WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health, Nutrition & Indigenous Medicine

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WEEKLY EPIDEMIOLOGICAL REPORT SRI LANKA 2021

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Law and Water – part ii

This is the last of a series of 2 articles.

Public health inspectors (PHII) of the public health team at Medical Officer of Health (MOH) areas are assigned to supervise and monitor water sanitation of Communities in their assigned areas. All sources of obtaining drinking water by each household need to be entered into the register named "Sanitation Register". The duties and responsibilities of PHII are as follows.

- Shall supervise the maintenance of Public and Community water supplies and ensure proper disinfection
- Shall send samples of water for bacteriological and chemical analysis regularly
- Shall inspect private and public wells and ensure that improvements, whenever necessary, are carried out

Standard of Quality Regulations
There are microbiological standards that set permissible coliform levels and physical standards specifying levels for turbidity, colour, and odour as shown in the table.

Characteristic	Mineral Water Requirements	Drinking-Water Requirements
Colour Hazen Units (Max)	5.0	15.0
Odour	Unobjectionable	Unobjectionable
Taste	Unobjectionable	Unobjectionable
Turbidity, NTU (max)	5.0	5.0
pH	--	6.5 to 8.5
Total dissolved solids, (values are presented hereunder as mg/l (max)	1500.0	1000.0
Arsenic as As	0.01	0.01
Aluminum as Al	0.2	0.2
Cadmium as Cd	0.003	0.003
Cyanide as CN	0.07	0.07
Chromium as Cr	0.05	0.05
Mercury as Hg	0.001	0.001
Nickel as Ni	0.02	0.02
Selenium as Se	0.01	0.01
Lead as Pb	0.01	0.01
Copper as Cu	1.0	1.0
Antimony as Sb	0.005	--
Barium as Ba	0.7	--
Manganese as Mn	0.5	0.5
Zinc as Zn	--	3.0
Total iron as Fe	--	0.3
Total hardness as CaCO3	--	250
Free residual Chlorine as Cl2	--	0.2
Alkalinity total as CaCO3	--	200
Free ammonia as NH3	--	0.06
Chloride as Cl	250.0	250.0
Fluoride as F	1.5	1.5
Nitrate as NO3	50.0	50.0
Nitrite as NO2	3.0	3.0
Sulphide as H2S	0.05	--
Sulphates as SO4	--	250.0
Chemical Oxygen Demand (COD)	--	10.0
Phenolic compounds and mineral oil	Absent	Absent
Grease and oil	Absent	Absent
E. coli and coliforms	Absent	Absent
Pathogenic organisms	Absent	Absent

Table 1: Physical-Chemical and Microbial requirements

Source: Food (Bottled or Packaged Water) Regulations 2005

Treatment during the processing of bottled drinking water
The regulations define chemical and physical treatment methods during processing to reduce, remove or prevent the growth of micro-organisms such as chlorination, ozonation, carbonation, high heat, ultraviolet radiation, and filtration. The treatment process includes the use of sand or compressed fibre filters, cartridge filters, pleated membrane filters, activated carbon filters, aeration, demineralization, de-ionization and/or water softening.

Inspection of Bottled Water Plants
The Authorized Officers appointed under the Food Act monitors and inspects bottled water products and processing plants. In addition, follows up on consumer and trade complaints and other leads, as appropriate, on use of potentially violative products, and also collect samples for analysis and submit these to Food Laboratories gazetted under the Food Act to test for microbiological or chemical contamination. It is the responsibility of all consumers to report observed faults such as the presence of foreign particles, unusual or unpleasant odours, suspicious label information etc. to Health Authorities.

Shelf Life of Bottled Water

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Bottled Water Regulations neither set nor suggest limitations to the shelf life of bottled water. Most bottled water containers retailed bear a two-year expiry period. General position of the International Bottled Water Association (IBWA) is that as long as bottled water is packaged in accordance with regulatory processing in compliance with Good Manufacturing Practices(GMP), and meeting the quality standards, the product's shelf life should remain intact for a considerable period of time provided that product storage and other post- packaging and handling practices do not adulterate or deleteriously affect the finished product.

