Nelson Labs
A Sotera Health company

Sponsor:
Michael Wong
Huizhou Bowen Manufacturing Limited
Xinnan 1st Road, Xianan Village,
Yuanzhou Town, Boluo County
Huizhou City, Guangdong Province,
CHINA

Determination of Inhalation and Exhalation Resistance for Air-Purifying Respirators Final Report

Test Article:	Kaze Junior Protective Respiratory
Study Number:	1340606-S01
Study Received Date:	11 Sep 2020
Testing Facility:	Nelson Laboratories, LLC 6280 S. Redwood Rd. Salt Lake City, UT 84123 U.S.A.
Test Procedure(s):	Standard Test Protocol (STP) Number: STP0145 Rev 05
Deviation(s):	None

Summary: This procedure was performed to evaluate the differential pressure of non-powered air-purifying particulate respirators in accordance with 42 CFR Part 84.180. The air exchange differential or breathability of respirators was measured for inhalation resistance using NIOSH procedure TEB-APR-STP-0007 and exhalation resistance with NIOSH procedure TEB-APR-STP-0003. The differential pressure technique is a simple application of a basic physical principle employing a water manometer differential upstream and downstream of the test material, at a constant flow rate.

According to 42 CFR Part 84.64, pretesting must be performed by all applicants as part of the application process with NIOSH. Results seen below are part of that pretesting and must be submitted to and accepted by NIOSH for respirator approval.

The inhalation resistance criteria as stated in 42 CFR Part 84.180 is an initial inhalation not exceeding 35 mm water column height pressure. The test articles submitted by the sponsor conform to this NIOSH criterion for airflow resistance.

The exhalation resistance criteria as stated in 42 CFR Part 84.180 is an initial exhalation not exceeding 25 mm water column height pressure. The test articles submitted by the sponsor conform to this NIOSH criterion for airflow resistance.

All test method acceptance criteria were met. Testing was performed in compliance with US FDA good manufacturing practice (GMP) regulations 21 CFR Parts 210, 211 and 820.

ilac-MRA ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

Robert Dieker electronically approved for	06 Oct 2020 21:32 (+00:00)
Study Director Curtis Gerow	Study Completion Date and Time

Results:

Test Article Number	Inhalation Resistance (mm H_2O)	Exhalation Resistance (mm H_2O)
1	19.2	16.6
2	21.4	19.3
3	19.2	17.1

Test Method Acceptance Criteria: The resistance measurement for the reference plate must be within ± 3 standard deviations of the mean established in the control chart.

Procedure: A complete respirator was mounted to a test fixture comprised of a metal plate with an approximate 3.5 inch diameter hole in the center to allow airflow to reach the mask. The sample holder was assembled by placing a Plexiglas collar around the test fixture and topping with another metal disc with a 3.5 inch opening in the center. The sample holder is held tightly together with clamps and connected to an air source. The manometer is attached to the sample holder by a connection port on the Plexiglas collar.

Before testing, the manometer was zeroed and the back pressure in the sample holder checked and verified to be acceptable. Resistance measurements were taken with a manometer capable of measuring at least 6 inches of water. For inhalation testing, a negative airflow (vacuum) was applied. For exhalation testing, a positive airflow (compressed air) was used. Airflow was passed through the sample holder at approximately 85 ± 2 liters per minute (L/min).

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Sodium Chloride (NaCl) Aerosol Test Final Report

Test Article:	Kaze Junior Protective Respiratory
Study Number:	1340607-S01
Study Received Date:	11 Sep 2020
Testing Facility:	Nelson Laboratories, LLC 6280 S. Redwood Rd. Salt Lake City, UT 84123 U.S.A.
Test Procedure(s):	Standard Test Protocol (STP) Number: STP0014 Rev 09
Deviation(s):	None

Summary: This procedure was performed to evaluate particulate filter penetration as specified in 42 CFR Part 84 and TEB-APR-STP-0059 for requirements on a N95 respirator. Respirators were conditioned then tested for particle penetration against a polydispersed, sodium chloride (NaCl) particulate aerosol. The challenge aerosol was dried, neutralized, and passed through the test article at a concentration not exceeding 200 mg/m^3. The initial airflow resistance and particle penetration for each respirator was determined.

According to 42 CFR Part 84.64, pretesting must be performed by all applicants as part of the application process with NIOSH. Results seen below are part of that pretesting and must be submitted to and accepted by NIOSH for respirator approval.

All test method acceptance criteria were met. Testing was performed in compliance with US FDA good manufacturing practice (GMP) regulations 21 CFR Parts 210, 211 and 820.

Leah Tiberius electronically approved for	19 Oct 2020 17:21 (+00:00)
Study Director Curtis Gerow	Study Completion Date and Time

Results: The NIOSH N95 filter efficiency as stated in 42 CFR Part 84.181 is a minimum efficiency for each filter of ≥95% (≤5% penetration). The test articles submitted by the sponsor conform to the NIOSH N95 criteria for filter efficiency.

