



**TEST REPORT**

Performed for: Miele  
 IBR JN: 10222-J  
 Date: March 14, 2009

Location: Princeton, NJ  
 Contact: N. Gast

Test Method: Vacuum Cleaner Fractional Efficiency per ASTM F1977-04  
 Flow Rate: 46 SCFM Sheath Air Flow Rate: 138 SCFM  
 Conditions: Temp. 70F, Relative Humidity 50% Barometric Pressure 735 mm Hg  
 Instrumentation: HR 5230, S/N 041002003, Cal due May-09  
 Contaminant: KCI Neutralized

**Description of Sample: Riccar Premium Radiance Upright Vacuum Cleaner TEST-1**

Model: RAD.8 S/N: 8D002443 Filters: As installed by manufacturer  
 Date Samples Received: February 13, 2009 Sample Source: IBR Open Mkt Purchase

Time mins	Motor Status	Inject Status	Port	Particles/5ft3 at:( in microns)						
				0.3-0.4	0.4-0.5	0.5-0.6	0.6-0.8	0.8-1	1-2.5	2.5-3.75
5	off	off	Downstream	12	7	10	7	8	0	0
5	off	off	Downstream	13	16	8	13	2	0	0
5	off	off	Downstream	9	7	8	9	0	0	1
5	on	off	Downstream	108,396	74,564	19,684	8,572	3,968	5,008	876
5	on	off	Upstream	11	14	9	0	0	0	0
5	on	off	Downstream	112,488	75,968	18,980	8,624	3,888	5,080	812
5	on	off	Upstream	10	3	13	0	0	0	0
5	on	off	Downstream	109,736	74,812	18,604	8,276	4,048	4,888	900
5	on	off	Upstream	8	12	19	3	0	0	0
5	on	on	Upstream	9,108,420	7,106,940	1,536,840	447,360	115,380	51,210	1,140
5	on	on	Downstream	334,416	129,404	23,800	9,004	4,080	5,072	900
5	on	on	Upstream	9,400,740	6,823,470	1,484,070	370,470	96,630	41,310	810
5	on	on	Downstream	324,664	121,524	22,440	8,980	4,100	4,924	720
5	on	on	Upstream	9,308,580	7,050,510	1,539,960	426,180	103,410	46,110	930
5	on	on	Downstream	334,848	125,520	23,208	9,020	3,976	5,020	828
Total upstream				27,817,740	20,980,920	4,560,870	1,244,010	315,420	138,630	2,880
Total downstream				993,928	376,448	69,448	27,004	12,156	15,016	2,448
Net downstream				663,308	151,104	12,180	1,532	252	40	-140
Gross Efficiency				96.43	98.21	98.48	97.83	96.15	89.17	15.00
<b>Net Efficiency</b>				<b>97.62</b>	<b>99.28</b>	<b>99.73</b>	<b>99.88</b>	<b>99.92</b>	<b>99.97</b>	<b>&gt;99.9</b>

Notice: These data relate only to the samples tested. This report may be copied only in its entirety.

pg 1/3

Performed By: DN

Data Location: DN69

Reviewed By:

Susan H Goldsmith, Director of Technical Services

IBR 11599 Morrissey Rd Grass Lake MI USA 49240 Voice 517-522-8453

**TEST REPORT**

Performed for: Miele  
 IBR JN: 10222-J  
 Date: March 14, 2009

Location: Princeton, NJ  
 Contact: N. Gast

Test Method: Vacuum Cleaner Fractional Efficiency per ASTM F1977-04  
 Flow Rate: 46 SCFM Sheath Air Flow Rate: 138 SCFM  
 Conditions: Temp. 70F, Relative Humidity 50% Barometric Pressure 735 mm Hg  
 Instrumentation: HR 5230, S/N 041002003, Cal due May-09  
 Contaminant: KCl Neutralized

**Description of Sample: Riccar Premium Radiance Upright Vacuum Cleaner TEST-2**

Model: RAD.8 S/N: 8D002443 Filters: As installed by manufacturer  
 Date Samples Received: February 13, 2009 Sample Source: IBR Open Mkt Purchase

