

Wet Scrubbers

A Key Tool Against Air Pollution Caused by Wood-Burning Household Stoves

Water is a good solvent for carbon dioxide

Hypothesis

“Dissolving carbon dioxide through recirculating water is an effective option to reduce wood stove emissions”.

Results



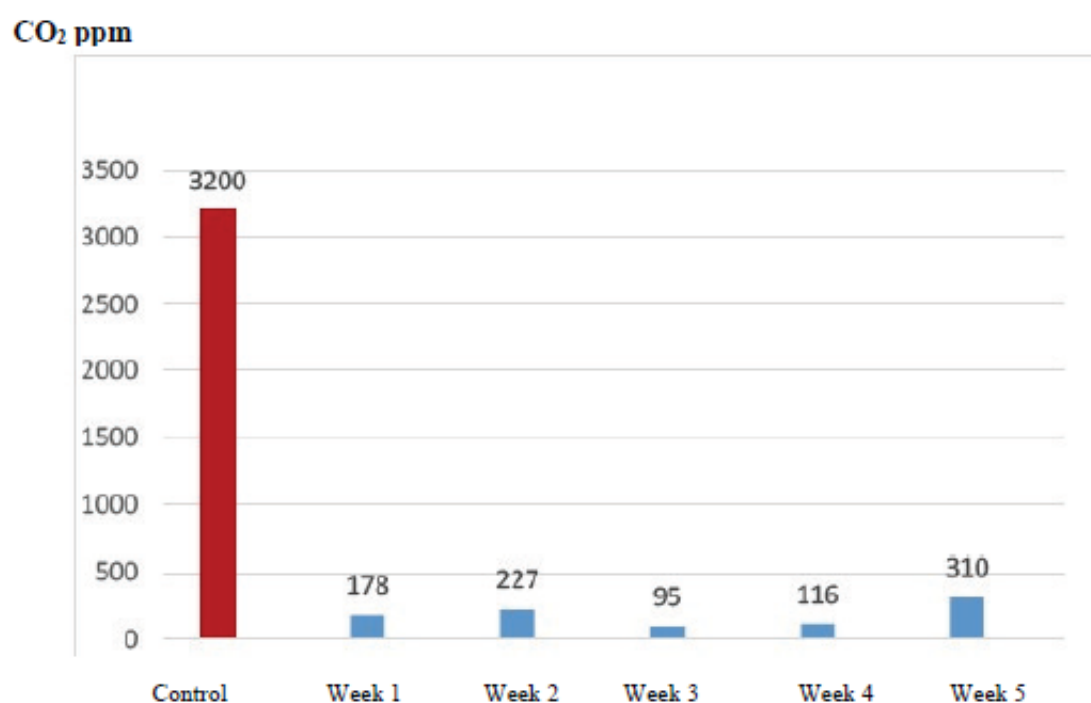
pH distilled water = 7,2

pH distilled water + CO₂ = 6,5

Acidification of water

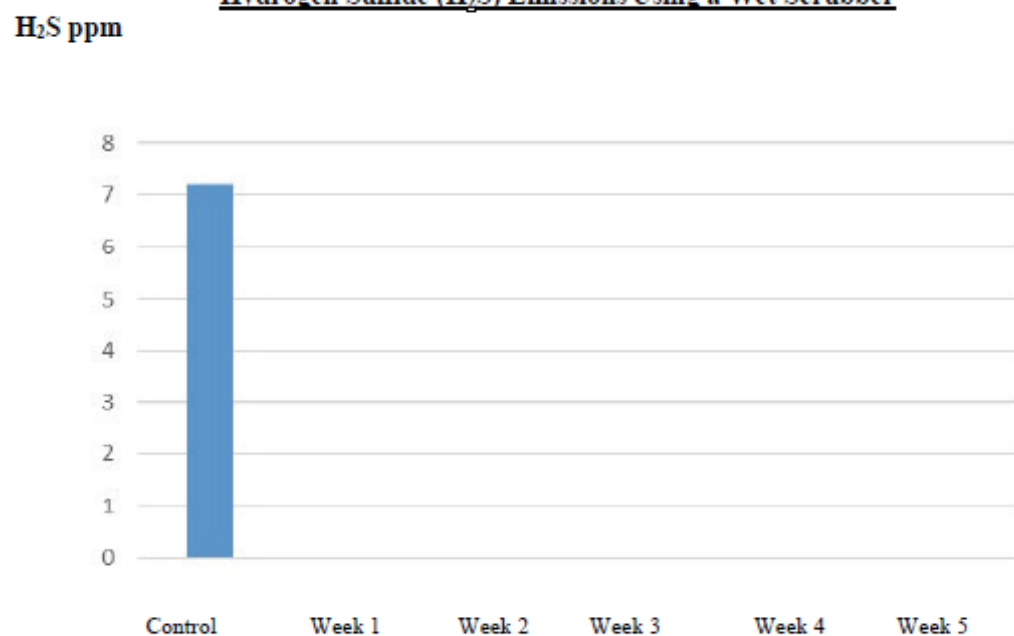


Carbon Dioxide (CO₂) Emissions Using a Wet Scrubber



When compared to a control sample, the result was normal seed germination.

Hydrogen Sulfide (H₂S) Emissions Using a Wet Scrubber



Conclusions

Water is a great solvent that reduces the pH level of carbon dioxide.

Water plus carbon dioxide (dissolution) is not harmful or toxic to plant and animal life.

From a qualitative point of view, wet scrubbers will significantly reduce CO₂ emissions from wood-burning stoves and help improve air quality.

The use of wet scrubbers helped reduce CO₂ by 94.22 percent, thereby corroborating our working hypothesis.

Water used to dissolve carbon dioxide must be replaced on a monthly basis, as saturation past that date will diminish its effectiveness.

Hydrogen sulfide dissolved completely in the wet scrubber, falling from 7.2 ppm to 0 ppm.

