

检测编号: WIV20201229001

Test No. WIV20201229001

中国科学院武汉病毒研究所

WUHAN INSTITUTE OF VIROLOGY, CAS

检测报告

TEST REPORT

声明

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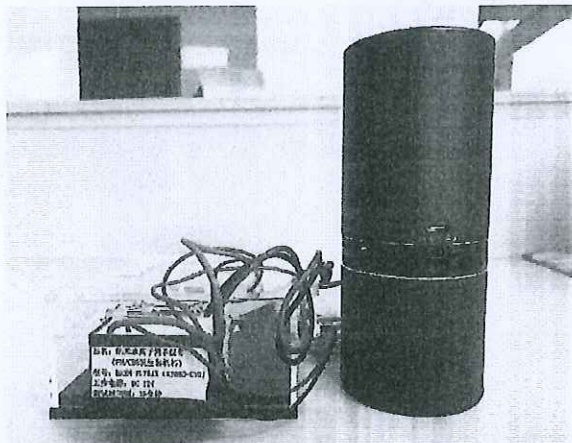
TEST REPORT

一、样品信息

样品名称	消毒灭菌洁净器纳米水离子消杀组件		
体积 (mL) /数量	3 套	状态	装置
批号	20201211	储存条件	室温 (10-30℃)
样品来源	送检	采样人/送检人	唐峰
收样日期	2020.12.11	收样人	余军平

检测周期: 2020 年 12 月 11 日至 2020 年 12 月 30 日

送检的产品图片:



测试杀新冠实验在左边的消毒灭菌洁净器纳米水离子消杀组件 (FM/CDS 发生器机芯) 中完成。

二、检测项目: 消毒灭菌洁净器纳米水离子消杀组件 (FM/CDS 发生器机芯) 抗

新型冠状病毒(SARS-CoV-2)效果评估

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三、抗新冠病毒检测方法

消毒灭菌洁净器纳米水离子消杀组件 (FM/CDS 发生器机芯) 抗新型冠状病毒(SARS-CoV-2)的效果评估具体采用的方法如下:

1. 使用 Vero E6 细胞培养病毒, 得到滴度大于 10^6 TCID₅₀/mL 的新型冠状病毒 (SARS-CoV-2) 的细胞培养上清。
2. 开始抗新型冠状病毒试验前 24 h, 接种 10^4 个 Vero E6 细胞于 96 孔板的每个孔中。
3. 将消毒灭菌洁净器纳米水离子消杀组件中放置洗净晾干的载玻片, 在载玻片的表面滴上 10 μ L 步骤 1 中准备的病毒细胞培养上清, 并尽量铺散开, 接通电源开始计时, 分别作用 5 min、15 min 和 60 min。以放置在无消杀组件的盒子中载玻片上同时滴上 10 μ L 的病毒液作为对照。
4. 达到相应时间后, 取出实验组和对照组的载玻片, 在加入病毒的位置加入 90 μ L 细胞维持液 (含 2% FBS 的 DMEM 溶液), 将病毒洗下来, 将洗下来的病毒按 10 倍梯度稀释后接入 96 孔板 Vero E6 细胞中。实验组与对照组各设置三个重复。
5. 将 96 孔板置于 37°C、5%的 CO₂ 培养箱中培养 4-5 天, 观察孔中细胞的病变, 得到每个梯度下的病变孔数, 从而计算出消杀组件或对照作用后的新冠病毒的 TCID₅₀。

四、抗新冠病毒检测结果

通过计数得到各个样本在每个稀释度下病变数, 采用 Reed-Muench 法得到各个实验组和对照组的 TCID₅₀, 数据如下表所示:

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病毒	实验序号	病毒对照放置 5 min 后病毒滴度的对数值 (lgTCID50/mL)	病毒在消毒灭菌洁净器纳米水离子消杀组件中放置 5 min 后病毒滴度的对数值 (lgTCID50/mL)
新型冠状病毒 (SARS-CoV-2)	1	6.75	5.67
	2	7.20	6.00
	3	6.28	5.33
lgTCID50/mL 平均数		6.74	5.67
抗病毒活性值		1.07	
抗病毒活性率 (%)		91.5%	