Time mins	Motor Status	Inject Status	Port	Particles/5ft3 at:( in microns)						
				0.3-0.4	0.4-0.5	0.5-0.6	0.6-0.8	0.8-1	1-2.5	2.5-3.75
5	off	off	Downstream	64	12	9	11	6	0	0
5	off	off	Downstream	63	22	10	11	14	3	0
5	off	off	Downstream	76	12	17	5	15	2	0
5	on	off	Downstream	108,352	73,712	19,404	8,640	4,088	5,076	836
5	on	off	Upstream	9	3	1	1	0	0	0
5	on	off	Downstream	103,120	69,844	18,048	8,400	3,764	4,948	872
5	on	off	Upstream	4	11	2	1	0	1	0
5	on	off	Downstream	105,004	71,420	18,756	8,868	4,052	5,012	768
5	on	off	Upstream	10	8	5	1	0	5	0
5	on	on	Upstream	9,327,660	6,624,000	1,234,770	325,080	77,040	33,750	600
5	on	on	Downstream	337,532	130,360	24,496	9,644	3,964	4,908	776
5	on	on	Upstream	9,143,190	6,248,400	1,125,120	294,030	67,740	30,240	450
5	on	on	Downstream	325,604	127,768	24,364	9,752	4,108	4,964	872
5	on	on	Upstream	9,245,400	6,463,680	1,181,130	309,810	69,150	31,260	570
5	on	on	Downstream	335,264	131,436	24,780	9,728	4,064	4,868	784
Total upstream				27,716,250	19,336,080	3,541,020	928,920	213,930	95,250	1,620
Total downstream				998,400	389,564	73,640	29,124	12,136	14,740	2,432
Net downstream				681,924	174,588	17,432	3,216	232	-296	-44
Gross Efficiency				96.40	97.99	97.92	96.86	94.33	84.52	-50.12
<b>Net Efficiency</b>				<b>97.54</b>	<b>99.10</b>	<b>99.51</b>	<b>99.65</b>	<b>99.89</b>	<b>&gt;99.99</b>	<b>&gt;99.9</b>

Notice: These data relate only to the samples tested. This report may be copied only in its entirety.

pg 2/3

Performed By: DN

Data Location: DN69

Reviewed By:

\_\_\_\_\_  
 Susan H Goldsmith, Director of Technical Services

**IBR 11599 Morrissey Rd Grass Lake MI USA 49240 Voice 517-522-8453**

**TEST REPORT**

Performed for: Miele  
 IBR JN: 10222-J  
 Date: March 14, 2009

Location: Princeton, NJ  
 Contact: N. Gast

Test Method: Vacuum Cleaner Fractional Efficiency per ASTM F1977-04  
 Flow Rate: 46 SCFM Sheath Air Flow Rate: 138 SCFM  
 Conditions: Temp. 70F, Relative Humidity 50% Barometric Pressure 735 mm Hg  
 Instrumentation: HR 5230, S/N 041002003, Cal due May-09  
 Contaminant: KCl Neutralized

**Description of Sample: Riccar Premium Radiance Upright Vacuum Cleaner TEST-3**

Model: RAD.8 S/N: 8D002443 Filters: As installed by manufacturer  
 Date Samples Received: February 13, 2009 Sample Source: IBR Open Mkt Purchase

