



检验检测报告

Test Report

报告编号:



1000008392

产品名称

Product Name

空气净化器 / Air purifier

生产企业

Manufacture

苏州贝昂智能科技股份有限公司 /
Suzhou BeiAng Smart Technology Co.,
Ltd

销售企业

Sales

—

委托单位

Client

AIRDOG USA INC.

检验检测类别

Test type

委托检测

苏州市计量测试院

Suzhou Institute of Metrology

国家空气净化产品及气体检测
仪器质量检验检测中心(江苏)

National Air Cleaner & Gas detect Production Quality
Inspection Center (Jiangsu)





苏州市计量测试院/国家空气净化产品及气体检测仪器质量检验检测中心(江苏)
SZJL/National Air Cleaner & Gas detect Production Quality Inspection Center(Jiangsu)

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产品名称 Product Name	空气净化器 / Air purifier				
规格型号 Specifications	X1D	注册商标 Brand	AIRDOG		
生产日期/编号 Production Date/ No.	—/—	抽查批次号 Batch Number	—		
检验检测类别 Test Type	委托检测	任务来源/委托书号 Being Tested from/Task No.	企业委托/C000988		
委托单位名称/地址 Client/Add	AIRDOG USA INC./3637 SAN GABRIEL RIVER PKWY PICO RIVERA CA 90660-1403, AMERICA				
销售企业名称/地址/联系电话/邮编 Sales/Add./Tel./P.C.	—/—/—/—				
生产企业名称/地址/联系电话/邮编 Manufacturer/Add./Tel./P.C.	苏州贝昂智能科技股份有限公司 / Suzhou BeiAng Smart Technology Co., Ltd/—/—/—				
抽样日期 Sampling Date	—	抽样人员 Sampling Staff	—	样品数量 Sample Quantity	1
抽样基数 (产品进货/库存数) Sample Batch	—	样品等级 Grade	—	样品到达日期 Arrival Date	2023-10-17
样品接收状态 Sample Description	符合检验检测要求 Meet requirements		检验检测日期 Test Date	2023-10-18~2023-10-24	
备样量及封存地点 Sealing Address	—/—				
检验检测地点 Test Address	Suzhou Institute of Metrology • 6 Louyang Road Suzhou Industrial Park				
检验检测与判定依据 Test Standard and Methods	The client specifies the test plan				
检验检测结论 Test Conclusion	See the results pages				
备注Note	—				



(承检机构公章或检验检测专用章)

Stamp of Testing

签发日期:

2023-10-26

Signature date

批准: 万龙
Approved by

审核: 韦思译
Reviewed by

主检: 晖亮
Tested by



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▶ 颗粒物净化效率检测方案

Test Scheme for Fractional Efficiency of Partical Matter

1、自衰减测试

Natural decay efficiency test

1.1 将样品置于 30m³ 环境测试仓内, 样品调节至额定工作状态, 检验运作正常后, 关闭样品;

Place the sample in 30m³ environmental test chamber. Adjust the sample to the rated working state, and then switch off the sample when it works normally;

1.2 开启温湿度控制装置, 使仓内温度达到 (25±2) °C, 相对湿度达到 (50±10) %

Turn on the temperature and humidity control device to make the temperature in the bin reach (25±2) °C The relative humidity is (50±10) %

1.3 使用环境空气作为颗粒物尘源, 开启循环风扇, 使用 TSI 扫描电迁移率粒径谱仪(SMPS-3938) 进行自衰减测试。仪器设置 64 通道, 每 2 分钟, 记录 14.6nm、51.4nm、101.8nm 通道颗粒物浓度, 连续记录 25 次, 50 分钟。

The ambient air was used as the dust source, the circulating fan was turned on, and the TSI scanning electromigration particle size spectrometer (SMPS-3938) was used for self attenuation test. The instrument was set with 64 channels, and the particle concentrations of 14.6nm, 51.4nm and 101.8nm channels were recorded every 2 minutes for 25 consecutive times for 50 minutes.

1.4 依据测试结果, 求得颗粒物 (14.6nm、51.4nm、101.8nm) 自衰减率;

According to the results, calculate the natural decay efficiency of particulate matter (14.6nm、51.4nm、101.8nm)

1.5 自衰减计算公式:

Calculation formula of natural decay efficiency:

$$\eta = \frac{c_0 - c_t}{c_0}$$

式中:

In the formula

η — 颗粒物自衰减率, %

Natural attenuation efficiency of particulate matter, %

c_0 — t=0 时, 室内未开启样品, 颗粒物浓度, P/cm³

The initial concentration of required particle size the very beginning, P/cm³

c_t — 在时间为 t 时, 室内未开启样品, 颗粒物浓度, P/cm³

The concentration of required particle size at time t, P/cm³

2、颗粒物净化效率测试

Particulate matter fractional efficiency

2.1 按照 1.1~1.2 步骤进行试验;



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Follow steps 1.1~1.2

2.2 使用环境空气作为颗粒物尘源, 开启循环风扇, 使用 TSI 扫描电迁移率粒径谱仪(SMPS-3938)进行测试。仪器设置 64 通道, 测试 14.6nm、51.4nm、101.8nm 通道颗粒物初始浓度, 开启样品至最高档位, 每 2 分钟记录 14.6nm、51.4nm、101.8nm 通道颗粒物浓度, 连续测试 25 次, 50 分钟。

The ambient air was used as the dust source, the circulating fan was turned on, and the TSI scanning electromigration particle size spectrometer (SMPS-3938) was used to test. The instrument is set with 64 channels to test the initial concentration of particulate matter in 14.6nm, 51.4nm and 101.8nm channels, turn on the sample to the highest gear, record the concentration of particulate matter in 14.6nm, 51.4nm and 101.8nm channels every 2 minutes, and continuously test for 25 times for 50 minutes.

