



中国科学院
CHINESE ACADEMY OF SCIENCES



广州中科检测技术服务有限公司
GuangZhou CAS Test Technical Services Co.,Ltd.

Chinese Academy of Science – March 4, 2020
Guangzhou Zhongke Testing Technology Service Co., Ltd.
AIR I60 disinfection and sterilization purifier
Inspection report number: JKK20020121

中研检测 CAS 中研检测

中研检测是中国科学院下属的第三方检测机构，前身是成立于1958年的中国科学院广州化学研究所分析测试中心，由中科院广州化学有限公司全资成立，总部设立在广州，是一家集检测、技术服务、咨询、培训为一体的综合性第三方机构。旗下设有中研检测技术服务有限公司、重庆中研检测技术服务有限公司、浙江中研检测技术服务有限公司、苏州中研检测技术服务有限公司、北京中研检测技术服务有限公司、南京中研检测技术服务有限公司、武汉中研检测技术服务有限公司、西安中研检测技术服务有限公司、成都中研检测技术服务有限公司、昆明中研检测技术服务有限公司、拉萨中研检测技术服务有限公司、海口中研检测技术服务有限公司、三亚中研检测技术服务有限公司、珠海中研检测技术服务有限公司、深圳中研检测技术服务有限公司、东莞中研检测技术服务有限公司、佛山中研检测技术服务有限公司、惠州中研检测技术服务有限公司、肇庆中研检测技术服务有限公司、云浮中研检测技术服务有限公司、江门中研检测技术服务有限公司、阳江中研检测技术服务有限公司、茂名中研检测技术服务有限公司、湛江中研检测技术服务有限公司、肇庆中研检测技术服务有限公司、云浮中研检测技术服务有限公司、江门中研检测技术服务有限公司、阳江中研检测技术服务有限公司、茂名中研检测技术服务有限公司、湛江中研检测技术服务有限公司。

中研检测通过了检验检测机构资质认定 (CMA)、中国合格评定国家认可委员会实验室认可 (CNAS)、ISO 9001质量管理体系认证、ISO 14001环境管理体系认证、ISO 45001职业健康安全管理体系认证。

中研检测拥有10000余平方米专业检测实验室，配备先进检测仪器和精密进口软件平台。检测实验室建设有理化实验室、工业食品实验室、生态环境实验室、可靠性试验实验室、食品安全实验室、健康产品实验室等。

基于完善的检测服务网络，服务全球客户，其中世界五百强企业近百家，服务领域包括生物医药、生态环境、工业消费品检测及认证、环境可靠性试验、食品农产品检测、健康产品检测 (公共卫生、消毒产品、化妆品、卫生用品、空气净化器和净水产品)、药物一致性评价及杂质分析等领域。中研检测拥有完善的质量体系、深厚的技术能力、优质的服务保障、高效的公路物流的全覆盖网络，为全球各产业提供一站式检测解决方案。

公司资质



MA 201819000873 副本

广州中研检测技术服务有限公司

检验报告

检验报告编号: JKK202002121

样品名称: AIR 160 空气消毒杀菌净化器

送检单位: 北京美科凯姆贸易有限公司

二零二零年三月四日

说明

一、本检验报告仅对送检样品负责。
二、本检验报告涂改增删无效，未加盖单位公章无效，复印件无效。
三、对本检验报告有异议，可在收到报告之日起30日内提出复核申请，逾期不予受理。
四、本检验报告及检验单位名称不得用于产品标签、广告、评优及商品宣传等。
五、本检验报告一式三份，两份交送检单位，一份由检验机构存档。

联系地址: 广州市天河区兴科路368号
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MA 201819000873 广州中研检测技术服务有限公司 检验报告

样品受理编号: JKK202002121 第1页/共6页

样品名称: AIR 160 空气消毒杀菌净化器 样品数量: 1

生产日期或批号: / 样品信息: /

型号规格: AIR 160-100W/60Watt 商标: ALCOCHEM HYGIENE

送检单位: 北京美科凯姆贸易有限公司 报检日期: 2020-02-25

生产单位: Alcochem Hygiene B.V. 检验完成日期: 2020-03-02

检验依据:

GB 28235-2011《紫外线空气消毒器安全与卫生标准》9.1.21, GB/T 18202-2000《室内空气中臭氧卫生标准》,《消毒技术规范》(2002年版) 2.1.3, 2.1.5.4.