Time mins	Motor Status	Inject Status	Port	Particles/5ft3 at:( in microns)						
				0.3-0.4	0.4-0.5	0.5-0.6	0.6-0.8	0.8-1	1-2.5	2.5-3.75
5	off	off	Downstream	15	10	9	15	6	1	0
5	off	off	Downstream	12	9	11	10	2	0	0
5	off	off	Downstream	11	8	14	13	2	0	5
5	on	off	Downstream	107,312	71,428	18,456	8,416	3,692	5,140	844
5	on	off	Upstream	1	0	0	0	0	0	0
5	on	off	Downstream	106,732	72,116	19,024	8,736	3,892	5,184	848
5	on	off	Upstream	11	3	0	0	0	0	0
5	on	off	Downstream	108,028	71,984	18,796	8,412	3,736	5,152	816
5	on	off	Upstream	3	0	0	0	0	0	0
5	on	on	Upstream	8,979,450	6,092,550	1,090,830	285,600	67,650	30,810	780
5	on	on	Downstream	325,888	128,924	25,100	9,420	3,876	5,128	872
5	on	on	Upstream	8,709,120	5,796,000	1,030,350	264,240	64,350	29,520	660
5	on	on	Downstream	313,552	124,944	24,160	9,512	3,916	5,288	736
5	on	on	Upstream	8,855,370	5,990,100	1,078,410	283,080	68,490	29,880	900
5	on	on	Downstream	320,492	122,264	23,828	9,344	3,736	5,176	816
Total upstream				26,543,940	17,878,650	3,199,590	832,920	200,490	90,210	2,340
Total downstream				959,932	376,132	73,088	28,276	11,528	15,592	2,424
Net downstream				637,860	160,604	16,812	2,712	208	116	-84
Gross Efficiency				96.38	97.90	97.72	96.61	94.25	82.72	-3.59
<b>Net Efficiency</b>				<b>97.60</b>	<b>99.10</b>	<b>99.47</b>	<b>99.67</b>	<b>99.90</b>	<b>99.87</b>	<b>&gt;99.9</b>

Notice: These data relate only to the samples tested. This report may be copied only in its entirety.  
 pg 3/3 Performed By: DN Data Location: DN69

Reviewed By: \_\_\_\_\_  
 Susan H Goldsmith, Director of Technical Services  
 IBR 11599 Morrissey Rd Grass Lake MI USA 49240 Voice 517-522-8453



**TEST REPORT**

Performed for: Miele  
 IBR JN: 10222-K  
 Date: March 14, 2009

Location: Princeton, NJ  
 Contact: N. Gast

Test Method: Vacuum Cleaner Fractional Efficiency per ASTM F1977-04  
 Flow Rate: 46 SCFM Sheath Air Flow Rate: 138 SCFM  
 Conditions: Temp. 72F, Relative Humidity 51% Barometric Pressure 734 mm Hg  
 Instrumentation: HR 5230, S/N 041002003, Cal due May-09  
 Contaminant: KCI Neutralized

**Description of Sample: Riccar Premium Radiance Upright Vacuum Cleaner TEST-1**  
 Model: RAD.8 S/N: 8D002444 Filters: As installed by manufacturer  
 Date Samples Received: February 13, 2009 Sample Source: IBR Open Mkt Purchase

Time mins	Motor Status	Inject Status	Port	Particles/5ft3 at: ( in microns)						
				0.3-0.4	0.4-0.5	0.5-0.6	0.6-0.8	0.8-1	1-2.5	2.5-3.75
5	off	off	Downstream	8	4	10	12	0	1	0
5	off	off	Downstream	15	7	10	13	3	0	0
5	off	off	Downstream	12	13	14	13	6	0	2
5	on	off	Downstream	110,852	76,116	19,468	8,844	3,968	5,244	964
5	on	off	Upstream	12	0	0	0	0	0	0
5	on	off	Downstream	110,388	74,124	19,544	8,752	4,196	5,300	820
5	on	off	Upstream	5	0	1	0	0	0	0
5	on	off	Downstream	111,980	75,572	19,452	9,176	3,940	5,380	860
5	on	off	Upstream	15	1	1	0	0	0	0
5	on	on	Upstream	8,693,070	5,758,020	1,015,860	265,950	62,370	29,670	870
5	on	on	Downstream	305,504	121,468	24,172	9,436	4,180	5,200	836
5	on	on	Upstream	8,498,820	5,477,760	945,450	234,870	56,400	25,530	480
5	on	on	Downstream	294,752	116,588	22,256	9,340	4,044	5,448	956
5	on	on	Upstream	8,615,610	5,599,770	971,220	252,210	58,410	26,640	600
5	on	on	Downstream	302,216	120,780	23,992	9,384	4,100	5,328	792
Total upstream				25,807,500	16,835,550	2,932,530	753,030	177,180	81,840	1,950
Total downstream				902,472	358,836	70,420	28,160	12,324	15,976	2,584
Net downstream				569,252	133,024	11,956	1,388	220	52	-60
Gross Efficiency				96.50	97.87	97.60	96.26	93.04	80.48	-32.51
<b>Net Efficiency</b>				<b>97.79</b>	<b>99.21</b>	<b>99.59</b>	<b>99.82</b>	<b>99.88</b>	<b>99.94</b>	<b>&gt;99.9</b>

