



WEEKLY EPIDEMIOLOGICAL REPORT

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Temperature Monitoring with Fridge-tag - Part 1

Introduction of Fridge-tag

To ensure the optimal potency of vaccines, careful attention is needed in handling practices at all levels. These include storage and transport of vaccines from the primary vaccine store down to the end-user at the clinic level. WHO recommends that all vaccines should be stored at between +2°C and +8°C at all immunization points in the periphery.

In Sri Lanka all vaccine storage places including all Medical Officer of Health offices and vaccine storing hospitals are provided with an Iced Lined Refrigerator. For the purpose of monitoring the temperature in these refrigerators multiple temperature monitoring devices are used namely a thermometer, a Freeze-tag and a Log-tag or a Fridge-tag. The newest device introduced to monitor the temperature is the Fridge-tag, which is a continuous temperature monitoring device, by replacing the Log-tag. This series of articles is to provide a brief understanding on the functions of the Fridge-tag and how to handle it.

Just above the upper margin of the fridge tag display, a 30 days memory legend has marked beginning from today to minus 29 days

ii. Upper and lower preset alarm

The Fridge-tag has two preset temperature/time limits. If the Fridge tag gets exposed to the defined temperature limits, it indicates as alarms. High preset alarm has adjusted to more than +8°C continuously for more than 10 hours while the low preset alarm has to lower than 0.5°C continuously for more than one hour duration.

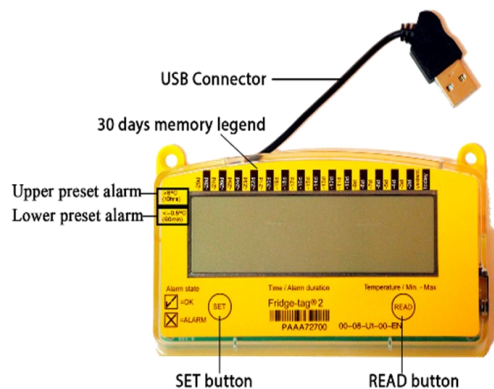
How to use the Fridge-tag

■ LOC function

The fridge-tag will stop storing temperature in following situations

- while pressing the buttons (READ or SET button)
- While fridge-tag connecting to the computer

After completion of these actions the Fridge-tag



Parts of the Fridge-tag

Figure 1 Parts of the Fridge-tag

i. 30 days memory legend



will not record temperature for 10 minutes from last button press and the in the display the "LOC" symbol will appear.

Figure 2 LOC function

■ Current temperature reading

The screen displays as follows (Fig 3)

- Current temperature reading (4.1°C)
- Current date and the time(16.09.2016 12:54)

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- OK (v) symbol will be shown as long as the fridge tag is kept at the preset alarm levels (between +0.5°C to +8°C) and duration and this level is maintained throughout for the last 30 days (today to minus 29th day).



Figure 3 Current temperature reading with no preset alarm levels violation

Current temperature reading with violations of preset alarm levels

Figure 4 Current temperature reading with preset alarm levels violations

The screen displays as follows (fig 4)

- Current temperature reading (6.1°C)
- Current date and time (16.09.2016 17:15)
- The warning symbol which indicates that, there is/are new preset alarm level violation/s which reader has not visualize.
- Alarm (X) symbol has appeared as there are violations of the preset alarm levels which has occurred at least ones, within last 30 days (form today to minus 29th day)
- Arrow head/s (non-blinking) will indicate in the upper display area to show which alarm limit has been violated (upper and/or lower) and on which day/s.

Temperature reading in last 30 days

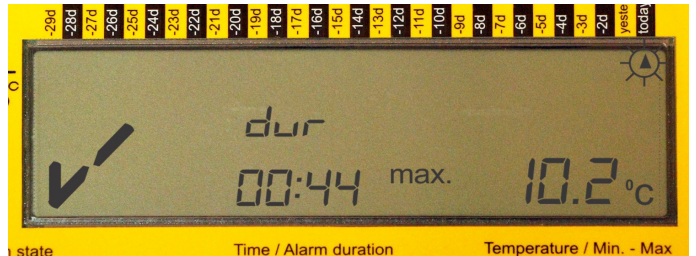
The user can visualize the highest and the lowest temperature recordings up to last 30 days. For this the user has to press the READ button accordingly.

Reading highest temperature non violated preset alarm levels

After pressing the READ button following will be displayed on the screen

- A blinking upward arrowhead (▲) for the corresponding day (today)
- Highest temperature reading for the corresponding day (10.2°C)

- The duration of out of the highest preset temperature limit (00:44)
- The OK (v) symbol is shown as there was no violation of the preset alarm levels in the corresponding day (more than +8°C but only for 44 minutes).



- max. sign to indicate the “maximum temperature”

Figure 5 Fridge-tag with non-violated preset alarm levels - reading of highest temperature

Reading lowest temperature with non-violated preset alarm levels



After pressing the READ button again, following will be displayed on the screen

Figure 5 Fridge-tag with non-violated preset alarm levels - reading of lowest temperature

- A blinking downward arrowhead (▼) for the corresponding day (today)
- Lowest temperature reading recorded for the corresponding day (2.4°C)
- The duration of out of the lowest preset temperature limit (00:44)(as the exposed lowest temperature was above the preset alarm level(-0.5C) time duration shown as 00:00)
- The OK (v) symbol is shown as there was no violation of the preset alarm levels for the corresponding day.
- min. sign to indicate the “minimum temperature”

The functions of the fridge tag and its advantages will be discussed further in the next article in this series.

