



MALDIVES FOOD AND DRUG AUTHORITY

Ministry of Health

Male', Maldives

Terms of Reference

CALIBRATION OF EQUIPMENTS USED AT NATIONAL HEALTH LABORATORY FROM A CALIBRATION CENTER ACCREDITED TO ISO/IEC 17025

List 1- Details of Items Requiring External Calibration - 2015

#	Item	Manufacturer/ Model No.	Serial/ Number	Lab Identification Number	Performance Range/Capacity	Resolution	Location/Lab	Required Accuracy
1.	Refrigerator	Whirlpool	-	NHL/CH-FC/EQ010	Chiller 2-8°C±2 and freezer <18°C	1°C	Food Chemistry 2	Chiller 2-8°C±2 and freezer <18°C
2.	Refrigerator	Whirlpool	-	NHL/CH-WC/EQ077	Chiller 2-8°C±2 and freezer <18°C	1°C	Water Chemistry	Chiller 2-8°C±2 and freezer <18°C
3.	Refrigerator	Whirlpool	-	NHL/CH-GN/EQ145	2-8 °C	-	Chemical Store	2-8 °C
4.	Refrigerator	LAB COLD	-	NHL/CH-GN/EQ161	2-8 °C	-	Chemical Store	2-8 °C
5.	Refrigerator	Hitachi	2160100075	NHL/MB-MR/EQ009	0-4°C	2-8°C±2	Media Room	0-4°C
6.	Refrigerator	Akira	DS-R278/EB 1	NHL/MB-MR/EQ065	2-8°C±2	2-8°C±2	Media Room	2-8°C±2
7.	Refrigerator	Whirlpool	B3117Z	NHL/MB-FM/EQ007	2-8°C±2	2-8°C±2	Food Micro	2-8°C±2
8.	Refrigerator	Hitachi	2360100134	NHL/MB-FM/EQ008	2-8°C±2	2-8°C±2	Food Micro	2-8°C±2
9.	Bio medical Freezer	40 Max		NHL/MB-VL/EQ038	<-18°C	1°C	Veterinary Laboratory	>-18°C
10.	Deep Freezer Fridge	Sanyo Ultra Low MDF-192AT	50607144	NHL/MB-VL/EQ040	-20 to -30°C	0.1°C	Molecular Biology Lab	-20 to -30°C
11.	Muffle Furnace	Bibbystuart	-	NHL/CH-BW/EQ009	Up to 1200°C	-	Bottle Wash Chemistry	550 °C and 700°C
12.	Hot air oven	Dalal	-	NHL/CH-BW/EQ023	50-300°C	10°C	Bottle Wash, Chemistry	50-300°C
13.	OMT Oven	Gallenkamp OM TOT5.XX2.C	SG 98/02/314	NHL/MB-FM/EQ006	55°C±2	0.1°C	Bottle Wash Micro	55°C±2
14.	Turbidity Meter 2100N	Hach, USA	-	NHL/CH-WC/EQ058	0-4000 NTU	1NTU	Water Chemistry	0-4000 NTU
15.	Spectro photometer DR4000	Hach, USA	-	NHL/CH-WC/EQ061	-	-	Water Chemistry	-
16.	Spectro photometer DR2010	Hach, USA	00050001813 2	NHL/CH-WC/EQ062	-	-	Water Chemistry	-
17.	BOD incubator	Hach, USA	-	NHL/CH-WC/EQ079	20°C	-	Water Chemistry	20°C
18.	pH meter	Eutech	11569174	NHL/CH-WC/EQ0109	1-10pH units	0.01 pH units	Water Chemistry	4, 7 and 10 pH units
19.	Digital Burette	Easy Calibration	-	NHL/CH-WC/EQ0116	0-999mL	0.01mL	Water Chemistry	-
20.	Spectrometer DR5000	Hach, USA	-	NHL/CH-WC/EQ0082	-	-	Water Chemistry	-
21.	Hot air oven	Dalal	-	NHL/CH-BW/EQ023	50-300°C	10°C	Bottle Wash,	50-300°C