Notice: These data relate only to the samples tested. This report may be copied only in its entirety.  
 pg 1/3 Performed By: DN Data Location: DN69

Reviewed By: \_\_\_\_\_  
 Susan H Goldsmith, Director of Technical Services  
 IBR 11599 Morrissey Rd Grass Lake MI USA 49240 Voice 517-522-8453

**TEST REPORT**

Performed for: Miele  
 IBR JN: 10222-K  
 Date: March 14, 2009

Location: Princeton, NJ  
 Contact: N. Gast

Test Method: Vacuum Cleaner Fractional Efficiency per ASTM F1977-04  
 Flow Rate: 46 SCFM Sheath Air Flow Rate: 138 SCFM  
 Conditions: Temp. 72F, Relative Humidity 51% Barometric Pressure 734 mm Hg  
 Instrumentation: HR 5230, S/N 041002003, Cal due May-09  
 Contaminant: KCI Neutralized

**Description of Sample: Riccar Premium Radiance Upright Vacuum Cleaner TEST-2**

Model: RAD.8 S/N: 8D002444 Filters: As installed by manufacturer  
 Date Samples Received: February 13, 2009 Sample Source: IBR Open Mkt Purchase

Time mins	Motor Status	Inject Status	Port	Particles/5ft3 at: ( in microns)						
				0.3-0.4	0.4-0.5	0.5-0.6	0.6-0.8	0.8-1	1-2.5	2.5-3.75
5	off	off	Downstream	16	2	10	11	0	0	0
5	off	off	Downstream	9	9	8	12	0	0	0
5	off	off	Downstream	19	12	12	9	1	0	0
5	on	off	Downstream	112,664	75,724	19,588	9,464	4,264	5,592	844
5	on	off	Upstream	3	0	0	0	0	0	0
5	on	off	Downstream	118,912	81,148	21,356	9,720	4,524	5,548	1,028
5	on	off	Upstream	10	2	1	0	0	0	0
5	on	off	Downstream	113,544	75,944	19,844	9,092	4,172	5,492	920
5	on	off	Upstream	7	0	0	0	0	0	0
5	on	on	Upstream	8,373,360	5,316,570	898,200	231,690	51,570	24,240	600
5	on	on	Downstream	284,196	113,400	22,100	9,644	4,188	5,536	948
5	on	on	Upstream	8,168,940	5,119,890	863,100	214,680	50,910	23,460	630
5	on	on	Downstream	284,608	114,232	23,072	10,256	4,656	5,604	964
5	on	on	Upstream	8,325,570	5,272,080	893,040	229,170	53,730	24,180	600
5	on	on	Downstream	273,216	106,928	20,288	9,044	4,232	5,528	856
Total upstream				24,867,870	15,708,540	2,654,340	675,540	156,210	71,880	1,830
Total downstream				842,020	334,560	65,460	28,944	13,076	16,668	2,768
Net downstream				496,900	101,744	4,672	668	116	36	-24
Gross Efficiency				96.61	97.87	97.53	95.72	91.63	76.81	-51.26
<b>Net Efficiency</b>				<b>98.00</b>	<b>99.35</b>	<b>99.82</b>	<b>99.90</b>	<b>99.93</b>	<b>99.95</b>	<b>&gt;99.9</b>

Notice: These data relate only to the samples tested. This report may be copied only in its entirety.

pg 2/3

Performed By: DN

Data Location: DN69

Reviewed By:

\_\_\_\_\_  
 Susan H Goldsmith, Director of Technical Services

**IBR 11599 Morrissey Rd Grass Lake MI USA 49240 Voice 517-522-8453**

**TEST REPORT**

Performed for: Miele  
 IBR JN: 10222-K  
 Date: March 14, 2009

Location: Princeton, NJ  
 Contact: N. Gast

Test Method: Vacuum Cleaner Fractional Efficiency per ASTM F1977-04  
 Flow Rate: 46 SCFM Sheath Air Flow Rate: 138 SCFM  
 Conditions: Temp. 72F, Relative Humidity 51% Barometric Pressure 734 mm Hg  
 Instrumentation: HR 5230, S/N 041002003, Cal due May-09  
 Contaminant: KCI Neutralized

