PACS

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Sample Analysis • GC/MS • R & D • Consulting • Training Courses • Activated Carbon Services

To: Carbon Comparison

From: Henry Nowicki, Ph.D.

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Analysis: January 6-10, 2014
Review Data: January 13, 2014
Date Report: January 16, 2014
PACS Sample ID: DD-479 thru DD-482

Subject: PACS Activated Carbon Test Package Analysis

As requested, your four samples were tested with standard methods used in the activated carbon industry. Results are below for the AC test package with Butane Number for the adsorption performance. Phat carbon is reported to come from a different mine and the other three samples are reported to come from the same mine. *

Customer Sample ID	PACS Sample ID	Apparent Density g/cc Received	Apparent Density g/cc Dry *	Oven Moisture %	How Much X How Good = Capacity Adsorption Yield
Phresh Filter	DD-479	0.413	0.382	7.51	.382 x 24.4 = 9.32
Rhino Filter	DD-480	0.362	0.361	0.27	.361 x 25.0 = 9.02
CAN Lite Filter	DD-481	0.416	0.401	3.60	.401 x 22.1 = 8.86
Phat Filter	DD-482	0.466	0.455	2.36	.455 x 20.9 = 9.51

Customer Sample ID	PACS Sample ID	Butane Number g/100 g C *	Total Ash%	Ball-Pan Hardness
Phresh Filter	DD-479	24.4	15.94	90.57
Rhino Filter	DD-480	25.0	14.78	77.59
CAN Lite Filter	DD-481	22.1	8.25	91.81
Phat Filter	DD-482	20.9	13.91	97.95

PACS Sample ID	Particle Size Distribution Data: Mean Particle Diameter mm	Uniformity Coefficient	Effective Size mm
DD-479	3.48	1.34	2.62
DD-480	2.47	1.33	1.81
DD-481	2.63	1.36	1.94
DD-482	4.81	0.00	3.53