

Here is the PLUVALOR System or Whole-House Rainwater Harvesting



Welcome to the PLUVALOR system, a rainwater harvesting system for whole-house reuse. PLUVALOR is not a commercially-available system. It is a concept made available to all, and its set-up does not require any special skills. The system's originality lies in the fact it prioritises the reuse of rainwater to produce high quality drinking water, while also adapting the water's quality to other end-uses in the home.

Rainwater falling on the roof drains to a small underground tank called a «primary filter pit», where the coarser impurities are removed (or you can install a strainer basket filter.) Water is then conveyed to the cistern's sedimentation tank, where the finer impurities settle at the bottom. To preserve rainwater's freshness, cisterns must always be placed underground. A properly conceived rainwater cistern is simply the artificial reproduction of a natural underground rock cavity in which water conserves quite well.

The sedimentation tank's overflow discharges into the cistern storage compartment. For household use, rainwater's acidity must always be neutralized. Neutralization occurs thanks to the alkaline properties of concrete or masonry. During this process, useful minerals are moderately taken up by the stored rainwater. Yet the water remains quite soft, containing little calcareous compounds. Other cistern components include a pond aerator and an overflow.

Water is drawn from the cistern through a floating subsurface strainer. In this way, the pump does not suck up sedimentation sludge from the bottom of the tank, or floating impurities.

We now come to the household pump and filter systems. After first passing through a 25-micron filter, water is pressurized with a well pump system and sent through a 10-micron filter. The set-up can also be equipped with a water meter and a drain valve.

The water thus obtained is of non-potable quality, yet remains safe. It is distributed throughout the home for all non-food and non-drinking uses. The accidental absorption of a glass of such water is not harmful to one's health. This water feeds the clothes washer, the dishwasher, and all cold water taps in the home. The hot water tank heats this water for bathroom and kitchen hot water taps.

In a home equipped with a PLUVALOR system, there is usually only one faucet, generally located in the kitchen, to supply high-quality drinking water. This will be used for drinking and cooking. Rainwater that has been made potable using a microfiltration or reverse osmosis system is equal to the best bottled mineral waters on the market, at a price of less than 5 cents a litre.

When the roof is too small to cover all of a household's water needs, make sure to connect the flush toilet and all outside taps to the mains water supply, and not to the rainwater harvesting system. In case of a rainwater shortage, you can feed a bit of mains water into the cistern, until the next rainfall.

For further reading, don't hesitate to visit the website www.eautarcie.org, where you will find all analytical data on the quality of rainwater obtained after treatment and filtration.



Online since 12/04/11

http://www.youtube.com/watch?v=637cdB5x9ss&feature=results_video&playnext=1&list=PLBD622BFED5F9DD8B