**Description of Sample: Riccar Premium Radiance Upright Vacuum Cleaner TEST-3**

Model: RAD.8 S/N: 8D002444 Filters: As installed by manufacturer  
 Date Samples Received: February 13, 2009 Sample Source: IBR Open Mkt Purchase

Time mins	Motor Status	Inject Status	Port	Particles/5ft3 at: ( in microns)						
				0.3-0.4	0.4-0.5	0.5-0.6	0.6-0.8	0.8-1	1-2.5	2.5-3.75
5	off	off	Downstream	33	14	9	23	1	3	2
5	off	off	Downstream	10	9	8	9	2	0	0
5	off	off	Downstream	15	6	7	7	3	0	1
5	on	off	Downstream	110,808	74,588	19,728	9,232	4,272	5,404	900
5	on	off	Upstream	8	1	0	0	0	0	0
5	on	off	Downstream	116,792	77,688	19,948	9,372	4,500	5,788	908
5	on	off	Upstream	19	2	1	0	0	0	0
5	on	off	Downstream	115,880	76,572	19,388	9,284	4,324	5,648	1,024
5	on	off	Upstream	9	0	0	0	0	0	0
5	on	on	Upstream	8,093,820	4,997,430	834,180	213,390	51,090	22,110	420
5	on	on	Downstream	283,004	111,540	22,008	10,072	4,364	5,740	924
5	on	on	Upstream	7,724,310	4,734,330	786,840	205,560	48,030	21,240	720
5	on	on	Downstream	271,652	106,400	21,296	9,664	4,316	5,536	812
5	on	on	Upstream	7,980,900	4,901,520	813,510	214,050	49,890	21,300	480
5	on	on	Downstream	286,008	117,860	23,420	9,812	4,596	5,620	1,048
Total upstream				23,799,030	14,633,280	2,434,530	633,000	149,010	64,650	1,620
Total downstream				840,664	335,800	66,724	29,548	13,276	16,896	2,784
Net downstream				497,184	106,952	7,660	1,660	180	56	-48
Gross Efficiency				96.47	97.71	97.26	95.33	91.09	73.87	-71.85
<b>Net Efficiency</b>				<b>97.91</b>	<b>99.27</b>	<b>99.69</b>	<b>99.74</b>	<b>99.88</b>	<b>99.91</b>	<b>&gt;99.9</b>

Notice: These data relate only to the samples tested. This report may be copied only in its entirety.

pg 3/3

Performed By: DN

Data Location: DN69

Reviewed By:

\_\_\_\_\_  
 Susan H Goldsmith, Director of Technical Services

**IBR 11599 Morrissey Rd Grass Lake MI USA 49240 Voice 517-522-8453**



**TEST REPORT**

Performed for: Miele  
 IBR JN: 10222-L  
 Date: March 14, 2009

Location: Princeton, NJ  
 Contact: N. Gast

Test Method: Vacuum Cleaner Fractional Efficiency per ASTM F1977-04  
 Flow Rate: 46 SCFM Sheath Air Flow Rate: 138 SCFM  
 Conditions: Temp. 73F, Relative Humidity 48% Barometric Pressure 734 mm Hg  
 Instrumentation: HR 5230, S/N 041002003, Cal due May-09  
 Contaminant: KCI Neutralized

**Description of Sample: Riccar Premium Radiance Upright Vacuum Cleaner TEST-1**

Model: RAD.8 S/N: 8D002445 Filters: As installed by manufacturer  
 Date Samples Received: February 13, 2009 Sample Source: IBR Open Mkt Purchase

