matter (PM _{2.5})	Barigo, Germany	-	Technology Promotion Association (Thailand-Japan)	22P2728	22 Jul 22	21 Jul 23	-
5	Dial Thermo-Hygrometer	Total Suspended Particulate (TSP) Particulate Matter < 10 µm (PM ₁₀) Particular Matter (PM _{2.5})	Barigo, Germany	-	Technology Promotion Association (Thailand-Japan)	22H1587	27 Jul 22	26 Jul 23	-
6	Nitrogen Dioxide Analyzer	Nitrogen Dioxide	Thermo Scientific	42i CM19050148	UAE Consultant Co.,Ltd.	15022023	15 Feb 23	14 Feb 24	-
7	Nitrogen Dioxide Analyzer	Nitrogen Dioxide	Thermo Scientific	42i CM19050149	UAE Consultant Co.,Ltd.	09012023	9 Jan 23	8 Jan 24	-
8	Nitrogen Dioxide Analyzer	Nitrogen Dioxide	Thermo Scientific	42i CM19050150	UAE Consultant Co.,Ltd.	16012023	16 Jan 23	15 Jan 24	-
9	Nitrogen Dioxide Analyzer	Nitrogen Dioxide	Thermo Scientific	42i CM19050151	UAE Consultant Co.,Ltd.	15022023	15 Feb 23	14 Feb 24	-
10	Standard Gases (Mixture)	Nitrogen Dioxide	Airgas	EB0143262 2015PSIG	Airgas an Air Liquide company	E04NI99E15A01D3	21 Jun 21	21 Jun 24	-
11	Sulphur Dioxide Analyzer	Sulphur Dioxide	Thermo Scientific	43C 43C-0611116459	UAE Consultant Co.,Ltd.	07042023	7 Apr 23	6 Apr 24	-

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12	Sulphur Dioxide Analyzer	Sulphur Dioxide	Thermo Scientific	43i CM22387062	UAE Consultant Co.,Ltd.	07032023	7 Mar 23	6 Mar 24	-
13	Sulphur Dioxide Analyzer	Sulphur Dioxide	Thermo Scientific	43i CM22387063	UAE Consultant Co.,Ltd.	07042023	7 Apr 23	6 Apr 24	-
14	Sulphur Dioxide Analyzer	Sulphur Dioxide	Thermo Scientific	43i CM22387064	UAE Consultant Co.,Ltd.	14022023	14 Feb 23	13 Feb 24	-
15	Standard Gases (Mixture)	Sulphur Dioxide	Airgas	EB0143262 2015PSIG	Airgas an Air Liquide company	E04NI99E15A01D3	21 Jun 21	21 Jun 24	-
16	Wind Speed/Wind Direction	WS/WD	LSI LASTEM	E-LOG305 20040005	Thai Meteorological Department	259/22	12 Jul 22	11 Jul 23	-
17	Sound Level Calibrator (Acoustic Calibrator)	Calibrate Sound Level Meter	01dB	CAL31 84065	Innovative Instrument Co.,Ltd.	22-ACT-523	19 Aug 22	18 Aug 23	-
18	Sound Level Meter	$L_{Aeq\ 24\ hours}$, L_{Amax} , L_{A90} , L_{Adn}	Larson Davis	LxT2 0005286	Sithiporn Associates Co., Ltd.	ACL22081	25 Jan 22	25 Jan 24	-
19	Sound Level Meter	$L_{Aeq\ 24\ hours}$, L_{Amax} , L_{A90} , L_{Adn}	Larson Davis	LxT2 0005289	Sithiporn Associates Co., Ltd.	ACL22082	25 May 22	24 May 24	-

List of Instruments Certification for Water Quality Analysis

No.	Instrument/Equipment	Parameter	Manufacturer	Model/Serial No.	Calibrator	Certification No.	Date of Calibration	Due date of Calibration	Remark
Water									
1	pH Meter	pH	YSI	pH100A JC03354	Technology Promotion Association (Thailand-Japan)	22CH1728	21 Dec 22	20 Dec 23	-
2	DO Meter	DO	Horiba	LAQUA-DO210 HE1D0010	Technology Promotion Association (Thailand-Japan)	22TM233	20 Oct 22	19 Oct 23	-

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Workplace									
1	Sound Level Meter	L _{Aeq} 8 hours, L _{Amax}	Rion, Japan	NL-42 00709682	Sithiporn Associates Co., Ltd.	ACL23116	11 Apr 23	10 Apr 24	-
2	Noise Dosimeter	Noise Dosimeter	Svantek	SV 104IS 67628	Innovative Instrument Co.,Ltd.	22-ACT-533	22 Aug 22	21 Aug 23	-

