

USABILITY OF HARVESTED RAINWATER IN DRINKING PURPOSES

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by

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Abstract

Sri Lanka is a tropical country where badly suffer from seasonal water scarcity. Nearby three quarters of Sri Lanka lies in what is widely known as the 'Dry Zone', comprising the northern half and the whole of the east of the country. Average annual rainfall in this region is generally between 1,200-1,800 mm. The Wet Zone also receives some rain during this period, although the coastal regions of the South-west are in the rain shadow of the Central Highlands, and are much drier than the North-east between November and January.

Rainwater is one of the purest sources of water available, as it does not come into contact with many of the pollutants often discharged into local surface waters. It comes free and can be used to supply both potable (drinkable) water and non-potable water. But when we collect them from roof or any other systems, it has tendency to contact with pollutants. Therefore they must have proper assessment about its quality before using it in many purposes. The research will be conducted to know usability of harvested rain water in drinking purposes.

From the collected details, the random samples were selected. As study was conducted in two particular areas twenty samples in each area were collected. Therefore twenty samples from Uva province where is affected by North- East monsoon during and twenty samples from South-West coastal area where is affected by South- West monsoon were collected.

As most important step chemical analysing of collected water samples were conducted. Sixteen standard water quality parameters which are most considered in drinking, were analysed to determine. The different laboratory experimental methods for each parameter were practiced.

According to the above results around 66% of total water samples writhing Sri Lanka standards. Therefore they can recommend for drinking purposes. Even about 34% of water samples are not in permissible level, they can use after preliminary water treatments in domestic level. As a conclusion rain water is the purest water supply source if it stored well and maintain properly.