

## NPPTL COVID-19 Response: International Respirator Assessment

Manufacturer: Qingdao Hainuo Biological Engineering Co., Ltd.

Model Tested: C005

Date Tested: January 25, 2021

These findings pertain to the Qingdao Hainuo Biological Engineering Co., Ltd., model C005. The packaging for this product indicates that it meets GB2626-2006 (the Chinese standard for Respiratory Protective Equipment – Non-Powered Air-Purifying Particle Respirator).

Ten respirators were submitted for evaluation. The samples were tested using a modified version of NIOSH Standard Test Procedure (STP) TEB-APR-STP-0059. This modified assessment plan can be found [here](#).

No certificate of approval was provided with the samples received; therefore, the authenticity of the claims cannot be validated.

The maximum and minimum filter efficiency was 99.95% and 98.47%, respectively. All ten respirators measured more than 95% filter efficiency.

While the above-listed product classification has similar performance requirements to NIOSH-approved devices, NIOSH does not have knowledge about the sustained manufacturer quality system and product quality control for these products. NIOSH also does not have knowledge about the product's handling and exposures after leaving its manufacturer's control.

In addition, this product is an ear loop design. Currently, there are no NIOSH-approved products with ear loops; NIOSH-approved N95s have head bands. Furthermore, limited assessment of ear loop designs, indicate difficulty achieving a proper fit. While filter efficiency shows how well the filter media performs, users must ensure a proper fit is achieved.

**This assessment is not a part of the NIOSH respirator approval process and will in no way lead to or preclude NIOSH approval through the official approval process.** This assessment was developed as an assessment of the filter efficiency for those respirators represented as certified by an international certification authority, other than NIOSH, to support the availability of respiratory protection to US healthcare workers due to the respirator shortage associated with COVID-19. Only particulate filter efficiency was assessed.

The results provided in this letter are specific to the subset of samples that were provided to NPPTL for evaluation.

These results will be used to update the CDC guidance for [Crisis Capacity Strategies \(during known shortages\)](#).

## Evaluation of International Respirators

**Test:** Modified TEB-APR-STP-0059

**Date Tested:** January 25, 2021

**Report Prepared:** January 26, 2021

**Manufacturer:** Qingdao Hainuo Biological Engineering Co., Ltd.

**Item Tested:** C005

**Country of Certification:** China (GB2626-2006)

Pictures have been added to the end of this report.

Filter	Flow Rate (LPM)	Initial Filter Resistance (mmH <sub>2</sub> O)	Initial Percent Leakage (%)	Maximum Percent Leakage (%)	Filter Efficiency (%)
1	85	19.7	0.05	0.05	99.95
2	85	18.2	0.09	0.09	99.91
3	85	19.1	0.06	0.06	99.94
4	85	18.0	0.07	0.07	99.93
5	85	17.1	0.07	0.07	99.93
6	85	16.5	0.09	0.09	99.91
7	85	15.6	1.44	1.58	98.42
8	85	16.3	0.10	0.10	99.90
9	85	17.5	0.11	0.11	99.89
10	85	16.8	0.06	0.06	99.94
<b>Minimum Filter Efficiency: 98.47%</b>			<b>Maximum Filter Efficiency: 99.95%</b>		

- The test method utilized in this assessment is not the NIOSH standard test procedure that is used for certification of respirators. Respirators assessed to this modified test plan do not meet the requirements of STP-0059, and therefore cannot be considered equivalent to N95 respirators that were tested to STP-0059.
- Respirators tested may not be representative of all respirators with the same certification mark. NIOSH has no control over suppliers and distributors of respirators certified by other national or international parties.
- This assessment is not a confirmation that it conforms with any or all of its specifications in accordance with its certification mark.
- This assessment was not a part of the NIOSH approval program. These results do not imply nor preclude a future approval through the NIOSH respirator approval program.

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QUALITY INSPECTED 合格証

Product 产品名称	KN95 Protective Face Mask
Model 型号	C005
Specification 规格	20x8.5cm
Manufacturer 制造商	Qingdao Hainuo Biological Engineering Co., Ltd
Standard 标准	GB2626-2006
Lot No. 批号	2021101
Mfg Date 生产日期	202111
Valid Date 有效期至	5 years
Notes 备注	96

Qingdao Hainuo Biological Engineering Co., Ltd  
 青岛海诺生物工程有限公司  
 地址: 中国山东省青岛市市南区香港中路11号

## QUALITY INSPECTED 合格证

Product 产品名称	KN95 Protective Face Mask KN95防护口罩
Model 款号	C005
Specification 规格	20x8.5cm
Ingredient 主要成分	61%non-woven fabric、39%melt blown 61%无纺布、39%熔喷布
Standard 执行标准	GB2626-2006
LOT No. 生产批号	201101
MFG 生产日期	202011
DOE 有效期	5 years 5年
EXP 检验员	06
MFR 制造商	Qingdao Hainuo Biological Engineering Co., Ltd 青岛海诺生物工程有限公司
ADD 地址	Jiangshan Industrial Park, Laixi, Qingdao, China 山东省青岛市莱西市姜山镇工业园



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