บัญชีรายการเครื่องมือหลักของห้องปฏิบัติการ สำหรับวิเคราะห์คุณภาพสิ่งแวดล้อม

No.	Instrument/Equipment	Parameter	Manufacturer	Model/Serial No.	Calibrator	Certification No.	Date of Calibration	Due date of Calibration*	Remark
เครื่องมือสำหรับวิเคราะห์คุณภาพอากาศ									
1	Analytical Balance (Readability 0.1 mg)	ฝุ่นละอองรวมเฉลี่ย (TSP) ฝุ่นละอองขนาดไม่เกิน 10 ไมครอน (PM-10)	Mettler-Toledo	AB204-S / 1128312528	Technology Promotion Association (Thailand-Japan)	<u>23MM331</u>	7 Apr 23	5 Apr 24	-
2	Analytical Balance (Readability 0.1 mg)		Mettler-Toledo	AB204-S/FACT / B108115858	Technology Promotion Association (Thailand-Japan)	<u>23MM332</u>	7 Apr 23	5 Apr 24	-
เครื่องมือหลักวิเคราะห์คุณภาพน้ำ									
3	pH Meter	ความเป็นกรด-ด่าง (pH) อุณหภูมิ (Temp)	Mettler-Toledo	Seven Easy S20 / 1230525212	National Food Institute, Ministry of Industry, Thailand	2302181-001-01	24 Mar 23	22 Mar 24	-
4	Analytical Balance (Readability 0.01 mg)	ของแข็งแขวนลอย ของแข็งละลายน้ำทั้งหมด (TDS)	Mettler-Toledo	XSR205DU / C210685394	Technology Promotion Association (Thailand-Japan)	23MM113	26 Apr 23	24 Apr 24	-
5	Hot Air Oven		Memmert	UF55 / B216.1666	Technology Promotion Association (Thailand-Japan)	22TM1490	19 Oct 22	18 Oct 23	-
6	BOD Incubator	4. บีโอดี (BOD)	Arco	UC4-1320 / (UAE.WAO.015/2561)	Technology Promotion Association (Thailand-Japan)	<u>23TM249</u>	15 Feb 23	14 Feb 24	-
7	BOD Incubator		Arco	UR-1320 / (UAE.WAO.018/2551)	Technology Promotion Association (Thailand-Japan)	<u>23TM375</u>	12 Apr 23	10 Apr 24	-
8	DO Meter	ดีโอ (DO)	YSI	4010-2W / 20260326	Technology Promotion Association (Thailand-Japan)	<u>22TW240</u>	27 Oct 22	26 Oct 23	-
9	Analytical Balance (Readability 0.1 mg)	น้ำมันและไขมัน (Oil & Grease)	Mettler-Toledo	XSR204 / C117635043	National Food Institute, Ministry of Industry, Thailand	2302827-001-01	10 May 23	8 May 24	-
10	COD Reactor (Heating Block)	ซีโอดี (COD)	Hanna	HI839800-02 / H018500I	Hanna Instruments (Thailand) Ltd.	<u>HIT-2312-0342</u>	10 Mar 23	9 Mar 24	-

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11	UV-VIS Spectrophotometer	ซิลิเกต,ไนเตรท,ซีโอดี (COD) 6. แอมโมเนีย ในหน่วยไนโตรเจน ไนเตรท ในหน่วยไนโตรเจน	Hitachi	U-1900 / 2021-064	DQE Services Co.,Ltd.	SP23-007	6 Jan 23	5 Jan 24	-
12	Atomic Absorption Spectrophotometer (AAS)	สารหนู (As), ปรอท (Hg) แมงกานีส (Mn) โซเดียม (Na)	Agilent Technologies	System ID:G8432A AA240FS / MY13160001	Thailand Institute of Scientific and Technological Research(TISTR)	<u>MTC. ACL. No.</u> <u>387/66</u> <u>Preventive</u> <u>Maintenance</u> <u>Checklist</u>	2 Feb 23	1 Feb 24	-
13	Inductively Coupled Plasma (ICP)	ตะกั่ว (Pb) แคดเมียม (Cd) ค่าอัตราการดูดซับโซเดียม (SAR)	Agilent Technologies	System ID:G8015A G8015AA / MY18030001	Agilent Technologies (Thailand) Co.,Ltd.		30 Nov 22	29 Nov 23	-
14	Digestor Unit	ทีเคเอ็น (TKN)	FOSS TECATOR	2520auto / 91794469	National Food Institute, Ministry of Industry, Thailand	<u>2302413-001-01</u>	30 Mar 23	28 Mar 24	-

Due Date of Calibration* : Schedule the program once a year at least once a year.