

Materials List for:

# Wind Tunnel Experiments to Study Chaparral Crown Fires

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URL: <https://www.jove.com/video/56591>

DOI: [doi:10.3791/56591](https://doi.org/10.3791/56591)

## Materials

Name	Company	Catalog Number	Comments
<b>Wind Tunnel Instrumentation</b>			
cDAQ-9178 CompactDAQ Chassis	National Instruments	781156-01	
NI-9213 C Series Temperature Input Module	National Instruments	785185-01	
NI SignalExpress for Windows	National Instruments	779037-35	Newest version, older version used for experiment
High Temperature Nextel Insulated Thermocouple Elements	Omega	XC-24-K-18	
Thermocouple Extension Wire with Polyvinyl Coated Wire and Tinned Copper Overbraid	Omega	EXPP-K-24S-TCB-P	
Ultra High Temperature Miniature Connectors	Omega	SHX-K-M	
CompuTrac MAX 2000XL	Arizona Instruments	MAX-2000XL	Discontinued, Newer Model Out
Kestrel 3000 Pocket Weather Meter	Nielsen-Kellerman	0830	
Sartorius CPA 34001S	Sartorius	25850314	Discontinued Model
5 Kg Micro Load Cell (X4)	Robotshop.com	RB-Phi-118	Strain Gauge Load Cell
Phidget PhidgetBridge Wheatstone Bridge Sensor Interface	Robotshop.com	RB-Phi-107	Interfaces with 4 load cells, performs signal amplification
#2 Stainless S-Biner (X4)	Home Depot	SB2-03-11	Dual spring gate carabiners used to mount load cells
2 in. Malleable Iron C-Clamp	Home Depot	# 4011	Used to mount load cells
Name	Company	Catalog Number	Comments
<b>Personal Protective Equipment</b>			
Wildland Firefighter Nomex Shirt	GSA Advantage	SH35-5648	
Fireline 6 oz Wildland Fire Pants	GSA Advantage	139702MR SEV16	
Name	Company	Catalog Number	Comments
<b>Fuels</b>			
Chamise	Collected in situ	N/A	
Natural Shredded Wood Excelsior – Natural Coarse 50 lbs bail	Paper Mart	21-711-88	
Bernzomatic UL100 Basic Propane Torch Kit	Home Depot	UL100KC	
Isopropyl alcohol	Convenience store	N/A	
Name	Company	Catalog Number	Comments
<b>Video and Photography</b>			

Nikon D3000 10.2-MP DSLR camera with DX-format sensor and 3x 18x55mm Zoon-NIKKOR VR Image Stabilization Lens			
Sony Handycam Camcorder DCR-SX85	Amazon.com	DCR-SX85	
<b>Name</b>	<b>Company</b>	<b>Catalog Number</b>	<b>Comments</b>
<b>Software</b>			
NI LabView	National Instruments	Student Version	Used for instrument control and interfacing
MATLAB Student Version (MATLAB_R2014a)	Mathworks	Student Version	Used for data post-processing including image processing