YIP-PROTOTYPE:

ADSORPTION PROCESS

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YIP
Your Ideas to Practice

INTRODUCTION

NEEDS According to Adequate technology:

- ✓ In accordance with the management capabilities of the locality:
  - **Easy installation**
  - **Easy to build (simple design)**
  - **Easy to use**
- ✓ Flexible design to environmental changes: Multi-assembly (adaptable to site requirements, flexible)
- ✓ Low costs for implementation, operation and maintenance: Low economic investment, cheap material (Affordable)
- ✓ Solve a specific need of a specific social group: Drinkable water
- ✓ Open technological knowledge, multipurpose, Reversible, Recoverable, Understandable, Participative and Socially responsible.

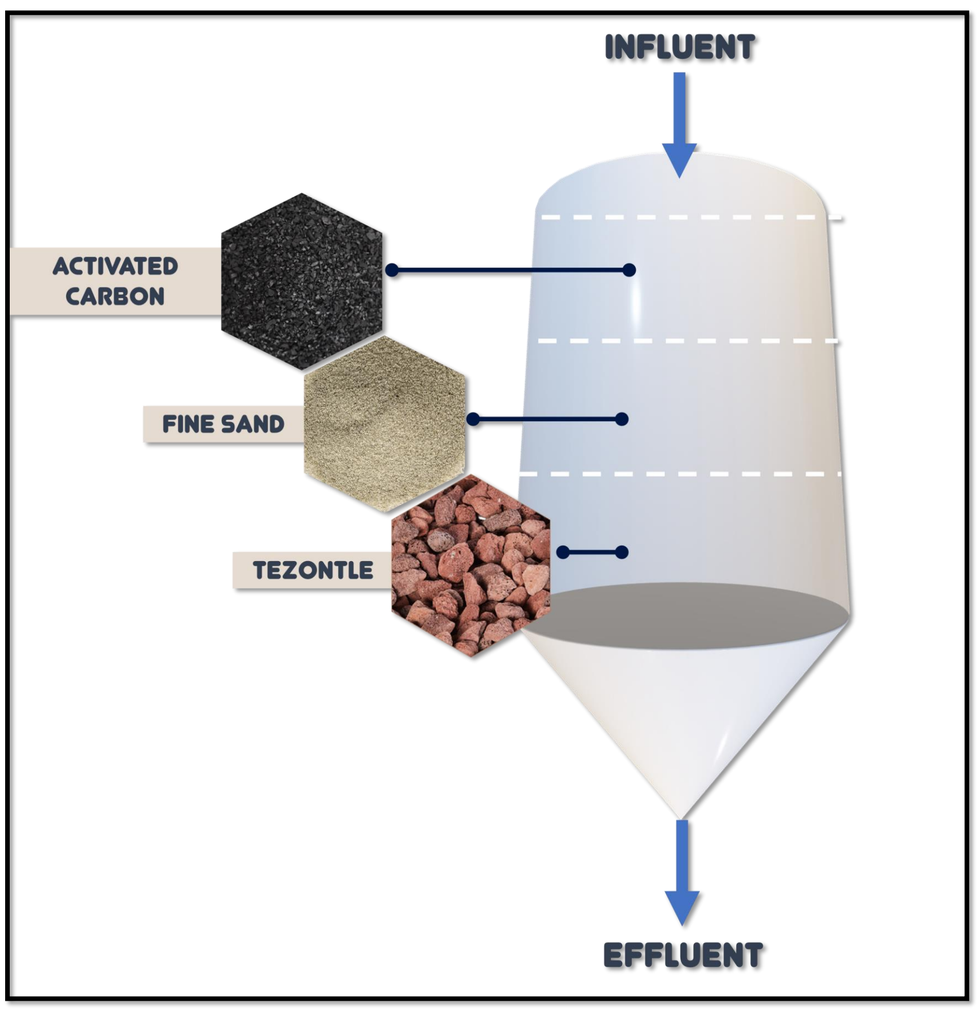

Figure 1: Schematic diagram of prototype (Adsorption part)

METHODOLOGY

Main component

- **Activated carbon:** It is useful to remove chemicals which gives odor or taste, e.g. Hydrogen sulfide or chlorine. It is also helpful to remove heavy metals
- **Fine sand:** For the removal of floating and sinkable particles as well as suspended materials.
- **Tezontle (Volcanic rock):** These are effective at filtering surface contaminants and can store water like a sponge due to their tiny pores.

EXPECTED OUTCOMES

The prototype can be used to decrease pollutants for wastewater discharge to water bodies.

RECOMMENDATION

To improve treatment efficiency, a coagulation system with alum dosage should be included before to the adsorption process.

WWW.DEMOCRATIA-AQUA.ORG

References: *Haba Prieto (2014): Adequate technology, Quintanilla*

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