GB 28235-2011《紫外线空气消毒器安全与卫生标准》, GB/T 18202-2000《室内空气中臭氧卫生标准》,《消毒技术规范》(2002年版)。

检验结果:

1. 紫外辐射强度: 样品“**AIR 160 空气消毒杀菌净化器**”用紫外辐射计, 其下方垂直中心1m 处的辐射强度为113 $\mu\text{W}/\text{cm}^2$, 符合GB 28235-2011《紫外线空气消毒器安全与卫生标准》中辐射功率对应的紫外辐射强度不低于93%的要求。

2. 紫外辐射量: 样品“**AIR 160 空气消毒杀菌净化器**”周边对角线左、中、右垂直距离30 cm 处辐射强度为1 $\mu\text{W}/\text{cm}^2$, 符合GB 28235-2011《紫外线空气消毒器安全与卫生标准》紫外辐射量应 $\leq 5 \mu\text{W}/\text{cm}^2$ 要求。

3. 臭氧测量: 样品“**AIR 160 空气消毒杀菌净化器**”在“最高风速”、“紫外”下开机消毒作用60 min, 室内空气中臭氧浓度为0.005 mg/m³, 臭氧测量符合GB/T 18202-2000《室内空气中臭氧卫生标准》的要求。

4. 空气环境现场试验表明: 样品“**AIR 160 空气消毒杀菌净化器**”在“最高风速”、“紫外”下开机消毒作用120 min, 对白色葡萄球菌的杀灭率3次试验结果均 $\geq 99.90\%$, 为消毒合格, 符合《消毒技术规范》(2002年版)的要求。

5. 空气环境现场试验表明: 样品“**AIR 160 空气消毒杀菌净化器**”在“最高风速”、“紫外”下开机消毒作用120 min, 对白色葡萄球菌的杀灭率3次试验结果均 $\geq 99.90\%$, 为消毒合格, 符合《消毒技术规范》(2002年版)的要求。

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MA 201819000873 广州中研检测技术服务有限公司 检验报告

样品受理编号: JKK202002121 第2页/共6页

样品名称: AIR 160 空气消毒杀菌净化器 报样日期: 2020-02-25

检验项目: 紫外辐射强度 检验完成日期: 2020-03-02

一、器材

1. ST-512 紫外辐射剂量计 (灵敏度: $1 \mu\text{W}/\text{cm}^2$)。

2. 消毒器械: AIR 160 空气消毒杀菌净化器用紫外辐射计 (型号: AIR 160 100W/60Watt)。

二、方法

1. 检测依据:《消毒技术规范》(2002年版) 2.1.5.4。

2. 检测环境: 温度: 25.1 $^{\circ}\text{C}$, 相对湿度: 54.8RH。

3. 测试方法: 将待测紫外辐射计置于消毒器下方垂直中心位置距器面1m 处, 连接电压器 (220V), 开启紫外灯5 min 后, 用剂量计测量其辐射强度, 试验重复3次。

3. 试验结果: 经3次重复试验, 该紫外辐射计在其中心垂直1m 处测得紫外辐射强度为113 $\mu\text{W}/\text{cm}^2$ (见表1)。

检测项目	单位	试验编号	辐射强度
紫外辐射强度	$\mu\text{W}/\text{cm}^2$	1	113
		2	113
		3	114
平均值			113

四、结论

紫外辐射强度: 样品“**AIR 160 空气消毒杀菌净化器**”用紫外辐射计, 其下方垂直中心1m 处的辐射强度为113 $\mu\text{W}/\text{cm}^2$, 符合GB 28235-2011《紫外线空气消毒器安全与卫生标准》中辐射功率对应的紫外辐射强度不低于93%的要求。

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MA 201819000873 广州中研检测技术服务有限公司 检验报告