Misleading bottled Water Labelling and Marketing

The Labelling Regulations define essential labelling and advertising rules, specify mandatory information which should be on product labels, and impose restrictions in relation to the declaration of false claims, or misleading descriptions in such a manner as to mislead the purchaser or consumer, or presented in a manner that is likely to create an erroneous impression regarding its character in any respect. In addition to the above, special provisions have been introduced to control false or misleading descriptions under the Bottled or Packaged Water Regulations, such as Nothing shall be printed or published on the label or the bottle in respect of medical or other benefits that can be gained by a consumer using Drinking Water; Shall not print or publish on the label or on the bottle any statement or any pictorial device, which may create confusion in the minds of the public, or in any way mislead the public about the nature, origin, composition and properties of Drinking Water. Some labels may carry descriptions such as "Spring water" with graphics of mountains and a lake on the label, whereas the actual source is located in an entirely different locality, thereby misleading the public about the product's origin.

Moreover, the use of descriptive terminology suggesting bottled water is extraordinarily pure and uncontaminated are observed. For instance, descriptions such as 'Pure', 'Naturally Purified', 'Premium', 'Mountain Water', 'For Health Conscious' are being used to boost sales.

Enforcement officers should be vigilant to identify such exaggerated descriptions and take appropriate action, and consumers also should pay more attention to the labelling information and be sharp enough to make a correct choice without being misled by exaggerated claims.

Reported illness due to bottled water

As far as Sri Lankan experiences are concerned no water-borne illnesses have been traced to bottled water since the introduction of bottled drinking water. This is evident from the Weekly Epidemiological Reports published by the Ministry of Health, and to date, bottled water has not been responsible for an outbreak of any such diseases. Nevertheless, there have been waterborne disease outbreaks elsewhere traced to bottled water. For example, in 1996 a bottled water-related cholera outbreak was reported in the Morbidity and Mortality Weekly Report of the United States. In Portugal, during the cholera epidemic of 1974, bottled mineral water was identified as one of the vehicles of transmission of Vibrio cholera.

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Table 1 : Water Quality Surveillance
Number of microbiological water samples May 2021

District	MOH areas	No: Expected *	No: Received
Colombo	15	90	NR
Gampaha	15	90	NR
Kalutara	12	72	NR
Kalutara NIHS	2	12	NR
Kandy	23	138	NR
Matale	13	78	NR
Nuwara Eliya	13	78	NR
Galle	20	120	NR
Matara	17	102	NR
Hambantota	12	72	NR
Jaffna	12	72	NR
Kilinochchi	4	24	NR
Manner	5	30	NR
Vavuniya	4	24	NR
Mullatvu	5	30	NR
Batticaloa	14	84	NR
Ampara	7	42	NR
Trincomalee	11	66	NR
Kurunegala	29	174	NR
Puttalam	13	78	NR
Anuradhapura	19	114	NR
Polonnaruwa	7	42	18
Badulla	16	96	NR
Moneragala	11	66	NR
Rathnapura	18	108	NR
Kegalle	11	66	NR
Kalmunai	13	78	NR

* No of samples expected (6 / MOH area / Month)
NR = Return not received

Table 1: Selected notifiable diseases reported by Medical Officers of Health 12th – 18th Jun 2021 (25th Week)

