

INFORMATION ABOUT THE PERSON FILLING THE FORM	
<b>Name and family name</b>	Mercedes GUIJARRO
<b>Research organization</b>	INIA - CIFOR
<b>Position in the organization</b>	Researcher
<b>Country</b>	SPAIN
<b>E-mail</b>	<a href="mailto:quijarro@inia.es">quijarro@inia.es</a>
FACILITY <sup>1</sup>	
<b>Name of the facility</b>	Calorímetro de Pérdida de Masa – Mass Loss Calorimeter (MLC)
<b>Location of the facility</b>	Spain Ctra. de La Coruña km 7.5 UTM coordinates: N 40° 27' 18" W 03° 44' 55"
<b>Start date</b>	2012
<b>Type of facility</b>	Mass Loss Calorimeter coupled with Moisture Analyser
<b>Keywords</b>	Forest fire, fuel characteristics, flammability, porous holder
<b>Scientific characteristics</b>	<p>Scientific objectives of MLC are to evaluate the flammability of forest fuels at bench scale, both dead and live fine fuels (when coupled with the moisture analysis).</p> <p>To analyse the flammability of forest fuels under fixed conditions, allowing the comparison of different species and plant parts at different fuel moisture contents.</p> <p>To use a calibrated thermopile to estimate HRR, to use a porous holder to take into account the effect of fuel structure and porosity and to obtain the four component of the flammability of live forest fuels at bench scale.</p> <p>RTA2009-00153-C03-02. "Forest fire protection: initiation, propagation and socio-economical impacts of crown fires in pine stands" (<a href="http://wwwsp.inia.es/Investigacion/centros/CIFOR/areas/protfor/ProyectosProtFor/Documents/RTA2009-00153-C03%20INFOCOPAS.pdf">http://wwwsp.inia.es/Investigacion/centros/CIFOR/areas/protfor/ProyectosProtFor/Documents/RTA2009-00153-C03%20INFOCOPAS.pdf</a>)</p> <p>RTA2011-0065-C02-02 "Post-fire rehabilitation and restoration: Effects in time on vegetation recovery, its flammability and on soil quality" (<a href="http://wwwsp.inia.es/Investigacion/centros/CIFOR/areas/protfor/ProyectosProtFor/Documents/RTA2011-0065-C02-02.pdf">http://wwwsp.inia.es/Investigacion/centros/CIFOR/areas/protfor/ProyectosProtFor/Documents/RTA2011-0065-C02-02.pdf</a>)</p>
<b>Technical characteristics</b>	The Mass Loss Calorimeter (MLC) is the complete fire model of the cone calorimeter, which has assumed a dominant role in bench-scale fire testing of building materials. A chimney, manufactured from stainless steel (600 mm long x 114 mm inner diameter) and containing a thermopile of four mineral insulated inconel sheathed thermocouples (type K, 1.6 mm diameter), was added to the MLC (650 mm above the holder surface). The thermopile output is first calibrated by use of a methane burner and a flowmeter, and then used to quantify heat release. The porous sample holder (10x10x5

<sup>1</sup> Note: This information could be published in the webpage of FORESTERRA.



# FORESTERRA

Enhancing FOrest RESearch in the MediTERRAnean through improved coordination and integration



*cm<sup>3</sup>*) is made of stainless steel and has small uniformly sized holes over the entire outer surface (sides and bottom).  
 The moisture analyser uses the loss-on-drying method to detect the volatile content of a sample of test material. The system consists of a small convection oven, a weighing mechanism with a resolution of 0.1 mg and a full scale range of 40 g.  
 Fuel moisture content, time-to-ignition, peak heat release rate, mass loss rate, average effective heat of combustion and total heat release  
 Madrigal et al. 2012. A new bench-scale methodology for evaluating the flammability of live forest fuels. DOI: 10.1177/0734904112458244  
<http://jfs.sagepub.com/content/early/2012/09/10/0734904112458244.abstract>

## SCIENTISTS AND/OR TECHNICIANS IN CHARGE OF THE FACILITY

<b>Principal investigator</b>	Javier MADRIGAL – <a href="mailto:incendio@inia.es">incendio@inia.es</a>
<b>One line for each additional person</b>	Carmen HERNANDO – <a href="mailto:lara@inia.es">lara@inia.es</a> Mercedes GUIJARRO – <a href="mailto:guijarro@inia.es">guijarro@inia.es</a>

## ADMINISTRATIVE INFORMATION

<b>Availability for participating in mutual measurements</b>	Yes Javier MADRIGAL – <a href="mailto:incendio@inia.es">incendio@inia.es</a> Conditions: In the frame of research projects or agreements between involved institutions.
<b>Availability for accessing the data collected</b>	Yes Javier MADRIGAL – <a href="mailto:incendio@inia.es">incendio@inia.es</a> Conditions: In the frame of research projects or agreements between involved institutions.
<b>Institution that manages the facility</b>	Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria – Centro de Investigación Forestal National Institute for Agricultural and Food Research and Technology – Forest Research Centre <a href="http://www.inia.es">http://www.inia.es</a> <a href="http://www.inia.es/IniaPortal/goUrlDinamica.action?url=http://wwwsp.inia.es/en-us/Investigacion/centros/CIFOR">http://www.inia.es/IniaPortal/goUrlDinamica.action?url=http://wwwsp.inia.es/en-us/Investigacion/centros/CIFOR</a>
<b>Structure or institution which manages the data</b>	Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria – Centro de Investigación Forestal National Institute for Agricultural and Food Research and Technology – Forest Research Centre <a href="http://www.inia.es">http://www.inia.es</a> <a href="http://www.inia.es/IniaPortal/goUrlDinamica.action?url=http://wwwsp.inia.es/en-us/Investigacion/centros/CIFOR">http://www.inia.es/IniaPortal/goUrlDinamica.action?url=http://wwwsp.inia.es/en-us/Investigacion/centros/CIFOR</a>
<b>Is the facility participating in a national or international Network?</b>	NO
<b>Is the facility open for transnational collaboration?</b>	Yes. Conditions: In the frame of research projects or agreements between involved institutions.