Time mins	Motor Status	Inject Status	Port	Particles/5ft3 at: ( in microns)						
				0.3-0.4	0.4-0.5	0.5-0.6	0.6-0.8	0.8-1	1-2.5	2.5-3.75
5	off	off	Downstream	25	16	13	4	1	0	1
5	off	off	Downstream	52	24	19	13	4	2	2
5	off	off	Downstream	21	7	10	15	1	0	0
5	on	off	Downstream	32,040	27,004	9,124	4,392	1,964	2,532	372
5	on	off	Upstream	13	2	0	0	0	0	0
5	on	off	Downstream	32,328	28,336	8,816	4,020	1,896	2,496	412
5	on	off	Upstream	12	1	0	0	0	0	0
5	on	off	Downstream	33,372	28,580	9,308	4,632	2,152	2,724	420
5	on	off	Upstream	1	1	0	0	0	0	0
5	on	on	Upstream	9,094,740	7,673,490	1,909,530	675,540	197,040	100,950	2,430
5	on	on	Downstream	265,056	89,332	13,532	5,132	2,404	2,644	380
5	on	on	Upstream	8,922,000	7,218,780	1,698,690	571,230	156,840	79,740	2,340
5	on	on	Downstream	257,936	90,820	15,156	6,504	2,280	2,736	444
5	on	on	Upstream	8,911,140	7,385,280	1,768,530	603,960	175,140	90,840	1,980
5	on	on	Downstream	263,312	91,960	14,636	5,852	2,376	2,616	372
Total upstream				26,927,880	22,277,550	5,376,750	1,850,730	529,020	271,530	6,750
Total downstream				786,304	272,112	43,324	17,488	7,060	7,996	1,196
Net downstream				688,564	188,192	16,076	4,444	1,048	244	-8
Gross Efficiency				97.08	98.78	99.19	99.06	98.67	97.06	82.28
<b>Net Efficiency</b>				<b>97.44</b>	<b>99.16</b>	<b>99.70</b>	<b>99.76</b>	<b>99.80</b>	<b>99.91</b>	<b>&gt;99.9</b>

Notice: These data relate only to the samples tested. This report may be copied only in its entirety.  
 pg 1/3 Performed By: DN Data Location: DN69

Reviewed By: \_\_\_\_\_  
 Susan H Goldsmith, Director of Technical Services  
 IBR 11599 Morrissey Rd Grass Lake MI USA 49240 Voice 517-522-8453

**TEST REPORT**

Performed for: Miele  
 IBR JN: 10222-L  
 Date: March 14, 2009

Location: Princeton, NJ  
 Contact: N. Gast

Test Method: Vacuum Cleaner Fractional Efficiency per ASTM F1977-04  
 Flow Rate: 46 SCFM Sheath Air Flow Rate: 138 SCFM  
 Conditions: Temp. 73F, Relative Humidity 48% Barometric Pressure 734 mm Hg  
 Instrumentation: HR 5230, S/N 041002003, Cal due May-09  
 Contaminant: KCI Neutralized

**Description of Sample: Riccar Premium Radiance Upright Vacuum Cleaner TEST-2**

Model: RAD.8 S/N: 8D002445 Filters: As installed by manufacturer  
 Date Samples Received: February 13, 2009 Sample Source: IBR Open Mkt Purchase

Time mins	Motor Status	Inject Status	Port	Particles/5ft3 at: ( in microns)						
				0.3-0.4	0.4-0.5	0.5-0.6	0.6-0.8	0.8-1	1-2.5	2.5-3.75
5	off	off	Downstream	52	25	19	11	3	1	4
5	off	off	Downstream	11	17	13	16	2	0	0
5	off	off	Downstream	20	11	11	18	2	1	1
5	on	off	Downstream	32,576	27,396	8,712	4,336	2,200	2,584	396
5	on	off	Upstream	8	1	1	0	0	0	0
5	on	off	Downstream	30,060	26,468	8,320	4,236	2,100	2,520	416
5	on	off	Upstream	14	2	0	0	0	0	0
5	on	off	Downstream	30,724	27,184	8,792	4,296	2,212	2,524	396
5	on	off	Upstream	6	0	0	0	0	0	0
5	on	on	Upstream	8,927,220	7,144,920	1,635,000	527,790	146,430	74,370	1,590
5	on	on	Downstream	248,896	89,064	14,928	6,036	2,452	2,404	348
5	on	on	Upstream	8,771,070	6,757,680	1,477,560	466,110	126,540	61,080	1,680
5	on	on	Downstream	238,456	86,740	15,576	6,220	2,668	2,688	360
5	on	on	Upstream	8,770,860	6,861,930	1,538,820	485,490	133,590	65,460	1,170
5	on	on	Downstream	242,888	88,188	15,112	6,116	2,412	2,588	332
Total upstream				26,469,150	20,764,530	4,651,380	1,479,390	406,560	200,910	4,440
Total downstream				730,240	263,992	45,616	18,372	7,532	7,680	1,040
Net downstream				636,880	182,944	19,792	5,504	1,020	52	-168
Gross Efficiency				97.24	98.73	99.02	98.76	98.15	96.18	76.58
<b>Net Efficiency</b>				<b>97.59</b>	<b>99.12</b>	<b>99.57</b>	<b>99.63</b>	<b>99.75</b>	<b>99.97</b>	<b>&gt;99.9</b>