Test Article Number	Corrected[a] Initial Airflow Resistance (mm H_2O)	Maximum Particle Penetration (%)	Filtration Efficiency (%)
1	23.3	0.218	99.782
2	24.8	1.05	98.95
3	26.9	0.764	99.236
4	22.5	0.922	99.078
5	20.5	0.785	99.215
6	22.3	1.26	98.74
7	16.6	0.176	99.824
8	17.2	0.978	99.022
9	17.4	0.199	99.801
10	19.2	2.69	97.31
11	20.4	1.02	98.98
12	18.2	1.21	98.79
13	16.9	0.132	99.868
14	17.3	0.555	99.445
15	23.1	0.077	99.923
16	17.4	0.750	99.250
17	19.6	0.053	99.947
18	14.6	0.569	99.431
19	15.0	0.338	99.662
20	20.0	0.352	99.648

[a] The final airflow resistance value for each test article was determined by subtracting out the background resistance from the system.

Test Method Acceptance Criteria: The filter tester must pass the "Tester Set Up" procedure. The airflow resistance and particle penetration of the reference material must be within the limits set by the manufacturer.

Filter Test Procedure: Prior to testing, respirators were taken out of their packaging and placed in an environment of 85 ± 5% relative humidity (RH) and 38 ± 2.5°C for 25 ± 1 hours.

The filter tester used in testing was a TSI® CERTITEST® Model 8130 Automated Filter Tester that is capable of efficiency measurements of up to 99.999%. It produces a particle size distribution with a count median diameter of 0.075 ± 0.020 microns (µm) and a geometric standard deviation not exceeding 1.86 µm. The mass median diameter was approximately 0.26 µm, which is generally accepted as the most penetrating aerosol size. The reservoir was filled with a 2% NaCl solution and the instrument allowed a minimum warm-up time of 30 minutes. The main regulator pressure was set to 75 ± 5 pounds per square inch (psi). The filter holder regulator pressure was set to approximately 35 psi. The NaCl aerosol generator pressure was set to approximately 30 psi and the make-up airflow rate was set to approximately 70 liters per minute (L/min).

The NaCl concentration of the test aerosol was determined in mg/m^3 by a gravimetric method prior to the load test assessment. An entire respirator was mounted on a test fixture, placed into the filter holder, and the NaCl aerosol passed through the outside surface of the test article at a continuous airflow rate of 85 ± 4 L/min. In accordance with NIOSH policy, three respirators were challenged until 200 ± 5 mg of NaCl had contacted each test article. Based upon the load pattern of NIOSH Type 2, the initial penetration reading of the remaining 17 respirators was recorded.

HUIZHOU BOWEN MANUFACTURING LIMITED
XINNAN 1ST ROAD, XIANAN VILLAGE, YUANZHOU TOWN, BOLUO COUNTY, HUIZHOU CITY, GUANGDONG PROVINCE, P.R.CHINA

The following sample(s) was/were submitted and identified on behalf of the client as:

Sample Description	:	COLOR NON-WOVEN FABRIC 16%; MELT BLOWN FABRIC 22%; HOT AIR COTTON 12%;SKIN FRIENDLY NON-WOVEN FABRIC 10%; EAR THREAD 25%; NOSE CLIP 15% JUNIOR PROTECTIVE RESPIRATOR IN WINE
Sample Color	:	(A)WINE
Composition	:	(A)COLOR NON-WOVEN FABRIC 16%; MELT BLOWN FABRIC 22%; HOT AIR COTTON 12%;SKIN FRIENDLY NON-WOVEN FABRIC 10%; EAR THREAD 25%; NOSE CLIP 15%
Style No.	:	KAZE-03
Manufacturer	:	HUIZHOU BOWEN MANUFACTURING LIMITED
Country of Destination	:	Europe, USA
Sample Receiving Date	:	Aug 19, 2020
Testing Period	:	Aug 19, 2020 - Aug 25, 2020
Test Result(s)	:	Unless otherwise stated the results shown in this test report refer only to the sample(s) tested, for further details, please refer to the following page(s).
Test Performed	:	Selected test(s) as requested by applicant

Conclusion	A	Remark
Pentachlorophenol (PCP)	PASS	
Cadmium(Cd)	PASS	
Nonylphenol Ethoxylates(NPEOs)	PASS	
Short Chain Chlorinated Paraffins (SCCP)	PASS	
Phthalates	PASS	
Azo Dyes	PASS	
Organotin Compounds	PASS	
Polycyclic Aromatic Hydrocarbons(PAHs)	PASS	

Remark(s) : PASS=Meet Client's Requirement

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Lily Wang (Account Manager)

