



**Blue Heaven
Technologies**

2820 S. English Station Rd.
Louisville, Ky 40299
Tel: (502) 357-0132
Fax: (502) 267-8379

Date:	23-Oct-17
Report No.	17-618
MODIFIED CADR CHAMBER TEST	
TEST REPORT SUMMARY	
Chamber Smoke Concentration Decay Test	
MERV 13 vs. MERV 8 w/GPS Device	

FILTER DESCRIPTION

Manufacturer	Generic MERV 13, MERV 8
Filter Model	1" Pleated
Test requested by:	Charlie Waddell
	Global Plasma Solutions (GPS)
Nom. Dims. (H x W x D), in.	24" x 24" x 1"
Rated Airflow, cfm	1200

GPS Device Mfr. information:
Global Plasma Solutions
10 Mall Terrace, Building C
Savannah, GA 31406
Phone (912) 356-0155

Approval
Kevin Singer, PE



2820 S. English Station Rd.
 Louisville, Ky 40299
 Tel: (502) 357-0132
 Fax: (502) 267-8379

Date:	23-Oct-17
Report No.	17-618
MODIFIED CADR CHAMBER TEST	
TEST REPORT SUMMARY	
Chamber Smoke Concentration Decay Test	
MERV 13 vs. MERV 8 w/GPS Device	

Test Description

- 1 Comparative tests were conducted to compare the performance of a 1" MERV 13 Panel filter to that of a 1" MERV 8 Panel Filter with GPS Technology in cleaning a 1,000 FT3 room of cigarette smoke with a beginning concentration of approximately 3,000 particles per cm3.
- 2 It was determined that the 1" MERV 13 Panel filter reduced particle count from 2,730,958 to 808 particles in a timeframe of 34 minutes.
- 3 It was determined that the 1" MERV 8 Panel filter with GPS Technology reduced particle count from 3,645,943 to 745 particles in a timeframe of 16 hours.
- 4 It was determined that the 1" MERV 8 Panel filter with GPS Technology reduced particle count from 2,753,181 to 745 particles in a timeframe of 15 hours - 40 minutes in comparison to the MERV 13 at 34 minutes.

Test Results

MERV 13 Filter

Elapsed Time, Min.	Microns									# total Particles	#/cm3 Concentration
	0.30	0.40	0.55	0.70	1.00	1.30	1.60	2.20			
4	1805492	738537	144867	40941	865	153	96	3	2730958	2730	
34	636	101	25	23	8	5	2	5	808	0.81	

MERV 8 Filter with GPS Technology

Elapsed Time, Min.	Microns									# total Particles	#/cm3 Concentration
	0.30	0.40	0.55	0.70	1.00	1.30	1.60	2.20			
5	1958081	1222632	332433	129698	2610	341	136	6	3645943	3645	
19	1876059	736434	117644	22892	116	11	20	5	2753181	2753	
16 hours	619	90	12	17	2	1	2	2	745	0.74	

Approval

Kevin Singer, PE