

## Accepted Manuscript

An overview of particulate emissions from residential biomass combustion

E.D. Vicente, C.A. Alves

PII: S0169-8095(17)30356-3  
DOI: doi: [10.1016/j.atmosres.2017.08.027](https://doi.org/10.1016/j.atmosres.2017.08.027)  
Reference: ATMOS 4055  
To appear in: *Atmospheric Research*  
Received date: 31 March 2017  
Revised date: 4 August 2017  
Accepted date: 30 August 2017



Please cite this article as: E.D. Vicente, C.A. Alves , An overview of particulate emissions from residential biomass combustion, *Atmospheric Research* (2017), doi: [10.1016/j.atmosres.2017.08.027](https://doi.org/10.1016/j.atmosres.2017.08.027)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## **An overview of particulate emissions from residential biomass combustion**

E.D. Vicente, C.A. Alves<sup>1</sup>

Centre for Environmental and Marine Studies, Department of Environment, University of Aveiro,  
3810-193 Aveiro, Portugal

### **Abstract**

Residential biomass burning has been pointed out as one of the largest sources of fine particles in the global troposphere with serious impacts on air quality, climate and human health. Quantitative estimations of the contribution of this source to the atmospheric particulate matter levels are hard to obtain, because emission factors vary greatly with wood type, combustion equipment and operating conditions. Updated information should improve not only regional and global biomass burning emission inventories, but also the input for atmospheric models. In this work, an extensive tabulation of particulate matter emission factors obtained worldwide is presented and critically evaluated. Existing quantifications and the suitability of specific organic markers to assign the input of residential biomass combustion to the ambient carbonaceous aerosol are also discussed. Based on these organic markers or other tracers, estimates of the contribution of this sector to observed particulate levels by receptor models for different regions around the world are compiled. Key areas requiring future research are highlighted and briefly discussed.

**Keywords:** Biomass; Emission factors; Organic tracers; PM; Residential heating; Source apportionment

---

<sup>1</sup> celia.alves@ua.pt

Download English Version:

<https://daneshyari.com/en/article/5753540>

Download Persian Version:

<https://daneshyari.com/article/5753540>

[Daneshyari.com](https://daneshyari.com)