COMPONENT LIST / List of Materials

Sample No.	Component No.	Description	Material	Color	Remark
A	1	Outer layer non woven fabric	Synthetic Fibers	Wine	Finished product
A	2	Melt-blown material	Synthetic Fibers	White	Finished product
A	3	Inner layer non woven fabric	Synthetic Fibers	White	Finished product
A	4	Hot air cotton	Blended Fibers	White	Finished product
A	5	Flat band	Synthetic Fibers	Wine	Finished product
A	6	Nose clip	Plastics	White	Finished product
A	7	Foam	Foam	Dark grey	Finished product
A	8	Adjuster button	Plastics	White	Finished product

Test Result

European Regulation POPs (EU) 2019/1021 - Pentachlorophenol (PCP)

Test Method: Modified §64 LFGB, BVL, B 82.02.8-2001 Alkaline (KOH) digestion, analysis was performed by GC-ECD or GC-MS.

Test Item(s)	Unit	MDL	*1+2+3*	*4+5*
Pentachlorophenol (PCP)	mg/kg	0.15	**ND**	**ND**
Comment			**PASS**	**PASS**

Notes :

RL (Reporting limit): 0.15 mg/kg
ND = Not Detected(< RL)
Requirement: Banned(< 0.5 mg/kg)

Entry 23 of Commission Regulation (EU) No 835/2012, (EU) No 494/2011 and (EU) 2016/217 amending Annex XVII of REACH Regulation (EC) No 1907/2006 - Cadmium(Cd)

Test Method : With reference to EN 1122: 2001, Method B, analysis was performed by AAS.

Test Item(s)	Unit	MDL	*6+7+8*
Cadmium (Cd)	mg/kg	5	**ND**
Comment			**PASS**

Notes :

RL (Reporting limit): 5 mg/kg
ND = Not Detected(< RL)
Requirement: 100 mg/kg

Entry 46a of Commission Regulation (EU) 2016/26 amending Annex XVII of REACH Regulation (EC) No 1907/2006 - Nonylphenol Ethoxylates(NPEOs)

Test Method: With reference to ISO 18254-1:2016, analysis was performed by LC-MS

Test Item(s)	Unit	MDL	*1+2+3*	*4+5*
Nonylphenol ethoxylates (NPEOs)	mg/kg	30	**ND**	**ND**
Comment			**PASS**	**PASS**

Notes :

RL (Reporting limit) :30 mg/kg
ND = Not Detected(< RL)
Requirement: 100 mg/kg

European Regulation POPs (EU) 2019/1021 - Short Chain Chlorinated Paraffins (SCCP)

Test Method : With reference to ISO 18219: 2015, analysis was performed by GC-NCI-MS / GC-ECD.

Test Item(s)	Unit	MDL	*6+7+8*
Alkanes C10-C13, chloro (short-chain chlorinated paraffins) (SCCPs)	mg/kg	50	**ND**
Comment			**PASS**

Notes :

RL (Reporting limit): 50 mg/kg
ND = Not Detected(< RL)
Requirement: 1500 mg/kg

Entry 51 of Commission Regulation (EU) 2018/2005 amending Annex XVII Regulation (EC) No 1907/2006 - Phthalates

Test Method : With reference to EN14372: 2004. Analysis was performed by GC-MS.

Test Item(s)	CAS_NO	Unit	MDL	*6+7+8*
Dibutyl Phthalate (DBP)	84-74-2	mg/kg	30	**ND**
Benzylbutyl Phthalate (BBP)	85-68-7	mg/kg	30	**ND**
Bis(2-ethylhexyl) Phthalate (DEHP)	117-81-7	mg/kg	30	**ND**
Diisobutyl Phthalate (DIBP)	84-69-5	mg/kg	30	**ND**
Total (DBP + BBP + DEHP+DIBP)	-	mg/kg	30	**ND**
Comment				**PASS**

Notes :

RL (Reporting limit): 30 mg/kg (each)
ND = Not Detected(< RL)
Requirement: Total (BBP+DBP+DEHP+DIBP) <1000 mg/kg

Entry 43 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 - Azo Dyes(Direct reduction approach)

Test Method : According to EN ISO 14362-1:2017, analysis was performed by GC-MS/ HPLC-DAD. Determination of 4-aminoazobenzene (CAS No.:60-09-3) – EN ISO 14362-3:2017, analysis was performed by GC-MS/ HPLC-DAD.