							Chemistry	
22.	Lamina Flow	ESCO	2009-39437	NHL/MB-MB/EQ059	-	-	Food Microbiology	-
23.	Fume Hood	ESCO	2009-39431	NHL/CH-GN/EQ146	-	-	Water Chemistry	-
24.	Fume Hood	ESCO	2009-39432	NHL/CH-GN/EQ147	-	-	Bottle Wash	-
25.	Weight Set (22 pieces) – Reference	Weightronics, National Physical Laboratory, INDIA	36413	NHL/GN-CH/EQ165	From 200g to 1mg	-	Calibration Room	200g, 100g, 50g, 20g, 10g, 5g, 2g, 1g, 500mg, 200mg, 100mg, 50mg, 20 mg, 10mg, 5mg, 2mg, 1mg
26.	Weight Set (13 pieces)	Troemner	-	NHL/GN-CH/EQ159	From 100g to 5mg	-	Sample Receiving	5mg, 20mg, 50mg, 100mg, 500mg, 2g, 5g, 10g, 50g, 20g, 100g
27.	Immersion thermometer (Reference)	Brannan	-	NHL/CH-GN/EQ042	0-210°C	1°C	Calibration Room	0-210°C
28.	Immersion thermometer	Koehler	-	NHL/CH-FC/EQ061	-30 - 50°C	1°C	Food Chemistry 2	<-18°C
29.	Thermometer	Brannan	-	NHL/CH-WC/EQ122	-10 to 110°C	1°C	Water Chemistry	2-8°C
30.	Thermometer COD pin metal circular	Hach USA	-	NHL/CH-WC/EQ129	0 to 200 °C	2°C	Water Chemistry	1%
31.	Thermometer	Thermo restfrei	-	NHL/CH-GN/EQ164	-30 - 50°C	1°C	Sample Receiving	<-18°C
32.	Thermometer	Thermo restfrei	-	NHL/CH-GN/EQ170	-30 - 50°C	1°C	Sample Receiving	2-8°C
33.	Thermometer (Reference)	Thermo restfrei	-	NHL/CH-GN/EQ157	-30 - 50°C	1°C	Calibration Room	<-18°C
34.	Thermometer (37°C)	Thermo Scientific/ERTCO	14983	NHL/MB-FM/EQ088	18 to 50°C	0.5°C	Food Micro	18 to 50°C
35.	Thermometer (44°C)	Thermo Scientific/ERTCO	15121	NHL/MB-FM/EQ085	18 to 50°C	0.5°C	Food Micro	18 to 50°C
36.	Incubator	Sanyo MIR 262	60101630	NHL/MB-WM/EQ003	37°C±1	0.1°C	Water Micro	37°C±1
37.	Incubator	Sanyo MIR 262	40608373	NHL/MB-WM/EQ004	44°C±0.5	0.1°C	Water Micro	44.5°C±0.5
38.	Incubator	Sanyo MIR 262	50506901	NHL/MB-WM/EQ005	22°C±2	0.1°C	Water Micro	22°C±2
39.	Incubator	Sanyo MIR 262	60101631	NHL/MB-FM/EQ094	37°C±2	0.1°C	Food Micro	37°C±2
40.	Incubator	Gallenkamp IPR 075XX 1.5	SG 98/04/368	NHL/MB-FM/EQ001	30°C±2	0.1°C	Food Micro	30°C±2
41.	Incubator	Gallenkamp IPR 075XX 1.5	SG 97/04/367	NHL/MB-FM/EQ002	44°C±2	0.1°C	Food Micro	44°C±2
42.	Water Bath	Julabo(SW22)	10115548	NHL/MB-MR/EQ013	41.5°C±2	0.1°C	Food Micro	41.5°C±2
43.	Water Bath	Julabo(SW23)	10150645	NHL/MB-AR/EQ076	100°C±2	0.1°C	Food Micro	100°C±2
44.	Autoclave	Sanyo MLS-2420U	840090	NHL/MB-AR/EQ092	121°C	-	Autoclave Room	121°C/15lbs±3
45.	Stomacher	Seward 400	47290	NHL/MB-FM/EQ075	-	-	Food Micro	-
46.	Finnpipette 2-10 mL	Finnpipette	V21240	NHL/MB-WM/EQ105	2-10ml	0.1mL	Water Microbiology	2-10mL