样品受理编号: JKK202002121 第3页/共6页

样品名称: AIR 160 空气消毒杀菌净化器 报样日期: 2020-02-25

检验项目: 紫外辐射量 检验完成日期: 2020-03-02

一、器材

1. ST-512 紫外辐射剂量计 (灵敏度: $1 \mu\text{W}/\text{cm}^2$)。

2. 消毒器械: AIR 160 空气消毒杀菌净化器。

二、方法

1. 检测依据: GB 28235-2011《紫外线空气消毒器安全与卫生标准》。

2. 检测环境: 温度: 25.0 $^{\circ}\text{C}$, 相对湿度: 58.4RH。

3. 仪器运行状态: 试验过程开启“最高风速”、“紫外”。

4. 测试方法: 将待测紫外辐射计置于消毒器下方垂直中心位置距器面30 cm 处, 将辐射剂量计探头置于辐射计周边对角线左、中、右垂直距离30 cm 处, 用辐射剂量计测定紫外辐射强度, 试验重复3次。

3. 试验结果: 经3次重复试验, 样品“**AIR 160 空气消毒杀菌净化器**”周边对角线左、中、右垂直距离30 cm 处辐射强度为1 $\mu\text{W}/\text{cm}^2$ (见表2)。

检测项目	测试位置	单位	试验结果	
			试验编号	辐射强度
紫外辐射量	左	$\mu\text{W}/\text{cm}^2$	1	1
			2	1
			3	1
	平均值	1		
	中	$\mu\text{W}/\text{cm}^2$	1	<1
			2	<1
3			<1	
平均值	<1			
右	$\mu\text{W}/\text{cm}^2$	1	<1	
		2	<1	
		3	<1	
平均值	<1			

四、结论

样品“**AIR 160 空气消毒杀菌净化器**”周边对角线左、中、右垂直距离30 cm 处辐射强度为1 $\mu\text{W}/\text{cm}^2$, 符合GB 28235-2011《紫外线空气消毒器安全与卫生标准》紫外辐射量应 $\leq 5 \mu\text{W}/\text{cm}^2$ 要求。

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MA 201819000873 广州中研检测技术服务有限公司 检验报告

样品受理编号: JKK202002121 第4页/共6页

样品名称: AIR 160 空气消毒杀菌净化器 报样日期: 2020-02-25

检验项目: 臭氧测量 检验完成日期: 2020-03-02

一、器材

1. 试验舱 (30 m³)、臭氧分析仪 (106-MH1)。

2. 消毒器械: AIR 160 空气消毒杀菌净化器。

二、方法

1. 检测环境: 温度: 24.8 $^{\circ}\text{C}$, 湿度: 55.9RH。

2. 仪器运行状态: 试验过程开启“最高风速”、“紫外”。

3. 检测依据: GB/T 18202-2000《室内空气中臭氧卫生标准》。

4. 检测方法: 将样品“**AIR 160 空气消毒杀菌净化器**”按使用要求安置在30 m³试验舱内, 同时用臭氧分析仪对舱内臭氧浓度进行实时监测, 将舱内臭氧浓度控制在0.005 mg/m³以内, 此期间一定间隔时间按12个位置采点, 将试验舱内测得的臭氧浓度换算成空气中的臭氧浓度为样品“**AIR 160 空气消毒杀菌净化器**”的臭氧测量。

3. 试验结果: 样品“**AIR 160 空气消毒杀菌净化器**”在开启“最高风速”、“紫外”下行60 min, 室内环境中平均臭氧浓度为0.005 mg/m³ (见表3), 臭氧测量符合GB/T 18202-2000《室内空气中臭氧卫生标准》的要求。

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时间 (min)	臭氧浓度 (mg/m ³)	均值 (mg/m ³)
5	0.004	0.005
10	0.003	
15	0.006	
20	0.003	
25	0.005	
30	0.004	
35	0.004	
40	0.004	
45	0.009	
50	0.004	
55	0.003	
60	0.006	

四、结论

样品“**AIR 160 空气消毒杀菌净化器**”在开启“最高风速”、“紫外”下行60 min, 室内空气中平均臭氧浓度为0.005 mg/m³, 臭氧测量符合GB/T 18202-2000《室内空气中臭氧卫生标准》的要求。