2.3 依据测试结果, 求得样品去除颗粒物 (14.6nm、51.4nm、101.8nm) 的净化效率;
According to the results, calculate the fractional efficiency of particulate matter (14.6nm, 51.4nm, 101.8nm) for sample;

2.4 颗粒物净化效率计算公式:

Calculation formula for fractional efficiency of particulate matter

$$\eta = \frac{c_0 - c_t}{c_0}$$

式中:

In the formula

η — 颗粒物净化效率, %

Fractional efficiency of particulate matter for sample, %

c_0 — $t=0$ 时, 室内未开启样品, 颗粒物初始浓度, P/cm^3

The initial concentration of required particle size the very beginning, P/cm^3

c_t — 在时间为 t 时, 室内开启样品, 颗粒物浓度, P/cm^3

The concentration of required particle size when the sample operates for t minutes, P/cm^3

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序号 No.	检验检测项目 Tested Items	检验检测结果 Test Results						
		时间 点 (min) Time	粒子浓度(P/cm³) Particulate Concentration			自衰减率		
			14.6nm	51.4nm	101.8nm	14.6nm	51.4nm	101.8nm
1	自衰减率 Natural Decay Efficiency	0	8978	11854	12567	-	-	-
		2	9875	12053	12897	-9.99%	-1.68%	-2.63%
		4	9890	11453	12926	-10.16%	3.38%	-2.86%
		6	9562	11758	12214	-6.50%	0.81%	2.81%
		8	9075	10863	12114	-1.08%	8.36%	3.60%
		10	8654	9845	12097	3.61%	16.95%	3.74%
		12	8792	11256	11987	2.07%	5.04%	4.62%
		14	7564	10257	11657	15.75%	13.47%	7.24%
		16	7314	9876	11234	18.53%	16.69%	10.61%
		18	7264	9573	11856	19.09%	19.24%	5.66%
		20	7024	9431	11523	21.76%	20.44%	8.31%
		22	6952	9586	11798	22.57%	19.13%	6.12%
		24	6583	9431	11254	26.68%	20.44%	10.45%
		26	6237	9335	11085	30.53%	21.25%	11.79%
		28	6058	9648	11147	32.52%	18.61%	11.30%
		30	6187	9257	10925	31.09%	21.91%	13.07%
		32	5972	9114	10752	33.48%	23.11%	14.44%
		34	5763	8952	10453	35.81%	24.48%	16.82%
		36	6125	8764	10894	31.78%	26.07%	13.31%
		38	5547	8587	10712	38.22%	27.56%	14.76%
		40	5117	8645	10524	43.01%	27.07%	16.26%
		42	5285	8358	10423	41.13%	29.49%	17.06%
		44	5687	8414	10114	36.66%	29.02%	19.52%
		46	5211	8245	10258	41.96%	30.45%	18.37%
		48	5047	8156	10687	43.78%	31.20%	14.96%
		50	5112	8097	10582	43.06%	31.69%	15.80%



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序号 No.	检验检测项目 Tested Items	检验检测结果 Test Results						
		时间 点 (min) Time	粒子浓度(P/cm ³) Particulate Concentration			净化效率		
2	颗粒物净化效率 Particulate Matter Fractional Efficiency		14.6nm	51.4nm	101.8nm	14.6nm	51.4nm	101.8nm
		0	7564	9750	9960	-	-	-
		2	5423	7752	7112	28.31%	20.49%	28.59%
		4	3254	6234	5956	56.98%	36.06%	40.20%
		6	2542	5142	5024	66.39%	47.26%	49.56%
		8	2045	4257	4623	72.96%	56.34%	53.58%
		10	2312	2864	3756	69.43%	70.63%	62.29%
		12	2015	2123	2212	73.36%	78.23%	77.79%
		14	1864	2245	1024	75.36%	76.97%	89.72%
		16	1524	1864	567	79.85%	80.88%	94.31%
		18	1123	1123	203	85.15%	88.48%	97.96%
		20	1056	657	112	86.04%	93.26%	98.88%
		22	897	315	60	88.14%	96.77%	99.40%
		24	925	425	23	87.77%	95.64%	99.77%
		26	745	305	0	90.15%	96.87%	100.00%
		28	482	212	0	93.63%	97.83%	100.00%
		30	302	110	22	96.01%	98.87%	99.78%
		32	221	67	0	97.08%	99.31%	100.00%
		34	135	23	0	98.22%	99.76%	100.00%
		36	125	0	0	98.35%	100.00%	100.00%
		38	107	0	0	98.59%	100.00%	100.00%
		40	55	22	0	99.27%	99.77%	100.00%
		42	23	0	28	99.70%	100.00%	99.72%
		44	21	0	0	99.72%	100.00%	100.00%
		46	12	0	0	99.84%	100.00%	100.00%
		48	0	0	0	100.00%	100.00%	100.00%
		50	0	0	0	100.00%	100.00%	100.00%



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➤ 样品照片

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The photo of the sample



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注意事项

Notice

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The test report is invalid without inspection organization stamp or special seal for test report on it.

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The test report is invalid without the signature of inspector, checker and approver.

4、检验检测报告涂改无效。

Test report is invalid with any alter.

5、对本报告如有异议，请于收到报告之日起十五天内提出。

Different opinions about this report should be reported to the test department within 15 days from the date of receiving the test report.

6、本检验检测报告仅对本次被测的样品负责。

For entrusted tests the responsibilities are undertaken for the delivered samples only.