Test Item(s)	CAS_NO	Unit	MDL	*1+5*
4-Aminobiphenyl	92-67-1	mg/kg	5	**ND**
Benzidine	92-87-5	mg/kg	5	**ND**
4-chloro-o-toluidine	95-69-2	mg/kg	5	**ND**
2-naphthylamine	91-59-8	mg/kg	5	**ND**
o-aminoazotoluene	97-56-3	mg/kg	5	**ND**
5-nitro-o-toluidine / 2-Amino-4-nitrotoluene	99-55-8	mg/kg	5	**ND**
4-chloroaniline	106-47-8	mg/kg	5	**ND**
4-methoxy-m-phenylenediamine / 2,4-Diaminoanisole	615-05-4	mg/kg	5	**ND**
4,4'-diaminodiphenylmethane	101-77-9	mg/kg	5	**ND**
3,3'-dichlorobenzidine	91-94-1	mg/kg	5	**ND**
3,3'-dimethoxybenzidine	119-90-4	mg/kg	5	**ND**
3,3'-dimethylbenzidine	119-93-7	mg/kg	5	**ND**
4,4'-methylenedi-o-toluidine/3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	mg/kg	5	**ND**
p-cresidine	120-71-8	mg/kg	5	**ND**
4,4'-methylene-bis-(2-chloroaniline)	101-14-4	mg/kg	5	**ND**
4,4'-oxydianiline	101-80-4	mg/kg	5	**ND**
4,4'-thiodianiline	139-65-1	mg/kg	5	**ND**
o-toluidine	95-53-4	mg/kg	5	**ND**
4-methyl-m-phenylenediamine / 2,4-Toluylendiamine	95-80-7	mg/kg	5	**ND**
2,4,5-trimethylaniline	137-17-7	mg/kg	5	**ND**
4-aminoazobenzene	60-09-3	mg/kg	5	**ND**
O-Anisidine	90-04-0	mg/kg	5	**ND**
Comment				**PASS**

Notes :

RL (Reporting limit): 5 mg/kg (for individual compound)

ND = Not Detected(< RL)

Requirement: 30 mg/kg (for individual compound)

(1)Method A is direct reduction, direct reduction refers to the extraction and reduction according to ISO 14362-1:2017 clause 10.2 and relevant clauses. Method B is colorant extraction, colorant extractionrefers to the colourant extraction and subsequent reduction according to ISO 14362-1:2017 clause 10.1 and relevant clauses.(2)The ISO 14362-1:2017 methods will enable further cleavage of 4 aminoazobenzene to non forbidden amines: aniline and 1,4 phenylenediamine, therefore, the test method of ISO

14362-3:2017 was employed to verify the presence of 4 aminoazobenzene.

(3) Max. limit specified by entry 43 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2002/61/EC).

(4)Whenever 4-aminodiphenyl (CAS number 92-67-1), 2-naphylamine (CAS number 91-59-8) and 4-methoxy-m-phenylene-diamine (CAS number 615-05-4) is found, the use of banned azo colorants cannot be reliably ascertained without additional information, e.g. the chemical structure of the colorants used. In case polyurethane materials are used, e.g. PU foams and coatings and in prints, it cannot be ruled out that certain amines, e.g. 4,4'-methylene-dianiline (MDA, CAS number 101-77-9) and 2,4-toluylen-diamine (TDA, CAS number 95-80-7) are released from the PU component and not from a banned azo colorant. In case of pigment prints care has to be taken that 4,4'-methylene-dianiline (MDA, CAS number 101-77-9) is not released from a source of banned azo colorants but from e.g. a chemical fixing agent.

Entry 43 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 - Azo Dyes(Colorant extraction approach)

Test Method : According to EN ISO 14362-1:2017, analysis was performed by GC-MS/ HPLC-DAD. Determination of 4-aminoazobenzene (CAS No.:60-09-3) – EN ISO 14362-3:2017, analysis was performed by GC-MS/ HPLC-DAD.

Test Item(s)	CAS_NO	Unit	MDL	*1+5*
4-Aminobiphenyl	92-67-1	mg/kg	5	**ND**
Benzidine	92-87-5	mg/kg	5	**ND**
4-chloro-o-toluidine	95-69-2	mg/kg	5	**ND**
2-naphthylamine	91-59-8	mg/kg	5	**ND**
o-aminoazotoluene	97-56-3	mg/kg	5	**ND**
5-nitro-o-toluidine / 2-Amino-4-nitrotoluene	99-55-8	mg/kg	5	**ND**
4-chloroaniline	106-47-8	mg/kg	5	**ND**
4-methoxy-m-phenylenediamine / 2,4-Diaminoanisole	615-05-4	mg/kg	5	**ND**
4,4’-diaminodiphenylmethane	101-77-9	mg/kg	5	**ND**
3,3’-dichlorobenzidine	91-94-1	mg/kg	5	**ND**
3,3’-dimethoxybenzidine	119-90-4	mg/kg	5	**ND**
3,3’-dimethylbenzidine	119-93-7	mg/kg	5	**ND**
4,4'-methylenedi-o-toluidine/3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	mg/kg	5	**ND**
p-cresidine	120-71-8	mg/kg	5	**ND**
4,4’-methylene-bis-(2-chloroaniline)	101-14-4	mg/kg	5	**ND**
4,4’-oxydianiline	101-80-4	mg/kg	5	**ND**
4,4’-thiodianiline	139-65-1	mg/kg	5	**ND**
o-toluidine	95-53-4	mg/kg	5	**ND**
4-methyl-m-phenylenediamine / 2,4-Toluylendiamine	95-80-7	mg/kg	5	**ND**
2,4,5-trimethylaniline	137-17-7	mg/kg	5	**ND**
4-aminoazobenzene	60-09-3	mg/kg	5	**ND**
O-Anisidine	90-04-0	mg/kg	5	**ND**
Comment				**PASS**