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MA 201819000873 广州中研检测技术服务有限公司 检验报告

样品受理编号: JKK202002121 第5页/共6页

样品名称: AIR 160 空气消毒杀菌净化器 报样日期: 2020-02-25

检验项目: 空气环境消毒试验 检验完成日期: 2020-03-02

一、器材

1. 试验舱: 约30 m³无人密闭房间。

2. 培养基: 金黄色葡萄球菌培养基, 采样器: 六级筛孔空气撞击式采样器。

3. 消毒器械: AIR 160 空气消毒杀菌净化器。

二、方法

1. 检测依据:《消毒技术规范》(2002年版) 2.1.3。

2. 检测环境: 温度: (23-25) $^{\circ}\text{C}$, 相对湿度: (55-65) %RH。

3. 仪器运行状态: 试验过程开启“最高风速”、“紫外”。

4. 检测方法: 试验时将待测样品安置于无人密闭房间内, 将机开至额定档位消毒120 min 后采样, 试验重复3次。

5. 采样方法: 在约30 m³无人密闭房间的对角线上设一个采样点, 用六级筛孔空气撞击式采样器采样, 采样量为28.3 L/min, 采样时间为5 min, 消毒作用后为10 min, 采样点距地面1.0 m。

3. 试验结果: 试验舱内约30 m³无人密闭房间, 环境温度: (23-25) $^{\circ}\text{C}$, 相对湿度: (55-65) %RH, 样品“**AIR 160 空气消毒杀菌净化器**”在“最高风速”、“紫外”下开机消毒作用120 min, 对空气中自然菌的杀灭率3次试验结果分别为91.99%、92.41%、90.23% (见表5)。

试验时间 (min)	试验前菌数 (cfu/m ³)	试验后菌数 (cfu/m ³)	杀灭率 (%)	
空气自然菌	1	1.94E+07	1.55E+07	91.99
	2	2.28E+07	1.73E+07	92.41
	3	1.70E+07	1.66E+07	90.23

四、结论

样品“**AIR 160 空气消毒杀菌净化器**”在“最高风速”、“紫外”下开机消毒作用120 min, 对约30 m³无人密闭房间中空气自然菌的杀灭率3次试验结果均 $\geq 90.00\%$, 为消毒合格, 符合《消毒技术规范》(2002年版)的要求。

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MA 201819000873 广州中研检测技术服务有限公司 检验报告

样品受理编号: JKK202002121 第6页/共6页

样品名称: AIR 160 空气消毒杀菌净化器 报样日期: 2020-02-25

检验项目: 空气环境消毒试验 (白色葡萄球菌) 检验完成日期: 2020-03-02

一、器材

1. 试验舱: 20 m³。

2. 培养基: 白色葡萄球菌 8032, 培养基: 普通营养琼脂培养基, 采样器: 六级筛孔空气撞击式采样器。

3. 消毒器械: AIR 160 空气消毒杀菌净化器。

二、方法

1. 检测依据:《消毒技术规范》(2002年版) 2.1.3。

2. 检测环境: 温度: (20-25) $^{\circ}\text{C}$, 相对湿度: (50-70) %RH。

3. 仪器运行状态: 试验过程开启“最高风速”、“紫外”。

4. 检测方法: 试验时将待测样品安置于试验舱内, 将机开至额定档位消毒120 min 后采样, 试验重复3次。

5. 采样方法: 在试验舱中央距器面1.0 m 处设一个采样点, 用六级筛孔空气撞击式采样器采样, 采样量为28.3 L/min, 采样时间为5 min, 消毒作用后为10 min 时进行采样, 对照的采样时间分别为20 s、20 s, 试验舱采样时间为20 s、6 min。

3. 试验结果: 试验温度为(20-25) $^{\circ}\text{C}$, 相对湿度为(50-70) %RH, 样品“**AIR 160 空气消毒杀菌净化器**”在“最高风速”、“紫外”下开机消毒作用120 min, 对白色葡萄球菌的杀灭率3次试验结果分别为99.93%、99.91%、99.94% (见表4)。

