

Water Quality Tests

To check the quality of the filtered water, this water test kit was used. It contains tests to verify if there are bacteria e. Coli, the pH of the water, nitrate, manganese, hydrogen sulfide, and the alkalinity and hardness of the water.

Kit de test



Bacteria Test

The bacteria test was carried out inside the bottle containing the kit. The instructions indicate that the bottle should be filled with filter water without contaminating the cap. Shake for 20 minutes so that the powder is integrated into the solution and wait 48 hours to see the results.

The color of the water after 48 hours will indicate its status:

- Does not contain bacteria
- May contain bacteria



Freshly poured water



After 24 hours

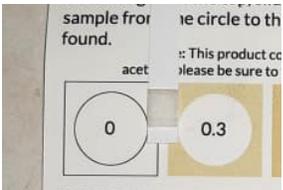
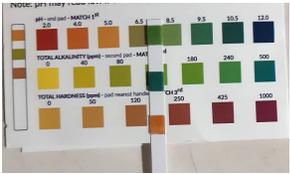
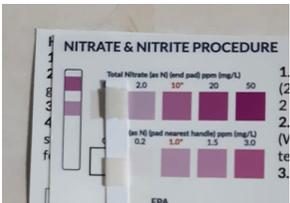


After 48 hours

The test results indicate that the filtered water does not contain bacteria and the water is safe for human consumption.

Other Tests

The other tests were carried out with different amounts of the same water sample, according to instructions.

Test	Result	Conclusion
Hydrogen Sulfide		The sdh level is between 0 and 0.3. The maximum safe level is 0. This is because there is a possibility of sulfur in the water source. Causes a bad smell and bad taste.
PH, alkalinity and hardness		Ph level: 8.5 The recommended level is between 6.5 and 8.5. Alkalinity level: 500 The recommended level is between 75-150. The result is due to the presence of minerals in the water. Hardness level: 120 The recommended level is 10-100. The result is due to the presence of minerals in the water. It can cover jets, etc.
Manganese		The manganese level is between 0.2 and 0.4. When the maximum allowed by the USEPA is 0.05. This may be due to the presence of minerals in the water. Causes a bitter, metallic taste.
Nitrate and Nitrite		The nitrate level is at 0, and the nitrite level is between 0 and 0.2. The water does not contain nitrate or nitrite. The presence of nitrate and nitrite causes the blue baby syndrome, nausea, weakness, and dizziness.

Conclusions and recommendations

The results achieved with the filter show that the water is safe to drink as it does not contain bacteria. They also show that there is a strong presence of minerals, probably due to the minerals in the filter, however, this does not mean that the water is not safe to drink, but that it will have a very strong mineral taste.

For the use of the filter it is recommended:

Monitor your usage constantly.

Do not use moringa seed powder more than two times.

Clean the filter after 4-5 uses, it depends on how dirty the added liquid is. Wash the bags (as due to the constant humidity it can attract mold).

Let the water flow into the filter and collect it immediately. (Do not puddle it because it can cause carbon particles to collect and become dirty).

The first time you use fresh dry charcoal, use the collected water for cleaning or add it back to the filter system, before drinking. The reason for this is that fresh charcoal could produce a lot of charcoal particles.

Maintain a hygienic construction and use process.

License:

Check out the project's page

<http://www.el-domo.com/project-el-domo-water-filter/>