Compiled by

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Table 1: Selected notifiable diseases reported by Medical Officers of Health 15th - 21st April 2017 (16th Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmani-asis		WRCD		
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**	
Colombo	823	8920	0	33	0	1	1	14	1	6	0	31	0	1	0	6	0	0	3	128	0	12	0	1	69	88	
Gampaha	627	6027	0	15	0	11	0	12	0	8	0	26	0	8	1	7	0	1	2	118	0	15	0	4	33	60	
Kalutara	213	2416	0	21	0	3	0	4	0	18	5	101	0	3	0	1	0	0	15	223	8	50	0	0	86	100	
Kandy	208	1140	0	33	1	4	1	4	0	0	1	18	3	57	0	7	0	1	4	117	1	15	1	4	91	96	
Matale	48	463	0	8	0	0	0	0	0	0	1	20	0	1	0	4	0	0	0	17	0	24	0	2	54	69	
NuwaraEliya	17	154	0	9	0	2	0	10	0	0	1	13	10	70	0	6	0	0	20	90	0	19	0	0	85	100	
Galle	90	2020	0	18	0	5	0	5	0	9	5	75	0	20	0	0	0	1	7	132	0	18	0	0	60	75	
Hambantota	134	1107	0	14	1	5	1	7	0	15	1	19	0	23	0	6	0	1	5	92	0	10	3	128	92	92	
Matarata	126	1402	0	16	0	6	0	0	0	2	5	33	0	12	0	3	0	1	6	77	1	3	4	46	100	100	
Jaffna	137	2345	5	99	1	8	0	17	1	29	0	21	6	341	0	4	0	0	9	131	0	20	0	0	93	100	
Kilinochchi	11	210	0	6	0	0	0	3	0	0	0	2	0	9	0	2	0	0	0	0	0	2	0	3	50	50	
Mannar	25	379	0	4	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	4	0	0	0	0	60	100	
Vavuniya	21	351	0	7	0	0	0	12	0	2	0	14	1	4	0	1	0	0	0	17	0	0	0	0	7	75	75
Mullaitivu	3	104	0	4	0	0	0	3	0	1	0	8	0	3	0	1	0	1	0	3	0	5	0	2	60	60	
Batticaloa	384	2360	4	51	0	8	0	9	0	6	0	9	0	0	0	4	0	0	0	80	0	15	0	1	50	93	
Ampara	14	205	0	9	0	1	0	1	0	0	0	7	0	1	0	2	0	0	1	69	0	12	0	2	43	71	
Trincomalee	199	3955	0	5	0	1	0	3	0	3	0	8	0	7	0	12	0	0	2	55	1	14	0	1	69	85	
Kurunegala	205	1726	0	24	0	0	0	0	0	2	0	35	0	20	0	7	1	1	9	241	0	17	3	46	62	90	
Puttalam	94	720	0	18	0	1	1	2	0	0	0	6	0	10	0	1	0	0	2	78	0	14	0	2	50	71	
Anuradhapur	71	707	0	14	0	1	0	1	0	2	5	0	28	0	7	0	0	0	11	161	0	21	4	114	37	68	
Polonnaruwa	89	1389	0	8	0	4	0	5	0	0	0	16	0	3	0	1	0	0	1	93	0	6	0	47	57	86	
Badulla	66	317	0	36	0	5	1	6	0	1	2	30	0	20	1	18	0	1	6	114	1	64	2	9	71	94	
Monaragala	42	607	3	21	0	3	0	0	0	2	1	47	1	58	0	11	0	0	2	37	0	20	0	4	100	100	
Ratnapura	41	401	3	72	0	9	0	4	0	4	11	173	0	15	1	27	0	0	2	144	1	75	0	0	50	83	
Kegalle	203	1664	1	23	0	4	0	3	0	14	0	20	1	36	0	6	0	0	7	104	1	32	0	4	82	91	
Kalmune	103	1042	0	19	0	4	0	1	23	102	0	3	0	0	0	0	0	0	4	94	0	6	0	0	46	77	
SRILANKA	4010	42131	16	587	3	126	5	127	27	229	33	763	22	734	3	144	1	8	118	2419	15	489	17	427	67	85	

Source: Weekly Returns of Communicable Diseases (WRCD).
 *T=Timeliness refers to returns received on or before 21st April, 2017 Total number of reporting units 337 Number of reporting units data provided for the current week. 297 C**=Completeness

Table 2: Vaccine-Preventable Diseases & AFP

15th – 21st April 2017 (16th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2017	Number of cases during same week in 2016	Total number of cases to date in 2017	Total number of cases to date in 2016	Difference between the number of cases to date in 2017 & 2016
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	00	00	00	00	27	17	58.8%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	00	01	00	00	01	00	00	00	01	03	01	103	129	- 20.1%
Measles	00	00	00	00	01	00	00	00	00	01	02	101	223	- 54.7%
Rubella	00	00	00	00	00	00	00	00	00	00	01	05	06	- 16.7%
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Tetanus	00	00	00	00	00	00	00	00	00	00	00	07	02	250%
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	21	00	0%
Whooping Cough	00	00	00	00	00	00	00	01	00	01	00	05	24	- 79.1%
Tuberculosis	64	26	33	23	10	18	03	06	75	258	142	2478	2809	- 11.7%

Key to Table 1 & 2

Provinces: W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.
RDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

Data Sources:
Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,
Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis
CRS** =Congenital Rubella Syndrome

Number of Malaria Cases Up to End of April 2017,

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All are Imported!!!

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Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@sltnet.lk. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

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