试验时间 (min)	试验前菌数 (cfu/m ³)	试验后菌数 (cfu/m ³)	自然菌消亡率 (%)	试验后菌数 (cfu/m ³)	杀灭率 (%)			
						对照	试验组	
白色葡萄球菌	1	1.27E+07	9.12E+06	24.63	1.05E+07	99.93		
							59	99.91
							57	99.94
	3	9.48E+06	7.37E+06	22.26	1.01E+07	47	99.94	

四、结论

样品“**AIR 160 空气消毒杀菌净化器**”在“最高风速”、“紫外”下开机消毒作用120 min, 对白色葡萄球菌的杀灭率3次试验结果均 $\geq 99.90\%$, 为消毒合格, 符合《消毒技术规范》(2002年版)的要求。

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编制: 李延波 审核: 钟瑜 批准: [盖章]

Inspection Report

Guangzhou Zhongke Testing Technology Service Co., Ltd.

Inspection report number: JKK20020121
Sample name: AIR 160 disinfection and sterilization purifier
Submission unit: Alcochem Trading Co., Ltd. Beijing

March 4, 2020

Description

1. This inspection report is only responsible for the samples submitted for inspection.
2. If there is any objection to this inspection report, an application for review may be submitted within 30 days from the date of receipt of the report.
Requests for changes outside this period will not be accepted.
3. This inspection report and the name of the inspection unit shall not be used for product labeling, advertising, evaluation and product promotion.
4. This inspection report is in triplicate, two copies are submitted to the inspection unit, and one is filed by the inspection agency.

Address: 368 Xingke Road, Tianhe District, Guangzhou
Zip Code: 510650
Phone: 020-85231325

Sample acceptance number: JKK20020121

Sample name	AIR 160	Disinfection sterilizer Purifier
Lot number	/	Sample properties
Model Specifications	AIR 160	Trademark
Inspection unit	BO Trading Co., Ltd.	Delivery date
Production unit	Alcochem Hygiene B.V.	Inspection date

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1	Production unit
	ALCOCHEM HYGIENE
	2020-02-25
	2020-03-02

Test based on:

GB 28235-2011 "Safety and Hygienic Standard for Ultraviolet Air Disinfectors" 9.12.1;
GB / T 18202-2000 "Ozone Hygiene in Indoor Air Standards", "Disinfection Technical Specifications" (2002) 2.1.3, 2.1.5.4.

Evaluation basis:

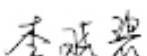
GB 28235-2011 "Safety and Hygienic Standard for Ultraviolet Air Disinfectors";
GB / T 18202-2000 "Sanitary Standard for Ozone in Indoor Air"; "Disinfection Technical Specifications" (2002).

Test results:

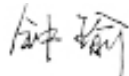
1. Ultraviolet radiation illuminance: The radiation of the ultraviolet lamp for the prototype "AIR 160 disinfection and sterilization purifier", 1m below the vertical center Illumination value is 113 $\mu\text{W}/\text{cm}^2$, corresponding to the nominal power in GB 28235-2011 "Safety and Hygienic Standard for Ultraviolet Air Disinfectors".
The requirement of ultraviolet radiation illumination is not less than 93%.
2. Ultraviolet light leakage: Radiation exposure of the prototype "AIR 160 disinfection and sterilization purifier" at a diagonal distance of 30 cm left, middle, and right. The degree value is 1 $\mu\text{W}/\text{cm}^2$, which conforms to GB 28235-2011 "Safety and Hygienic Standard for Ultraviolet Air Disinfectors" $\mu\text{W}/\text{cm}^2$ requirements.
3. Ozone leakage: The prototype "AIR 160 disinfection and sterilization purifier" was started for disinfection under the "maximum wind speed" and "ultraviolet" for 60 minutes, The average ozone concentration in the indoor air environment is 0.005 mg/m^3 , and the amount of ozone leakage conforms to GB/T 18202-2000 " Odor in indoor air Oxygen Hygiene Standard.
4. The air simulation field test shows that the prototype "AIR 160 disinfection and sterilization purifier" starts to consume at "highest wind speed" and "ultraviolet" The toxic effect was 120 minutes, and the killing rate of Staphylococcus aureus was 3 times. The test results were all $\geq 99.90\%$. Technical Specifications (2002).
5. Field test of air shows that the prototype "AIR 160 disinfection and sterilization purifier" is started at "highest wind speed" and "ultraviolet" for disinfection. In 120 minutes, the extinction rate of natural bacteria in the air of an unoccupied room with a volume of about 30 m^3 was 3 times. The results were $\geq 90.00\%$. Disinfection is qualified and meets the requirements of the Disinfection Technical Specification (2002).