Notes :

RL (Reporting limit): 5 mg/kg (for individual compound)

ND = Not Detected(< RL)

Requirement: 30 mg/kg (for individual compound)

(1)Method A is direct reduction, direct reduction refers to the extraction and reduction according to ISO 14362-1:2017 clause 10.2 and relevant clauses. Method B is colorant extraction, colorant extractionrefers to the colourant extraction and subsequent reduction according to ISO 14362-1:2017 clause 10.1 and relevant clauses.(2)The ISO 14362-1:2017 methods will enable further cleavage of 4 aminoazobenzene to non forbidden amines: aniline and 1,4 phenylenediamine, therefore, the test method of ISO

14362-3:2017 was employed to verify the presence of 4 aminoazobenzene.

(3) Max. limit specified by entry 43 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2002/61/EC).

(4)Whenever 4-aminodiphenyl (CAS number 92-67-1), 2-naphylamine (CAS number 91-59-8) and 4-methoxy-m-phenylene-diamine (CAS number 615-05-4) is found, the use of banned azo colorants cannot be reliably ascertained without additional information, e.g. the chemical structure of the colorants used. In case polyurethane materials are used, e.g. PU foams and coatings and in prints, it cannot be ruled out that certain amines, e.g. 4,4'-methylene-dianiline (MDA, CAS number 101-77-9) and 2,4-toluylen-diamine (TDA, CAS number 95-80-7) are released from the PU component and not from a banned azo colorant. In case of pigment prints care has to be taken that 4,4'-methylene-dianiline (MDA, CAS number 101-77-9) is not released from a source of banned azo colorants but from e.g. a chemical fixing agent.

Entry 20 of Regulation (EC) No 276/2010 amending Annex XVII of REACH Regulation (EC) No 1907/2006 - Organotin Compounds

Test Method : SGS In-house method (GZTC CHEM-TOP-031, with reference to ISO 17353:2004), analysis was performed by GC-MS

Test Item(s)	Unit	MDL	*1+2+3*	*4+5*	*6+7+8*
Dibutyl tin (DBT) by weight of Tin	mg/kg	100	**ND**	**ND**	**ND**
Dioctyl tin (DOT) by weight of Tin	mg/kg	100	**ND**	**ND**	**ND**
Tributyl tin (TBT) by weight of Tin	mg/kg	100.00	**ND**	**ND**	**ND**
Triphenyl tin (TPhT) by weight of Tin	mg/kg	100.00	**ND**	**ND**	**ND**
Tricyclohexyltin (TCyT) by weight of Tin	mg/kg	100.00	**ND**	**ND**	**ND**
Trioctyltin (TOT) by weight of Tin	mg/kg	100.00	**ND**	**ND**	**ND**
Tripropyltin (TPT) by weight of Tin	mg/kg	100	**ND**	**ND**	**ND**
Trimethyltin(TMT) by weight of Tin	mg/kg	100.00	**ND**	**ND**	**ND**
Σ of Tri substituted organotin compounds calculated as tin	mg/kg	100	**ND**	**ND**	**ND**
Comment			**PASS**	**PASS**	**PASS**

Notes :

RL (Reporting limit): 100 mg/kg (for individual compound)
ND = Not Detected (< RL)
Requirement:
Tri substituted Organotin compound (TBT,TPhT,TCyT,TPT,TOT,TMT): 1000 mg/kg by weight of tin (sum)
DBT: 1000 mg/kg by weight of tin
DOT: 1000 mg/kg by weight of tin

Entry 50 of Commission Regulation (EU) No 1272/2013 amending Annex XVII of REACH Regulation (EC) No 1907/2006 - Polycyclic Aromatic Hydrocarbons(PAHs)

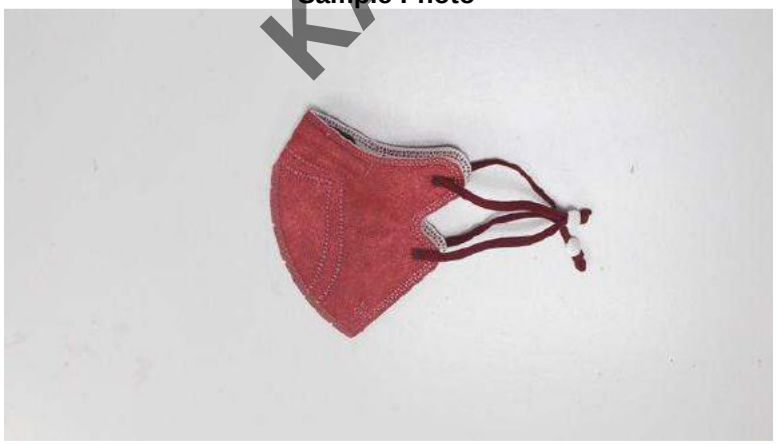
Test Method : With reference to AfPS GS 2019:01 PAK, analysis was performed by GC-MS.