病毒	实验序号	病毒对照放置 15 min 后病毒滴度的对数值 (lgTCID50/mL)	病毒在消毒灭菌洁净器纳米水离子消杀组件中放置 15 min 后病毒滴度的对数值 (lgTCID50/mL)
新型冠状病毒 (SARS-CoV-2)	1	6.33	<2
	2	6.50	<2
	3	5.67	<2
lgTCID50/mL 平均数		6.17	<2
抗病毒活性值		>4.17	
抗病毒活性率 (%)		>99.99%	

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病毒	实验序号	病毒对照放置 60 min 后病毒滴度的对数值 (lgTCID50/mL)	病毒在消毒灭菌洁净器 纳米水离子消杀组件中 放置 60 min 后病毒滴度 的对数值 (lgTCID50/mL)
新型冠状病毒 (SARS-CoV-2)	1	5.43	<2
	2	5.80	<2
	3	5.90	<2
lgTCID50/mL 平均数		5.71	<2
抗病毒活性值		>3.71	
抗病毒活性率 (%)		>99.98%	

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五、结论

经检测的北京福乐云数据科技有限公司送检的消毒灭菌洁净器纳米水离子消杀组件（FM/CDS 发生器机芯）抗新冠病毒（SARS-CoV-2），按本报告中的上述具体步骤测试，病毒在该消杀组件中作用 5 min、15 min 和 60 min 后，通过测试作用后病毒的 TCID₅₀，得到消毒灭菌洁净器纳米水离子消杀组件（FM/CDS 发生器机芯）抗新冠病毒的杀灭率分别为 91.5%、99.99%、99.98%。

本次检测结果仅对送检样品负责。

以下空白。

检验员：

审核人：

批准人：



（技术报告专用章）

2021 年（月）4 日

WUHAN INSTITUTE OF VIROLOGY, CAS

TEST REPORT

Test Report

Product name: Nanometer water ion and Sterilization Components - a Disinfection and Sterilization Instrument

Submitted by: [REDACTED]

Entrusting unit: [REDACTED]

Test category: Commissioned test

Wuhan Institute of Virology, CAS

Wuhan, China

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TEST REPORT

Declaration

1. This report will be invalid without the “special seal for technical report” and the cross-page seal of Wuhan Institute of Virology, CAS.
2. This report shall not be copied partially without the approval of Wuhan Institute of Virology, CAS, and it will be invalid if tampered.
3. This report will be invalid without the signature of the “verifier” and “approver”.
4. The entrusting unit shall submit any objection concerning this report to us within 15 days since the report is issued, and otherwise such objection will not be accepted if overdue.
5. This report and relevant data shall not be used for commercial advertisement without the written consent of Wuhan Institute of Virology, CAS.



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TEST REPORT

I Sample Information

Sample name	Nanometer water ion and Sterilization Components - a Disinfection and Sterilization Instrument		
Volume (mL)/Quantity	3 sets	Status	Apparatus
Batch number	20201211	Storage condition	Room temperature (10-30°C)
Sample origin	Submitted for test	Sampled/Submitted by	Tang Feng
Receiving date	December 11, 2020	Received by	Yu Junping

Testing period: December 11, 2020 to December 30, 2020

Picture of the submitted product:



The test for eliminating COVID-19 (SARS-CoV-2) is finished in the Nanometer water ion and Sterilization Components-a Disinfection and Sterilization Instrument (FM/CDS generator core) on the left.

II Test: Anti-COVID-19 (SARS-CoV-2) Effect Evaluation of the Nanometer water ion and Sterilization Components - a Disinfection and Sterilization Instrument (FM/CDS generator core).

WUHAN INSTITUTE OF VIROLOGY, CAS**TEST REPORT****III Anti-COVID-19 (SARS-CoV-2) Test Method**

The specific methods adopted for anti-COVID-19 (SARS-CoV-2) effect evaluation of the Nanometer water ion and Sterilization Components-a Disinfection and Sterilization Instrument (FM/CDS generator core) are as follows:

1. The viruses were cultured in Vero E6 cells to obtain the culture supernatant with anti-COVID-19 (SARS-CoV-2) titer $>10^6$ TCID₅₀/mL.

2. 24 hours before starting the anti-COVID-19 (SARS-CoV-2) effect test, 10^4 VeroE6 cells were inoculated into each well of the 96-well plate.