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Sample acceptance number: JKK20020121

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Sample name	AIR 160 disinfection sterilizer purifier	Delivery date	2020-02-25
Inspection item	Ultraviolet radiation illumination	Inspection date	2020-03-02

Equipment

1. ST-512 UV radiance meter (sensitivity: $1\mu\text{W}/\text{cm}^2$).
2. Disinfection equipment: AIR 160 UV lamp for disinfection and sterilization purifier (model: AIR 160).

Detection method

1. Test basis: "Technical Specifications for Disinfection" (2002 edition) 2.1.5.4.
2. Test environment: temperature: $25.1\text{ }^\circ\text{C}$, relative humidity: 54% RH.
3. Test method: Fix the ultraviolet lamp to be measured on the measuring rack, adjust the distance so that the lamp is placed at the vertical center of the lamp below it 1m, connect the voltage stabilizer (220 V), and turn on the UV lamp for 5 minutes, then measure the irradiance value with an illuminance meter, and repeat the test 3 times.

Results

After 3 repeated tests, the UV lamp has an illuminance value of $113\ \mu\text{W}/\text{cm}^2$ measured at 1 m perpendicular to its center (see Table 1).

Table 1 Ultraviolet radiation illuminance detection data

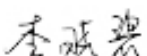
Test items	Test results		
	Unit	Test number	Radiation value
UV radiation illumination	$\mu\text{W}/\text{cm}^2$	1	113
		2	113
		3	114
		Average value	113

Conclusion

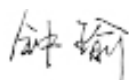
Ultraviolet radiation illuminance: the irradiance of the UV lamp for the prototype "AIR 160 disinfection and sterilization purifier", 1 m below the vertical center. The value is $113\ \mu\text{W}/\text{cm}^2$, which meets the UV radiation corresponding to the nominal power in GB 28235-2011 "Safety and Hygienic Standard for Ultraviolet Air Sterilizers". The irradiance is not less than 93 %.

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Sample acceptance number: JKK20020121

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Sample name	AIR 160 disinfection sterilizer purifier	Delivery date	2020-02-25
Inspection item	UV leakage inspection	Inspection date	2020-03-02

Equipment

1. ST-512 UV radiance meter (sensitivity: 1 $\mu\text{W}/\text{cm}^2$).
2. Disinfection equipment: AIR 160 disinfection and sterilization purifier.

Detection method

1. Test basis: GB 28235-2011 "Safety and Hygienic Standard for Ultraviolet Air Sterilizer".
2. Test environment: temperature: 25.0 °C, relative humidity: 58% RH.
3. Machine running state: Turn on the "maximum wind speed" and "ultraviolet" during the test.
4. Test method: The machine is turned on to the rated working state, and the radiometer is placed on the diagonal of the periphery of the machine to the left, middle, and right. At a distance of 30 cm, use a radiometer to measure the irradiance of ultraviolet rays. *The test is repeated 3 times.*

Results

After 3 repeated tests, the radiation around the diagonal of the prototype "AIR 160 disinfection and sterilization purifier" left, middle, and right 30 cm vertical radiation. *The degree value is 1 $\mu\text{W}/\text{cm}^2$ (see Table 2).*

Table 2 UV leak detection data

Test items	Test results			
	Test location	Unit	Test number	Irradiance value
UV Leakage	Left	$\mu\text{W}/\text{cm}^2$	1	1
			2	1
			3	1
			Average value	1
	Middle	$\mu\text{W}/\text{cm}^2$	1	<1
			2	<1
			3	<1
			Average value	<1
	Right	$\mu\text{W}/\text{cm}^2$	1	<1
			2	<1
			3	<1
			Average value	<1

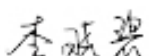
Conclusion

The irradiance value of the prototype "AIR 160 disinfection and sterilization purifier" around the diagonal left, middle and right vertical distance of 30 cm is 1 $\mu\text{W}/\text{cm}^2$.

