



27th Conference of the International Society for Environmental Epidemiology

"Addressing Environmental Health Inequalities"

August 30th to September 3rd
Centro de Convenções Rebouças | São Paulo | Brazil

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remember password

Special Journal Issue

Addressing Environmental Health Inequalities
Proceedings from ISEE Conference 2015

Home

Visa Requirements

Committees

Invited Speakers

Program

Ancillary Meetings

Registration

Pre-Conference Workshops

Abstract Mentoring Program

Travel Awards Report

Venue

Accommodation

Newsletters

Special Journal Issue

Arriving In São Paulo

Sustainability Initiatives

Event News

Contact Us

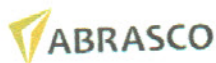
Dear Colleagues,

You are invited to submit papers to be presented at the ISEE2015 Conference for publication in the International Journal of Environmental Research and Public Health, an open access journal with Impact Factor 2.063. This Special Issue will be guest edited by Dr. Nelson Gouveia (ISEE). Manuscripts should be submitted by 31 March 2016. See the Special Issue website (http://www.mdpi.com/journal/ijerph/special_issues/ISEE2015) for further details and submission instructions.

Participants of this conference will receive a 30% discount on the Article Processing Charges.

Papers submitted to this Special Issue of the IJERPH will undergo the standard peer-review procedure. Published papers will be indexed by the SCIE (Web of Science) and PubMed

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2015 CONFERENCE

Abstract Number: 1706 | ID: 2015-1706

Biomonitoring Technique Using Tree Barks To Identify Hot Spots Of Air Pollution

Tiana Carla Lopes Moreira - Fmusp; Luis Fernando Amato Lourenço - Fmusp; Paulo Hilário Nascimento Saldiva - Fmusp; Regiani Carvalho De Oliveira - Fmusp; Mitiko Saiki - Ipen; Tiana Carla Lopes Moreira - Fmusp; Luis Fernando Amato Lourenço - Fmusp; Paulo Hilário Nascimento Saldiva - Fmusp; Regiani Carvalho De Oliveira - Fmusp; Mitiko Saiki - Ipen;

The air pollution presents a heterogeneous dispersion in the cities and thus, the comprehension of local area pollution is important to understand the impacts on human health. One of its major problems is the high load of pollutants, mainly from vehicular origin released into the atmosphere daily. Some chemical elements are considered traffic markers, and are measured in places with high traffic emission. These chemical elements also can be found very close of the sources causing impact in the closest areas. In this research, 171 tree bark samples were collected in an area circumscribed by important avenues, called the expanded center of São Paulo city and determined by the EDXRF method. The concentrations of the following elements of Al, Ca, Cl, Cu, Fe, K, Mg, Mn, Na, P, S and Zn were determined. Distribution maps of element concentrations were obtained using the Ordinary Kriging technique that predicts values of elements concentration interpolating data by a modelled process using the Surfer software version 8. It was possible to identify some "hot spots" of air pollutions. The avenues with bus traffic showed high levels of sulfur concentrations that are related with the fuel used. In avenues with high traffic of heavy vehicles were found high levels of Fe, Zn and Cu, elements related with wear parts and resuspension of road dust. Results obtained in this study indicated that biomonitoring technique using bark trees can be applied to obtain dispersion data of air pollution to be used in epidemiological studies and to obtain micro scale maps.