3. A clean and dried glass slide was placed in the Nanometer water ion and Sterilization Components-a Disinfection and Sterilization Instrument; 10 μ L of virus culture supernatant prepared in the first step was dripped and spread out to the greatest extent. The Nanometer water ion and Sterilization Components-a Disinfection and Sterilization Instrument worked for 5, 15 and 60 min, respectively (starting from the time to switch on the power source). Additionally, 10 μ L of virus suspension was also dripped on the glass slide in the box without the Nanometer water ion and Sterilization Components and was used as the control group.

4. At the corresponding time, the glass slides of the experimental group and control group were taken out, and 90 μ L of cell maintenance medium (DMEM solution containing 2% of FBS) was added at the site where the virus was dripped. The virus was washed down, diluted by a tenfold gradient and then transferred to the Vero E6 cells in the 96-well plate. Three repetitions were set in the experiment group and control group, respectively.

5. The 96-well plate was placed in a incubator at 37°C and containing 5% CO₂ for 4-5 days and the cytopathic effect was observed to count the wells with the cytopathic effect at each gradient, thereby calculating the TCID₅₀ of COVID-19 (SARS-CoV-2) in the two groups.

IV Anti-COVID-19 (SARS-CoV-2) Test Result

By counting the wells with cytopathic effect for each sample at each dilution, TCID₅₀ in the experimental group and control group was obtained by Reed-Muench method. The data were shown in the table below:

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Virus	Experiment No.	Logarithmic value of the virus titer at 5 min in the control group (lgTCID50/mL)	Logarithmic value of the virus titer at 5 min in the experiment group (lgTCID50/mL)
COVID-19 (SARS-CoV-2)	1	6.75	5.67
	2	7.20	6.00
	3	6.28	5.33
Average lgTCID50/mL		6.74	5.67
Antiviral activity value		1.07	
Antiviral activity rate (%)		91.5%	



Virus	Experiment No.	Logarithmic value of the virus titer at 15 min in the control group (lgTCID50/mL)	Logarithmic value of the virus titer at 15 min in the experiment group (lgTCID50/mL)
COVID-19 (SARS-CoV-2)	1	6.33	< 2
	2	6.50	< 2
	3	5.67	< 2
Average lgTCID50/mL		6.17	< 2
Antiviral activity value		> 4.17	
Antiviral activity rate (%)		> 99.99%	

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Virus	Experiment No.	Logarithmic value of the virus titer at 60 min in the control group (lgTCID50/mL)	Logarithmic value of the virus titer at 60 min in the experiment group (lgTCID50/mL)
COVID-19 (SARS-CoV-2)	1	5.43	< 2
	2	5.80	< 2
	3	5.90	< 2
Average lgTCID50/mL		5.71	< 2
Antiviral activity value		≥ 3.71	
Antiviral activity rate (%)		≥ 99.98%	



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V Conclusion

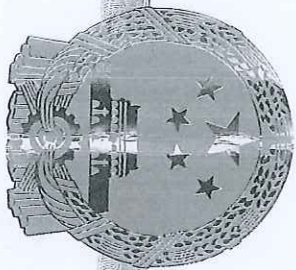
If the tested Nanometer water ion and Sterilization Components-a Disinfection and Sterilization Instrument for Anti-COVID-19 (SARS-CoV-2) submitted by [REDACTED] is operated based on the above-mentioned specific steps in this report and works for 5, 15 and 60 min, respectively, the TCID50 of the viruses in it (FM/CDS generator core) is determined to calculate the COVID-19 (SARS-CoV-2) elimination rate of this instrument being 91.5%, > 99.99% and > 99.98%, respectively.

This test result is only responsible for the submitted sample.
Blank below.

Tested by:
Verified by:
Approved by:

(Special seal for technical report)

Date:



营业执照



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名称 深圳泽国译民翻译服务有限公司
类型 有限责任公司
法定代表人 林世荣

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2. 商事主体经营范围和许可审批项目等有关企业信用事项及年报信息和其他信用信息，请登录左下角的国家企业信用信息公示系统或扫描右上方的二维码查询。
3. 各类商事主体每年须于成立周年之日起两个月内，向商事登记机关提交上一自然年度的年度报告。企业应当按照《企业信息公示暂行条例》第十条的规定向社会公示企业信息。

登记机关

2019年09月03日