Test Item(s)	CAS_NO	Unit	MDL	*7+8*
Benzo(a)anthracene(BaA)	56-55-3	mg/kg	0.1	**ND**
Chrysene(CHR)	218-01-9	mg/kg	0.1	**ND**
Benzo(b)fluoranthene(BbF)	205-99-2	mg/kg	0.1	**ND**
Benzo(j)fluoranthene(BjF)	205-82-3	mg/kg	0.1	**ND**
Benzo(k)fluoranthene(BkF)	207-08-9	mg/kg	0.1	**ND**
Benzo(a)pyrene(BaP)	50-32-8	mg/kg	0.1	**ND**
Benzo(e)pyrene(BeP)	192-97-2	mg/kg	0.1	**ND**
Dibenzo(a,h)anthracene(DBA)	53-70-3	mg/kg	0.1	**ND**
Comment				**PASS**

Notes :

RL (Reporting limit): 0.1 mg/kg (each)
ND = Not Detected(< RL)
Requirement: 1 mg/kg (each)

Sample Photo



The statement of conformity in this test report is only based on measured values by the laboratory and does not take their uncertainties into consideration.

End of Report

天纺标检测认证股份有限公司
TianFangBiao Standardization Certification & Testing Co.,Ltd.

国家服装质量监督检验中心（天津）
National Clothing Quality Inspection & Supervision Center(Tianjin)
国家针织产品质量监督检验中心
National Knitted Product Quality Inspection & Supervision Center

检验检测报告
Test Report

TTTS-WT20226965

客户提供信息及要求 Information Provided by Client	委托单位/地址 Applicant	惠州博文制造有限公司 Huizhou Bowen Manufacturing Limited 广东省惠州市博罗县园洲镇下南村新南一路 Xinnan 1st Road, Xianan Village, Yuanzhou Town, Boluo County, Huizhou City, Guangdong Province, P.R.China	送样人：/ Contact 电话：Tel. /	
	生产单位/地址 Manufacturer	惠州博文制造有限公司 Huizhou Bowen Manufacturing Limited 广东省惠州市博罗县园洲镇下南村新南一路 Xinnan 1st Road, Xianan Village, Yuanzhou Town, Boluo County, Huizhou City, Guangdong Province, P.R.China		
	样品信息 Information of Submitted Sample	样品名称：儿童防护口罩 Sample Name Junior Protective Respirator 样品总数：80个 Sample Count 80Pieces 号型规格：折叠型口罩 Size FOLD MASK 质量等级：/ Quality Grade	商标：KAZE Trademark 颜色：/ Colour 安全类别：/ Safety Category	
		产品款号或货号：2020-08 Style No. or Order No.		
	判定标准：Test Standards	GB/T 38880-2020 儿童口罩技术规范（防护口罩） Technical specification of children mask (Protective Mask)		
样品描述 Test Part Description		见第2页 See Page 2		
检验性质 Test Type	委托检验 Commission Test	样品接收日期 Date of Submission	2020-08-12	报告发布日期 Date of Checking 2020-08-19
检验日期 Test Date	2020-08-12 到 To 2020-08-19			
执行标准 Test Standards	见附页 See next page(s)			
检验结论 Conclusion	检验结果及符合性见附页。 Test results and compliance refer to next page(s). 检验单位盖章 Stamp of Inspection Unit			
备注 Remarks	何振签字领域：微生物检测项目；单学蕾签字领域：除微生物检测项目以外的全部检测项目。 Signature Field of He Zhen:Microbe test item;Signature Field of Shan Xuelei:All test items except for Microbe test item. 客户要求颗粒物过滤效率测试初始过滤效率，并按GB/T 38880-2020标准判定。 As per client's request, the initial filtration efficiency is tested for particle Filtration Efficiency, and judged according to the standard GB/T 38880-2020.			