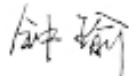
In accordance with GB 28235-2011 "Safety and Hygienic Standard for Ultraviolet Air Sterilizers", the amount of ultraviolet leakage should be $\leq 5 \mu\text{W}/\text{cm}^2$.

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Sample acceptance number: JKK20020121

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Sample name	AIR 160 disinfection sterilizer purifier	Delivery date	2020-02-25
Inspection item	Ozone Leakage inspection	Inspection date	2020-03-02

Equipment

1. Test chamber: 30 m³, ozone analyzer (106-MH).
2. Disinfection equipment: AIR 160 disinfection and sterilization purifier.

Detection method

1. Detection environment: temperature: 24.8 °C; humidity: 55% RH.
2. Machine running status: “Highest wind speed” and “UV” are turned on during the test.
3. Test basis: GB / T 18202-2000 “Sanitary Standard for Ozone in Indoor Air”.
4. Testing method: The prototype “AIR 160 disinfection and sterilization purifier” is placed in a 30 m³ test chamber according to the requirements of use, and the ozone is separated. The sampling port of the analyzer is fixed at a height of 1.5 m in the center of the test chamber, and the prototype is opened to the rated position. The test time is 1h, and the reading is performed at a certain interval. Take 12 data to average. The ozone concentration measured in the test minus the ozone concentration in the air before the test is the prototype “AIR 160 disinfection Purifier” “ozone leakage.”

Results

The prototype “AIR 160 disinfection and sterilization purifier” was run for 60 minutes under the “maximum wind speed” and “ultraviolet”. The average ozone concentration is 0.005 mg/m³ (see Table 3).

Table 3 Ozone leak detection data

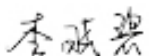
Time (min)	Ozone leakage (mg/m ³)	Mean (mg/m ³)
5	0.004	
10	0.003	
15	0.006	
20	0.003	
25	0.005	
30	0.004	0.005
35	0.004	
40	0.004	
45	0.009	
50	0.008	
55	0.003	
60	0.006	

Conclusion

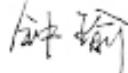
The prototype “AIR 160 disinfection and sterilization purifier” was operated for 60 min under the “maximum wind speed” and “ultraviolet”, and the average indoor air. The ozone concentration is 0.005 mg/m³, and the ozone leakage amount meets the requirements of GB / T 18202-2000 “Ozone Hygienic Standard for Indoor Air”.

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Sample acceptance number: JKK20020121

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Sample name	AIR 160 disinfection sterilizer purifier	Delivery date	2020-02-25
Inspection item	Air simulation <i>field disinfection test (Staphylococcus albicans)</i>	Inspection date	2020-03-02

Equipment

1. Test chamber: 20 m³.
2. Test strain: Staphylococcus aureus 8032, culture medium: common nutrient agar medium, sampler: six-stage air sampler.
3. Disinfection equipment: AIR 160 disinfection and sterilization purifier.

Method

1. Test basis: "Technical Specifications for Disinfection" (2002 edition) 2.1.3.
2. Testing environment: temperature: (20 ~ 25) °C, relative humidity: (50 ~ 70)% RH.
3. Machine running state: Turn on the "maximum wind speed" and "ultraviolet" during the test.
4. Disinfection method: Place the sample to be tested in the test chamber during the test. Open the sample to the rated position and sterilize it for 120 minutes. Repeat 3 times.
5. Sampling method: Set a sampling point 1.0 m above the ground in the center of the test chamber, and sample with a six-stage screen air impact sampler.
The sample flow rate was 28.3 L/min. Sampling was performed at the disinfection time of 0 min and 120 min.
The sampling time of the control group was 20 sec and 20 sec, respectively.
The sampling time of the test group was 20 sec and 6 min.

