An aerial photograph of a city, likely Addis Ababa, Ethiopia, showing a dense urban landscape with various buildings and a prominent white dome structure in the foreground. The image is split diagonally, with the left side showing the city and the right side being a solid yellow background.

Activated Carbon Filter for Mercury Remediation

By Jessica Antoine, Ema
Mehuljic and Meron Tadesse



WPI



Mercury and
other heavy
metals are
present in water





The Approach:
Co-design with local
high school

Establishing Community Relations



Local
Miners



Okyeman
Environmental
Foundation

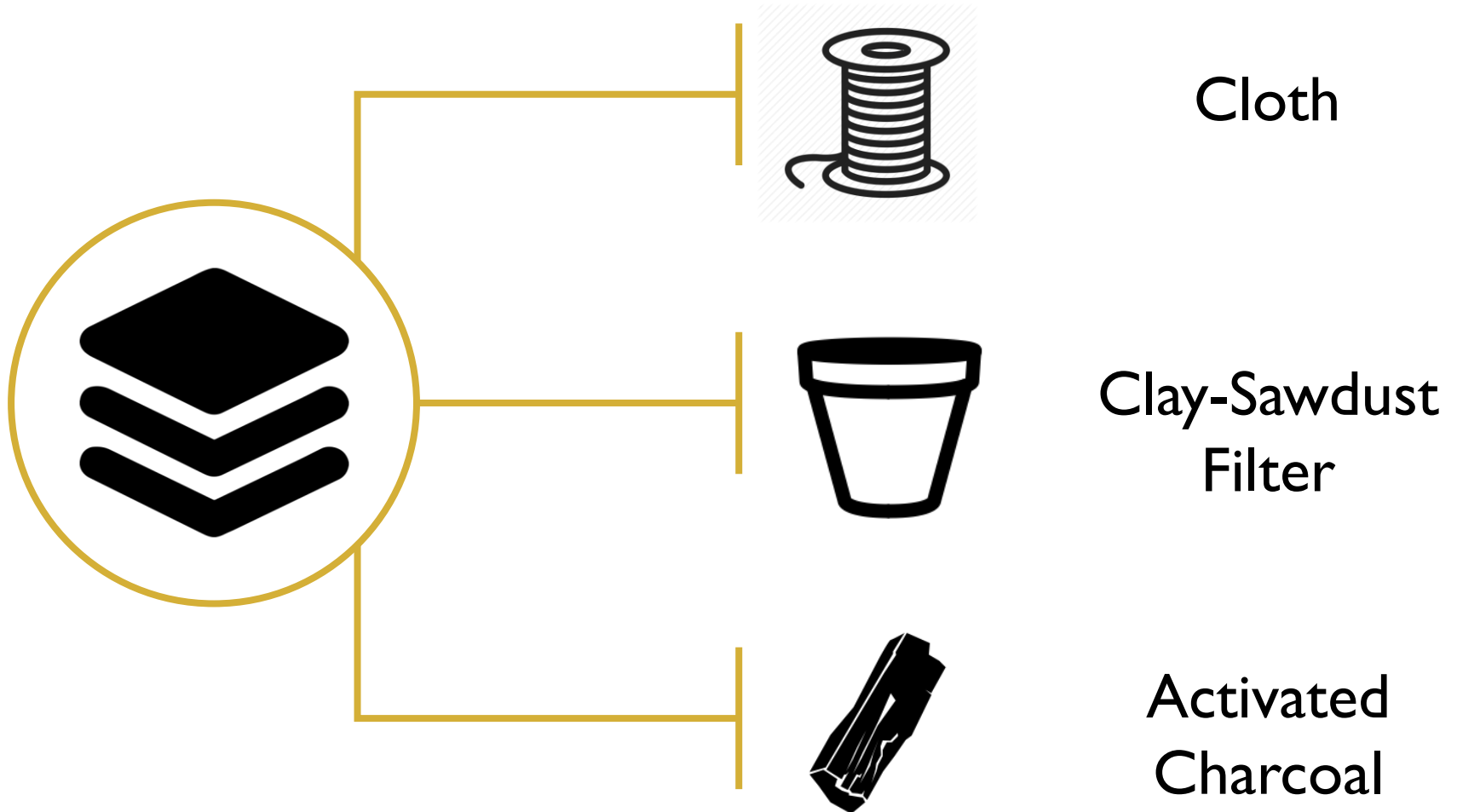


Local
Community



Kibi Senior High
Technical School

Triple Layer Filter Design



Clay-Sawdust Filter Creation

Process: Firing Methods





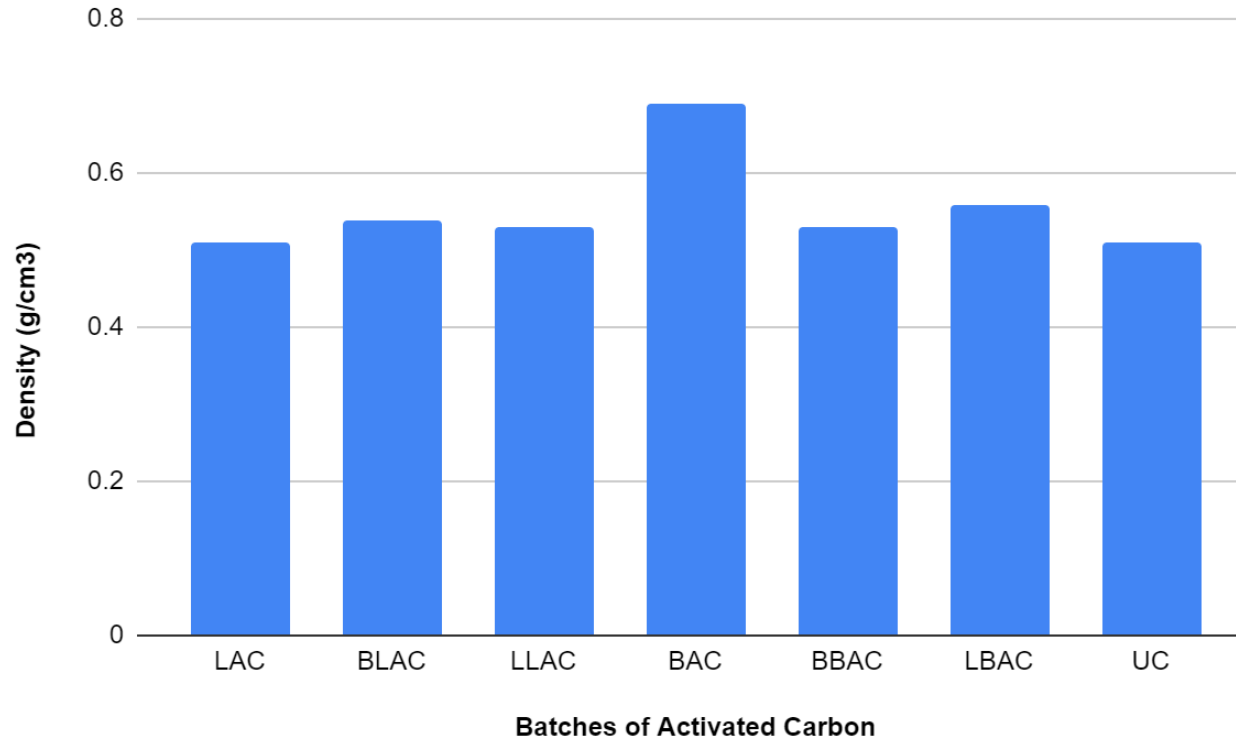