KAZE

天纺标检测认证股份有限公司 检测专用章

批准：Approver 审核：Checker 编制：Editor

样品描述Test Part Description

01# 口罩-酒红色Mask-Wine
02# 口罩-浅灰色Mask-Light Grey
03# 口罩-粉色Mask-Pink
04# 口罩-浅蓝色Mask-Light Blue
05# 口罩-玫红色Mask-Rose
06# 口罩-橙色Mask-Orange
07# 口罩-红色Mask-Red
08# 口罩-深蓝色Mask-Dark Blue
09# 口罩-米黄色Mask-Beige
10# 口罩-绿色Mask-Green
11# 口罩-紫色Mask-Purple
12# 口罩-深绿色Mask-Dark Green

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检测项目 Test Items	项目描述 Description	单位 Unit	标准值 Standard Requirement	实测值 Results	评价 Conclusions	执行标准/备注 Test Method/ Remarks
01# 口罩-酒红色Mask-Wine						
甲醛含量 Formaldehyde Content	/	mg/kg	≤20	未检出 (低于检出限20mg/kg) Undetected (< 20mg/kg)	符合 Pass	GB/T 2912.1-2009
02# 口罩-浅灰色Mask-Light Grey						
pH值 pH Value	氯化钾萃取 KCl Extract	/	4.0～7.5	6.4	符合 Pass	GB/T 7573-2009
03# 口罩-粉色Mask-Pink						
外观质量要求 Appearance Quality Requirement	/	/	口罩与皮肤直接接触的内层材料不应印花或者染色；口罩不应存在外露金属物，表面不应有破损、油污斑渍、变形及其他明显的缺陷 The material of the mask contact in the skin should not be dyeing or printing, the mask should have no exposed metal matters,and have no damage,oil stain, deformation and other obvious defects on the surface.	+	符合 Pass	GB/T 38880-2020*
04# 口罩-浅蓝色Mask-Light Blue						

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检测项目 Test Items	项目描述 Description	单位 Unit	标准值 Standard Requirement	实测值 Results	评价 Conclusions	执行标准/备注 Test Method/ Remarks
可迁移性荧光增白物 Transferable Fluorescent Brighteners	荧光增白剂 C.I.220 Fluorescent Brightener C.I.220	mg/kg	不得检出 Not Detected	未检出 (低于检出限70mg/kg) Undetected (< 70mg/kg)	符合 Pass	FZ/T 01137-2016
	荧光增白剂 C.I.85 Fluorescent Brightener C.I.85	mg/kg	不得检出 Not Detected	未检出 (低于检出限40mg/kg) Undetected (< 40mg/kg)		
	荧光增白剂 C.I.113 Fluorescent Brightener C.I.113	mg/kg	不得检出 Not Detected	未检出 (低于检出限40mg/kg) Undetected (< 40mg/kg)		
	荧光增白剂 C.I.351 Fluorescent Brightener C.I.351	mg/kg	不得检出 Not Detected	未检出 (低于检出限1mg/kg) Undetected (< 1mg/kg)		
	荧光增白剂 C.I.71 Fluorescent Brightener C.I.71	mg/kg	不得检出 Not Detected	未检出 (低于检出限20mg/kg) Undetected (< 20mg/kg)		
	荧光增白剂 C.I.162 Fluorescent Brightener C.I.162	mg/kg	不得检出 Not Detected	未检出 (低于检出限10mg/kg) Undetected (< 10mg/kg)		
	荧光增白剂 C.I.140 Fluorescent Brightener C.I.140	mg/kg	不得检出 Not Detected	未检出 (低于检出限4mg/kg) Undetected (< 4mg/kg)		
	荧光增白剂 C.I.135 Fluorescent Brightener C.I.135	mg/kg	不得检出 Not Detected	未检出 (低于检出限1mg/kg) Undetected (< 1mg/kg)		
	荧光增白剂 C.I.199 Fluorescent Brightener C.I.199	mg/kg	不得检出 Not Detected	未检出 (低于检出限2mg/kg) Undetected (< 2mg/kg)		

05# 口罩-玫红色Mask-Rose

检测项目 Test Items	项目描述 Description	单位 Unit	标准值 Standard Requirement	实测值 Results	评价 Conclusions	执行标准/备注 Test Method/ Remarks
颗粒物过滤效率 Particle Filtration Efficiency	/	%	≥95	初始过滤效率 Initial Filtration Efficiency: 未预处理样品 Samples Without Pretreatment: 1：99.2 2：99.3 3：99.1 4：99.3 5：99.2 预处理样品 Samples With Pretreatment: 1：99.6 2：99.3 3：99.8 4：98.9 5：99.2 最小值Minimum：98.9	符合 Pass	GB/T 32610-2016
06# 口罩-橙色Mask-Orange						
鼻夹长度 Nose Clip Length	/	cm	≥5.5	8.5	符合 Pass	GB/T 38880-2020*
07# 口罩-红色Mask-Red						
鼻夹耐折性 Flexing Resistance of Nose Clip	/	/	不应断裂 Should not break	+	符合 Pass	GB/T 38880-2020*
08# 口罩-深蓝色Mask-Dark Blue						
口罩带及口罩带与口罩体的连接处断裂强力 Breaking Strength of The Mask Belt and The Joint Between The Mask Belt and The Mask Body	/	N	≥15	35	符合 Pass	GB/T 32610-2016
09# 口罩-米黄色Mask-Beige						
阻燃性能 Flame Retardation Properties	/	s	≤5	0	符合 Pass	YY 0469-2011
10# 口罩-绿色Mask-Green						

