



FOOD CONTROL ADMINISTRATION UNIT

**Ministry of Health & Indigenous Medicine
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Provincial Directors of Health Services
Regional Directors of Health Services
Director / NIHS
Chief Medical Officers of Health
Medical Officers of Health

Guidelines for the operation of water treatment plants using Reverse Osmosis technique

In view of the issues reported as a result of wide spread use of the technique of Reverse Osmosis to treat water in several parts of the island, the Ministry of Health has developed a set of health guidelines to be followed with regard to the operation of such plants.

You are requested to follow the above guidelines attached herewith to minimize the possible adverse health & environmental effects associated with such water treatment plants.


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Guidelines for Reverse Osmosis Plants

These guidelines were developed in a consultative meeting held at RDHS Vavuniya headed by DDG-PHS 1 with the participation of the RDHS, MOOH and PHI. They were reviewed by an expert panel with the participation of Ministry of Health, National Water Services and Drainage Board and Government Analyst Department headed by the Director General of Health Services.

- 01 These guidelines will be applicable only to the Reverse Osmosis plants establish in CKDu affected areas for Distribution of water to the community (except water supplied by the Water Supply and Drainage Board) and will not replace the bottle water legal enactments.
- 02 All Reverse Osmosis plants should be registered by the respective Local Authorities on recommendation of the Medical Officer of Health.
- 03 All established facilities should adhere to the desired requirements as given below.
 - a. All plants need to be located in areas where there are no plants (One Reverse Osmosis plant for 500 families).
 - a. Existing plants needs to be given a grace period of 6 months to improve their status in compliance with this guidelines).
 - b. Technical guidance for the Reverse Osmosis plant establishment and maintenance could be obtained from the National Water Services and Drainage Board.
- 04 All water sources to obtain water for a reverse osmosis plant should be safe.
 - a. Coliforms less than 10/100 ml
 - b. No E-coli
 - c. Heavy metals levels should be less than Sri Lanka Standards for Potable Water (SLS 721: 1985)
- 05 A well that is used as a water source for a reverse osmosis facility should fulfil the following criteria:
 - a) The well should be located at least 15m from the latrine.
 - b) There should be a 3 feet tall wall around the well.
 - c) The well should be plastered up to 10 feet deep.
 - d) There should be a cemented skirt of 3 feet around the well.
 - e) There should be a system to drain discharged water.
 - f) The well should be covered.
- 06 A tube well that is used as a water source for a reverse osmosis facility should fulfil the following criteria:
 - a. The tube well should be at least 180 feet deep.
 - b.
- 07 Location of the reverse osmosis plant.

- a. A separate designated place needs to be allocated for the establishment of the reverse osmosis plant.
- 08 Capacity of reverse osmosis plants
- a) The maximum amount of water that could be produced from plant (more than 600 L per day)
- b) Domestic filters should not be used for producing water for commercial purposes.
- 09 Persons managing the reverse osmosis plant:
- a. The person assigned for the handling of water should not do other activities which could contaminate water.
- b. Persons who are handling water needs to be medically examined and certified.
- 10 Chemical testing of water at a reverse osmosis facility
- a. Manufacturers are encouraged to have in-house pH and TDS checking using hand held meters and their regular use.
- 11 Transport of purified water by reverse osmosis plants:
- a) No bulk transport of water allowed.
- (Bulk transport means transport of water beyond the boundaries of the ^{MOH}GN division in which the reverse osmosis plant is located, transport by bowsers or transport for purposes exceeding that of the GN division or more than 1000 L except for the National Water Services and Drainage Board.
- 12 Distribution of water within the GN division area could be allowed if they follow the given criteria.
- a. Producer's name, address, TP number and GN area of the plant is displayed on the container used to transport the water and at the point of distribution.
- b. Transport to be done within day time.
- c. PHI has the authority to inspect water that is being transported which may include handheld pH/TDS meter.
- 13 Maintenance of records
- a) Following information needs to be documented regularly and systematically by all Reverse Osmosis plants:
- i. Water sample testing reports
 1. monthly for bacteriological tests by NWSDS
 2. Chemical analysis once in 6 months
 3. Daily pH and TDS reports
 - ii. Date of change of filters
 - iii. Number of liters of water produced and sold per day
 - iv. Medical checkup of persons handling water
 - v. Local government license

vi. File for circulars instruction

- b) PHII should maintain
- i. a register of WP plants
 - ii. Maintain a file for each facility

PHI should report on the Reverse Osmosis plants and their status in the Monthly Return to the RDHS. A quarterly report consolidated at the RDHS level should be sent to the Environmental and Occupational Health unit of the Ministry of Health).

- 14 In future, it is recommended to include levels of pesticide residues in to the water quality analysis of Reverse Osmosis plants.