Notice: These data relate only to the samples tested. This report may be copied only in its entirety.

pg 2/3

Performed By: DN

Data Location: DN69

Reviewed By:

Susan H Goldsmith, Director of Technical Services

**IBR 11599 Morrissey Rd Grass Lake MI USA 49240 Voice 517-522-8453**

**TEST REPORT**

Performed for: Miele  
 IBR JN: 10222-L  
 Date: March 14, 2009

Location: Princeton, NJ  
 Contact: N. Gast

Test Method: Vacuum Cleaner Fractional Efficiency per ASTM F1977-04  
 Flow Rate: 46 SCFM Sheath Air Flow Rate: 138 SCFM  
 Conditions: Temp. 73F, Relative Humidity 48% Barometric Pressure 734 mm Hg  
 Instrumentation: HR 5230, S/N 041002003, Cal due May-09  
 Contaminant: KCI Neutralized

**Description of Sample: Riccar Premium Radiance Upright Vacuum Cleaner TEST-3**

Model: RAD.8 S/N: 8D002445 Filters: As installed by manufacturer  
 Date Samples Received: February 13, 2009 Sample Source: IBR Open Mkt Purchase

Time mins	Motor Status	Inject Status	Port	Particles/5ft3 at: ( in microns)						
				0.3-0.4	0.4-0.5	0.5-0.6	0.6-0.8	0.8-1	1-2.5	2.5-3.75
5	off	off	Downstream	13	9	9	9	4	2	1
5	off	off	Downstream	12	7	10	11	3	0	0
5	off	off	Downstream	16	15	9	8	3	0	0
5	on	off	Downstream	32,288	27,352	9,388	4,744	2,292	2,604	416
5	on	off	Upstream	1	1	0	0	0	0	0
5	on	off	Downstream	30,736	26,532	8,968	4,828	1,932	2,516	496
5	on	off	Upstream	6	1	0	0	0	0	0
5	on	off	Downstream	33,052	28,960	9,616	4,736	2,220	2,536	424
5	on	off	Upstream	10	3	0	0	0	0	0
5	on	on	Upstream	8,566,200	6,370,260	1,346,310	417,840	107,580	50,100	1,290
5	on	on	Downstream	234,328	87,236	16,384	6,372	2,404	2,600	400
5	on	on	Upstream	8,706,720	6,576,870	1,406,160	421,530	106,890	51,150	1,530
5	on	on	Downstream	218,448	80,132	15,556	6,168	2,248	2,568	376
5	on	on	Upstream	8,466,840	6,194,460	1,314,600	405,270	105,900	48,930	1,320
5	on	on	Downstream	222,048	83,236	16,004	6,476	2,380	2,536	440
Total upstream				25,739,760	19,141,590	4,067,070	1,244,640	320,370	150,180	4,140
Total downstream				674,824	250,604	47,944	19,016	7,032	7,704	1,216
Net downstream				578,748	167,760	19,972	4,708	588	48	-120
Gross Efficiency				97.38	98.69	98.82	98.47	97.81	94.87	70.63
<b>Net Efficiency</b>				<b>97.75</b>	<b>99.12</b>	<b>99.51</b>	<b>99.62</b>	<b>99.82</b>	<b>99.97</b>	<b>&gt;99.9</b>

Notice: These data relate only to the samples tested. This report may be copied only in its entirety.

pg 3/3

Performed By: DN

Data Location: DN69

Reviewed By:

Susan H Goldsmith, Director of Technical Services

**IBR 11599 Morrissey Rd Grass Lake MI USA 49240 Voice 517-522-8453**