检测项目 Test Items	项目描述 Description	单位 Unit	标准值 Standard Requirement	实测值 Results	评价 Conclusions	执行标准/备注 Test Method/ Remarks
尖端和边缘锐利性 Sharp Points and Sharp Edges	/	/	不应存在可触及的锐利尖端和锐利边缘 Touchable sharp points and sharp edges are not allowed	不存在可触及的锐利尖端和锐利边缘 Have no touchable sharp points and sharp edges	符合 Pass	GB/T 31702-2015
11# 口罩-紫色Mask-Purple						
微生物 Microbe	大肠菌群 Coliform Group	/	不得检出 Not Detected	未检出 Undetected	符合 Pass	GB 15979-2002
	致病性化脓菌（绿脓杆菌）Pathogenic Pyogenic Bacteria (Pseudomonas Aeruginosa)	/	不得检出 Not Detected	未检出 Undetected		
	致病性化脓菌（金黄色葡萄球菌）Pathogenic Pyogenic Bacteria(Staphylococcus Aureus)	/	不得检出 Not Detected	未检出 Undetected		
	致病性化脓菌（溶血性链球菌）Pathogenic Pyogenic Bacteria (Hemolytic Streptococcus)	/	不得检出 Not Detected	未检出 Undetected		
	真菌菌落总数 Total Counts of Fungal Colonies	cfu/g	≤100	<20		
	细菌菌落总数 Total Counts of Bacterial Colonies	cfu/g	≤200	<20		
12# 口罩-深绿色Mask-Dark Green						

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检测项目 Test Items	项目描述 Description	单位 Unit	标准值 Standard Requirement	实测值 Results	评价 Conclusions	执行标准/备注 Test Method/ Remarks
甲醛含量 Formaldehyde Content	/	mg/kg	≤20	未检出 (低于检出限20mg/kg) Undetected (< 20mg/kg)	符合 Pass	GB/T 2912.1-2009

表中“+”为符合标准要求，“×”表示不符合标准要求。
+ Meet the standard requirements, X Not Meet the standard requirements.
“*”表示不在CNAS、CMA、CAL授权范围内。
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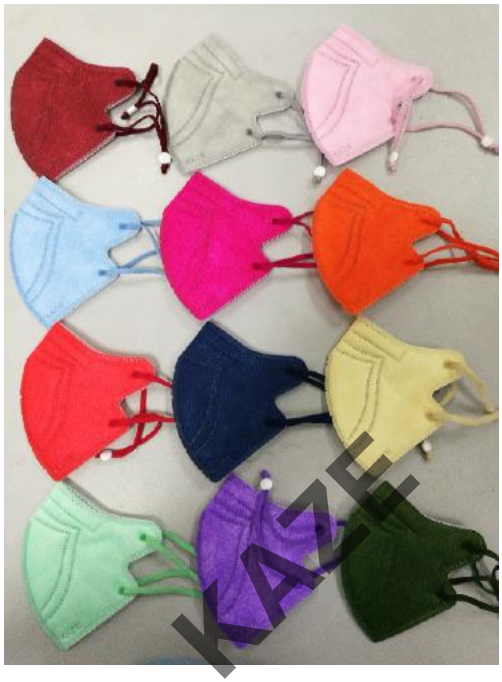
样 品 Sample



检验检测报告
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POINTS FOR ATTENTION

1.检验报告无“检验专用章”无效。
Report is invalid without stamp of "special seal for the test report".

2.复制报告未重新加盖“检验专用章”无效。
Copy report is invalid without re-stamp of "special seal for the test report".

3.报告无编写、审核、批准人签字无效。
Report is invalid without collective signatures by editor, checker and approver.

4.检验报告涂改无效。
Report is invalid if altered.

5.检验报告或复制报告未加盖骑缝章无效（报告页数多于1页时）。
Report and copy report is invalid without stamp of “Paging Seal” (When the page number more than 1).

6.委托检验仅对来样负责，不承担其他连带责任。
Unless otherwise stated the results shown in this report refer only the sample(s) tested.

7.对于检验结果若有异议，应于收到报告之日起十五日内向本机构提出，逾期不予受理。
Objection should be issued in 15 days upon receiving the report, overdue opinion is inadmissible.

8.未经本机构书面批准，部分复制报告无效。
Part copy report is invalid without the approval of the written documents of the testing organization.

----------报告结束 End of report----------

注意事项以中文为准The English edition is for reference only

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