



Sample Abstract – Engineering

This project started with a simple goal: build a water purification system that runs on sunlight and does not rely on electricity, filters, or expensive parts. The idea came from looking at communities where clean water is hard to come by and tools need to be practical, not perfect. Using a parabolic trough to focus heat, the system boils contaminated water and collects the steam as it cools, leaving the bad stuff behind.

We tested it using untreated water from local sources. After running it through the system, most common bacteria were gone. The final samples met basic safety standards, and the setup held up well with just scrap metal and glass. There were no fancy materials. It was just something that could be built, repaired, and actually used by people who need it.

This is not about making the best purifier in the world. It is about creating something that works well enough to matter. The early version still has flaws. But it shows what is possible when you start with what is available and design for real-life use, not just ideal conditions.