

Materials List for:

Design and Use of a Full Flow Sampling System (FFS) for the Quantification of Methane Emissions

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Materials

Name	Company	Catalog Number	Comments
Abaco DBX 97 mm	Abaco Performance, LLC	http://www.abacoperformance.com/products.htm	mass air flow sensor
Ultraportable Greenhouse Gas Analyzer	Los Gatos Research	http://www.lgrinc.com/analyzers/ultraportable-greenhouse-gas-analyzer/	methane, CO ₂ , and water sensor
3AA20 Fume Exhauster	Daytona	http://www.sustainablesupply.com/Dayton-3AA20-Exhauster-Fume-Smoke-p/w267066.htm?gclid=Ci2Dm9ffrcgCFUYTHwodyusFRg&CAWELAID=1307486526	blower/dilutor
Eagle II	RKI Instruments	http://www.rkiinstruments.com/pdf/eagle2brochure.pdf	Handheld detector
MCR 50	Alicat Scientific	http://www.alicat.com/	calibrated on methane
Laminar Flow Element, Model Number: Z50MC2-6, Serial Number 707230-Y1	Meriam	http://www.meriam.com/product-category/laminar-flow-element/	calibrated on air
K-Type thermocouple	Omega	http://www.omega.com/	
PTE-1 Calibrator	Heise	http://www.heise.com/products/calibrators/	handheld unit for use with Dressor modules
Model HQS-2	Dresser/Ashcroft	http://www.ashcroft.eu/download/data%20sheet/englisch/MODULE_E.pdf	absolute pressure module
Model HQS-1	Dresser/Ashcroft	http://www.ashcroft.eu/download/data%20sheet/englisch/MODULE_E.pdf	differential pressure module
Gas Divider - SGD-710C	Horiba	http://www.horiba.com/us/en/	calibrated gas divider
Methane (99.9%)	Matheson TriGas	http://www.mathesongas.com/	pure methane for gas recovery test
Methane (±1%) 2.5%	Matheson TriGas	http://www.mathesongas.com/	high concentration
Methane (±1%) 2,010 ppm	Matheson TriGas	http://www.mathesongas.com/	low concentration
Ultra High Purity Nitrogen (UPHN)	Matheson TriGas	http://www.mathesongas.com/	99.9% nitrogen gas
10 Liter Tedlar Bag	Dupont	http://www.dupont.com/products-and-services/membranes-films/pvf-films/brands/tedlar-pvf-films/uses-and-applications/tedlar-gas-sample-bag-applications.html	used for bag samples for alternative gas sampling
PET-7018Z	ICP DAS USA	http://www.icpdas-usa.com/pet_7018z.html	DAQ unit
Edgetech Dew Prime Hygrometer	Edgetech Instruments	http://www.edgetechinstruments.com/moisture-humidity	hygrometer for flowbench
Stainless steel Swagelok fittings (1/4 inch)	Swagelok	https://www.swagelok.com/products/fittings.aspx	tee and other fittings

PTFE Tubing	McMaster-Carr	http://www.mcmaster.com/#standard-hollow-tubing-(made-with-teflon-ptfe)/=z8xrzl	tubing for sampling and calibration
FLIR GF 320	FLIR	http://www.flir.com/ogi/display/?id=55671	infrared camera
CGA 580 Regulator	Airgas	http://airgas.com/category/_/N-1z13vaq	UHPN regulator
CGA 350 Regulator	Airgas	http://airgas.com/category/_/N-1z13vaq	Methane in nitrogen regulator
Leak detection solution (Snoop)	Swagelok	https://www.swagelok.com/search/find_products_home.aspx?show_results=Y&item=5e208092-ed6c-4251-9202-ed8a2aae5811	bubble solution for non-leak verification