Stress Testing



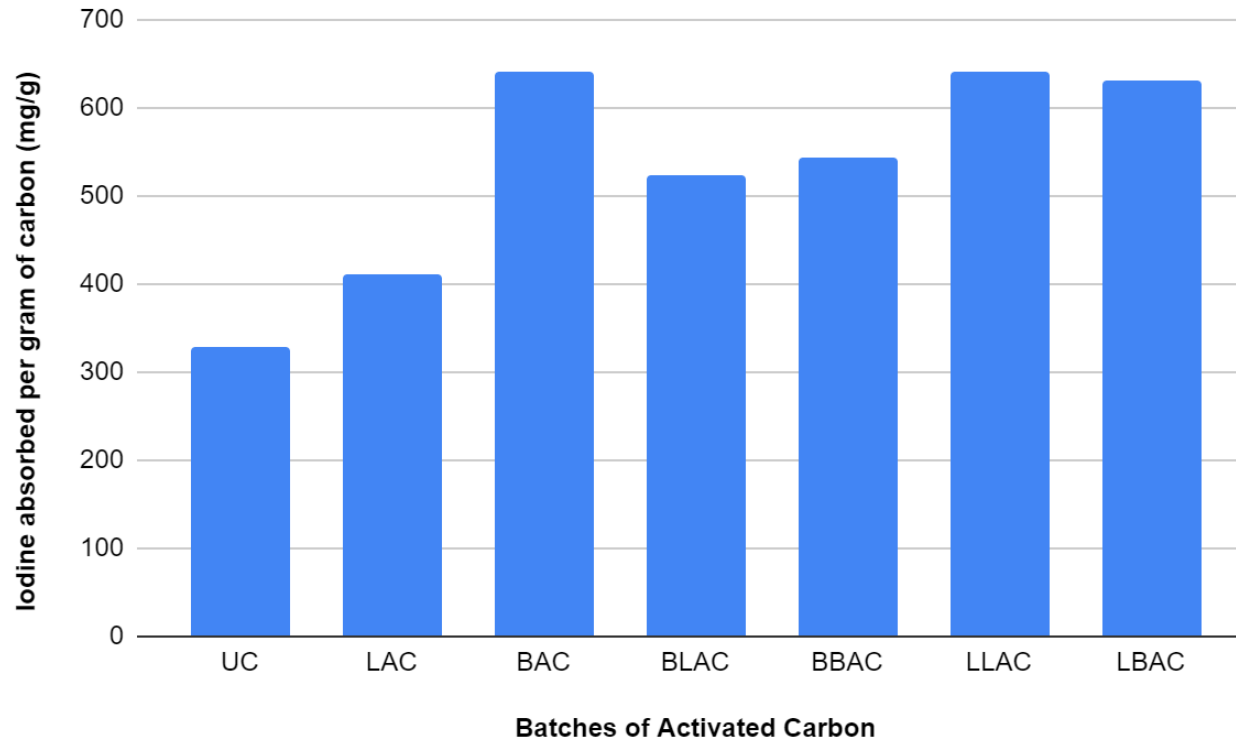
Carbon Alcating Methods

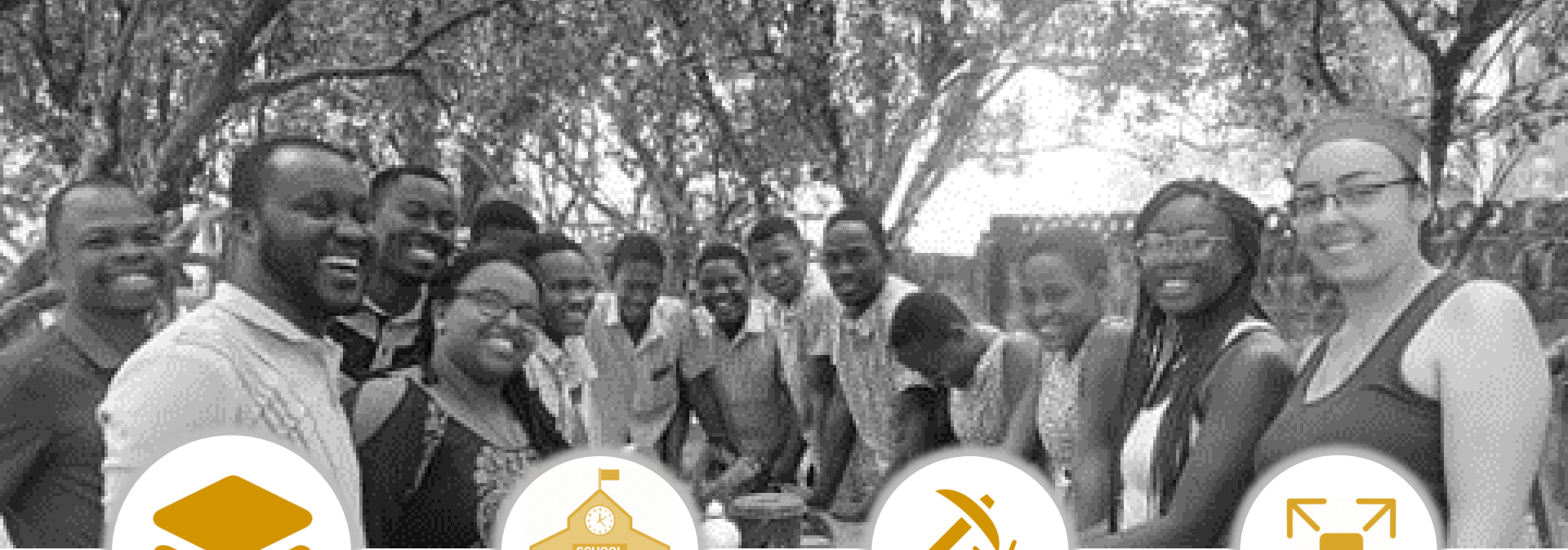


Testing Adsorption Efficiency: Density Test



Testing Adsorption Efficiency: Iodine Test





**More Tests for
Clay-Sawdust
Layer**



**Continue to
Work with
Local
Highschool**



**Create
Prototype
with Miners**



**Scale-up
Filter**



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