Results

The test temperature was (20 ~ 25) °C and the relative humidity was (50 ~ 70)% RH. The sample "AIR 160 disinfection and sterilization purifier" "Speed gear", "Ultraviolet" start-up disinfection for 120 min, the killing rate of Staphylococcus albicans three times, the results were 99.93%, 99.91%, 99.94% (see Table 4).

Table 4 Experimental data of air disinfection effect identification test

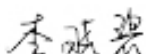
Test Strain Strain	Action Time (min)	Test Number	Control group			Test group		Kill rate (%)
			The number of colonies before the test (cfu/m ³)	Colony number after test (cfu/m ³)	Natural Extinction Rate (%)	The number of colonies before the test (cfu/m ³)	Colony number after test (cfu/m ³)	
Staphylococcus albicans	120	1	1.21 × 10 ⁵	9.12 × 10 ⁴	24.63	1.05 × 10 ⁵	59	99.93
		2	1.15 × 10 ⁵	8.87 × 10 ⁴	22.87	1.24 × 10 ⁵	88	99.91
		3	9.48 × 10 ⁴	7.37 × 10 ⁴	22.26	1.01 × 10 ⁵	47	99.94

Conclusion

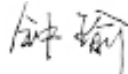
The sample "AIR 160 disinfection and sterilization purifier" was sterilized for 120 minutes under the condition of "maximum wind speed" and "ultraviolet", and it was effective for white grapes. The three test results of cocci were all ≥ 99.90%. They are qualified for disinfection and meet the requirements of the "Disinfection Technical Specification" (2002 edition).

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Sample acceptance number: JKK20020121

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Sample name	AIR 160 disinfection sterilizer purifier	Delivery date	2020-02-25
Inspection item	Air on-site disinfection test	Inspection date	2020-03-02

Equipment

1. Test site: about 30 m³ unoccupied room.
2. Culture medium: common nutrient agar medium, sampler: six-stage air sampler.
3. Disinfection equipment: AIR 160 disinfection and sterilization purifier.

Method

1. Test basis: "Technical Specifications for Disinfection" (2002 edition) 2.1.3.
2. Test environment: temperature: (23 ~ 25) °C, relative humidity: (55 ~ 65)% RH.
3. Machine running state: Turn on the "maximum wind speed" and "ultraviolet" during the test.
4. Disinfection method: During the test, place the sample to be tested in an unmanned closed room, open the sample to the rated position and sterilize it for 120 minutes, then take a sample.
The test was repeated 3 times.
5. Sampling method: Set a sampling point on the diagonal of an unoccupied room of about 30 m³, and collect it with a six-stage screen air impact sampler.
The sampling flow rate is 28.3 L/min; the sampling time is 5 minutes before disinfection, 10 minutes after disinfection, and the sampling point is 1.0 m from the ground.

Results

The test site is an airtight room of about 30 m³, the ambient temperature is (23 ~ 25) °C, the relative humidity is (55 ~ 65)% RH, and the sample "AIR160 disinfection and sterilization purifier" in the "maximum wind speed", "ultraviolet" start-up disinfection for 120 minutes, the death rate of natural air bacteria
The test results were 91.99%, 92.41%, and 90.23%, respectively (see Table 5).

Table 5 Experimental data of air disinfection effect identification test (natural air bacteria)

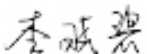
Test bacteria	Action time (min)	Test number	The number of colonies before the test (cfu/m ³)	Colony number after test (cfu/m ³)	Natural Extinction Rate (%)
Air Natural Bacteria	120	1	1.94 × 10 ³	1.55 × 10 ²	91.99
		2	2.28 × 10 ³	1.73 × 10 ²	92.41
		3	1.70 × 10 ³	1.66 × 10 ²	90.23

Conclusion

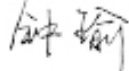
The sample "AIR 160 disinfection and sterilization purifier" was sterilized for 120 minutes under the "highest wind speed" and "ultraviolet", and the effect was about 30 m³.
The extinction rate of natural bacteria in the air in an unoccupied room was ≥ 90.00% in three tests.

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