RDHS	Dengue Fever		Dysentery		Encephaliti		Enteric Fever		Food Poi-		Leptospirosis		Typhus Fe-		Viral Hep-		Human		Chickenpox		Meningitis		Leishmania-		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	149	1693	0	8	0	0	0	3	0	3	0	100	0	1	0	2	0	2	0	20	0	6	0	1	**54**	**89**
Gampaha	42	766	0	1	0	1	0	1	0	0	0	128	0	2	0	3	0	2	1	16	0	6	0	9	**32**	**72**
Kalutara	26	553	0	11	0	2	0	0	0	0	1	293	0	3	0	1	0	1	0	57	0	9	0	0	**39.5**	**100**
Kandy	8	313	0	15	0	1	0	1	0	2	0	75	1	26	0	1	0	0	0	27	0	9	0	16	**60**	**100**
Matale	5	53	0	10	0	4	0	0	0	0	0	34	0	4	0	1	0	0	0	10	0	1	0	100	**57**	**100**
NuwaraEliya	1	30	0	11	0	2	0	2	0	0	0	34	0	32	0	2	0	0	0	22	0	4	0	1	**32**	**94**
Galle	4	123	0	2	0	1	0	5	0	5	3	369	0	20	0	2	0	0	0	28	0	18	0	1	**47**	**93**
Hambantota	9	166	1	7	0	2	0	2	0	4	6	142	4	41	0	6	0	0	0	29	1	16	15	224	**74**	**100**
Matara	22	200	0	3	0	1	0	1	0	0	12	145	0	12	0	2	0	0	0	42	1	4	1	171	**42**	**100**
Jaffna	4	113	0	33	0	3	0	12	0	25	1	14	6	420	0	0	0	2	0	24	0	3	0	2	**19**	**88**
Kilinochchi	0	22	1	17	0	0	0	0	0	10	0	42	3	58	0	0	0	0	0	10	0	0	0	1	**52**	**100**
Mannar	0	19	0	0	0	0	0	4	0	0	0	23	0	2	0	0	0	0	0	3	0	12	0	1	**51**	**80**
Vavuniya	0	30	0	2	0	1	0	0	0	0	0	17	0	2	0	1	0	0	0	5	0	1	0	1	**41**	**100**
Mullaitivu	0	5	0	1	0	0	0	0	0	0	0	23	0	7	0	0	0	0	1	9	0	4	0	0	**24**	**95**
Batticaloa	12	2950	0	18	0	3	0	2	0	15	0	35	0	0	0	1	0	0	0	10	1	19	0	0	**46**	**100**
Ampara	1	22	0	5	0	0	0	1	0	0	4	41	0	0	0	1	0	0	0	32	0	9	0	3	**60**	**100**
Trincomalee	0	95	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	14	0	2	0	0	**38**	**79**
Kurunegala	21	523	0	11	0	3	0	0	0	3	1	169	0	8	0	0	0	1	2	34	0	73	0	198	**45**	**92**
Puttalam	2	205	0	2	0	1	0	0	0	0	0	16	0	14	0	0	0	1	1	16	0	23	0	9	**45**	**93**
Anuradhapur	0	111	0	8	0	0	0	1	0	3	0	183	0	20	0	2	0	0	0	22	0	19	0	117	**34**	**77**
Polonnaruwa	2	42	0	3	0	0	0	2	0	2	3	83	0	2	1	2	0	0	1	21	0	1	6	227	**38**	**100**
Badulla	15	104	0	9	0	0	0	1	0	0	0	173	1	30	0	15	0	0	0	29	0	11	0	13	**46**	**100**
Monaragala	2	58	0	5	0	0	0	2	0	5	5	214	0	14	0	43	0	0	0	20	1	36	0	13	**46**	**100**
Ratnapura	9	282	0	21	0	5	0	0	0	4	6	452	0	16	0	6	0	1	1	39	3	46	2	52	**39**	**96**
Kegalle	6	256	0	4	0	7	0	0	0	1	1	166	0	8	0	1	0	0	0	70	1	16	0	11	**43**	**100**
Kalmune	5	258	0	11	0	2	0	1	0	1	1	15	0	0	0	2	0	2	2	14	0	7	0	2	**44**	**100**
SRILANKA	**345**	**8992**	**2**	**218**	**0**	**39**	**0**	**41**	**0**	**83**	**44**	**2989**	**15**	**742**	**1**	**96**	**0**	**12**	**9**	**623**	**8**	**355**	**24**	**1173**	**45**	**93**

Source: Weekly Returns of Communicable Diseases (esurvillance.epid.gov.lk).

*T=Timeliness refers to returns received on or before 18th June , 2021 Total number of reporting units 357 Number of reporting units data provided for the current week: 352 C**-Completeness

Table 2: Vaccine-Preventable Diseases & AFP

12th – 18th Jun 2021 (25th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2021	Number of cases during same week in 2020	Total number of cases to date in 2021	Total number of cases to date in 2020	Difference between the number of cases to date in 2021& 2020
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	00	00	00	01	23	18	27.77%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	00	00	00	00	00	01	00	00	00	01	06	45	87	-48.27%
Measles	00	00	00	00	00	00	00	00	00	00	01	10	31	-67.74%
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
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	02	03	-33.33%
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	03	02	14	- 81.8%
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	00	05	-100%
Tuberculosis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	437	2591	2592	-0.0385%

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

NA = Not Available

Influenza Surveillance in Sentinel Hospitals - ILI & SARI

Month	Human				Animal		
	No Total	No Positive	Infl A	Infl B	Pooled samples	Serum Samples	Positives
June							

Source: Medical Research Institute & Veterinary Research Institute

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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