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Data Article

Gaseous emissions from combustion of common fuelwood species in South-west Nigeria

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ABSTRACT

This study identified the common fuelwoods in Southwestern Nigeria. It characterized the gaseous emissions from open burning of the fuelwoods. Common fuelwoods used as energy source in southwestern Nigeria were collected, identified and subjected to open burning. Hundred grams (100 g) of each of these fuelwoods were subjected to open burning during which gaseous emissions were analyzed for carbon monoxide (CO), hydrocarbon (HC), oxides of nitrogen (NO, NO_2 and NOx) and Sulfur dioxide (SO_2) using the E8500 combustion analyzer. Meteorological parameters including temperature, relative humidity, wind speed and wind direction were determined concurrently during each experimental runs using the kestrel pocket weather tracker. These concentrations were combined the National Ambient Air Quality Standards (NAAQS) of Nigeria to determine the impact of the fuelwoods combustion on ambient air quality. Data obtained were analyzed using descriptive and inferential statistics.

Specifications Table

Subject area	Environmental engineering (Air Quality)
Compound	carbon monoxide, hydrocarbon, oxides of nitrogen and Sulfur dioxide
Data Category	Air Pollution
Data acquisition Format	Emission Concentration
Data type	Experimental analysis
Procedure	Gaseous emissions from open burning of the identified fuelwoods measurement using the E8500 portable industrial emission analyzer
Data accessibility	Data is with this article.

1. Rationale