



INSTITUT PRO TESTOVÁNÍ A CERTIFIKACI, a. s.

třída Tomáše Bati 299, Louky, 763 02 Zlín, Czech Republic

Testing Laboratory No. 1004

accredited by ČIA according to ČSN EN ISO/IEC 17025:2018



Testing laboratory * Calibration laboratory * Product certification body * Management systems certification body
Inspection body * Authorized body * Notified body

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ACCREDITED LABORATORY TEST REPORT ref. No. 462204624-02

Client: SPUR a.s.
VAT No.: CZ46900098

Address: Třída Tomáše Bati 299, Louky, 763 02 Zlín, Czech Republic

Sample: Face mask, see page 2

Sample received on: November 11, 2021

Report elaborated by: Ing. Martin Juříčka, Ph.D.

Place and date of issue: Zlín, January 31, 2022



Ing. Jiří Samsonek, Ph.D.
Head of Testing Laboratory

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Description and identification of samples:

Table No. I - Sample description and identification

ITC's identification number	Sample identification by client	Description of submitted sample
462204624/01	Name of product: Face mask, respirator, type "NANOSÍK" (respirator with nose bridge and 2elastic bands), marking and 5layer. Samples were packed together (see Fig. 1 - left and in the middle).	Face mask, respirator, type "NANOSÍK" (respirator with nose bridge, 2elastic bands and white).. Samples were packed together (see Fig. 1 - left and in the middle).
462204624/02	Name of product: Face mask, respirator, type "NANOSÍK" (respirator with nose bridge and 2elastic bands), and 5layer. Samples were packed separately (see Fig. 1 – right).	Face mask, respirator, type "NANOSÍK" (respirator with nose bridge, 2elastic bands and white).., 5layer. Samples were packed separately (see Fig. 1 – right).



Fig. 1 - Sample No. 462204624/01 (face mask in packaging – left and in the middle), and sample No. 462204624/02 (separately packaging – right)

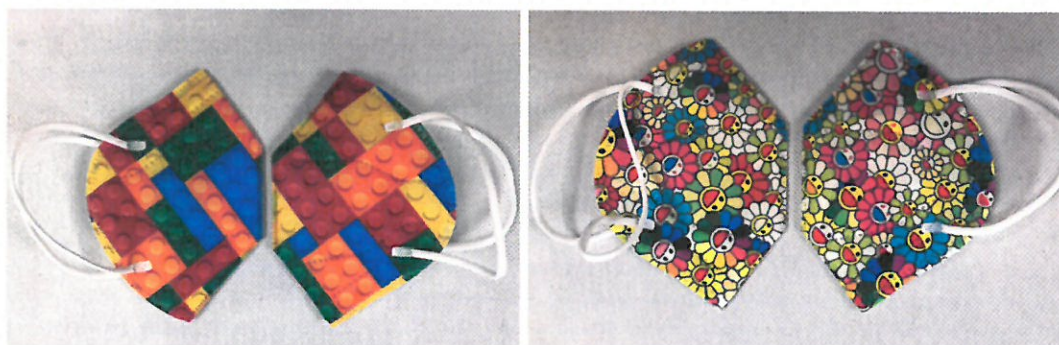


Fig. 2 - Sample No. 462204624/01 - colour versions

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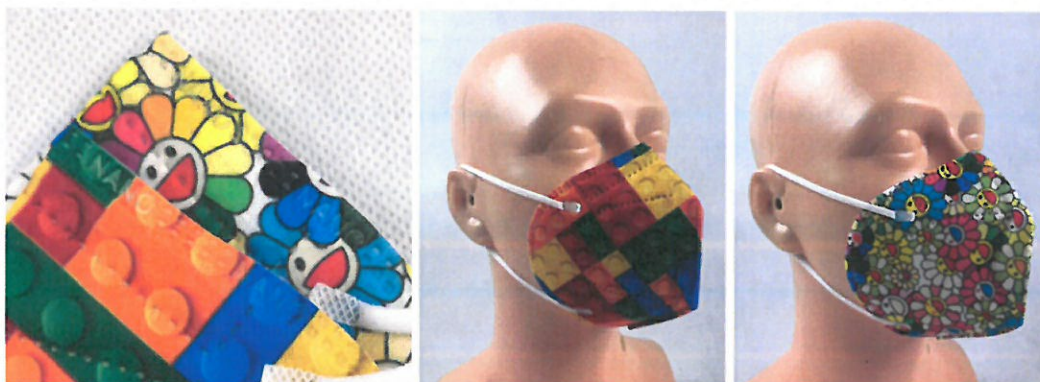


Fig. 3 - Sample No. 462204624/01 – symbol on the face mask „NANO“ (left), presentation face mask on the head of figure (middle and right)

Sampling method used:

The test sample was collected and supplied to the laboratory by the client. The laboratory is not responsible for this way of sampling

Work requested:

Determination of selected physical-mechanical properties – Medical face mask testing

Testing method used:

1. Testing the properties of medical mask – Material, construction and design acc. internal test specification ITC No. P-20-25 (requirement ČSN EN 14638+AC, 5.1)
2. Determination of bacterial filtration efficiency ČSN EN 14638+AC, (clause 5.2.2 – *sub-delivery*)
3. Determination of microbial cleanliness acc. to SOP 11737-1 (EN 14638+AC, 5.2.5 – *sub-delivery*)

Test conditions:

- | | |
|--|--|
| 1. Samples conditioning | NO (deviation from the standard) |
| Face sizes | S/M, L, XL |
| No. of tested specimens | 5 (deviation from the standard, test was realized on the others persons than in ITC) |
| 2. No. of tested specimens | 5 |
| Tested area | 50 cm ² |
| Samples conditioning | (23±5)°C; (85±5)% R.h.; min 4 h |
| Side of the mask in contact with the bacterial challenge | Inner side |
| Challenge bacterial strain used | Staphylococcus aureus ATCC6538 |
| CFU of test suspension: | 5.5 x 10 ⁵ /ml |
| Incubation | 48h / (36±1)°C |
| Flow rate | 28,3 min |
| Positive control | total count of colony – 2positive control = 1313 cfu and 1345 cfu |
| Negative control | total count of colony – 1negative control = 0 cfu |
| 3. No. of tested specimens | 5 |
| Extraction time | 5 min |
| Others test conditions | acc. to report No. B 25515 |
| Extract medium | Peptone 1g/l, NaCl 5g/l, Tween20 2g/l |
| Volume of extract | 300 ml |
| Technique | Membrane / filtration |

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Volume of filtration 100 ml
Cultivate medium TSA (Tryptic Soy Agar)
SDA (Sabouraud Dextrose Agar with chloramphenicol)
Incubation 3 days / 30°C (TSA); days / 20-25°C (SDA)
Sampling Acc. ČSN EN 14683+AC (dle Annex D.1)

The laboratory is not responsible for information received from customer, which could have influence on the validity of the results. Further information required by standards and not given in this Test Report are available at a request at the Laboratory.

Testing laboratory:

Test no. 1 Workplace No. 2, třída Tomáše Bati 5264, Svit premises, building No. 113,
760 01 Zlín, Czech Republic.
Test no. 2 Sub-delivery TBU Zlín (The results were took up from Test Report no. 2021_040
BFE, issued 18. 11. 2021)
Test no. 3 Sub-delivery TBU Zlín (The results were took up from Test Report no. 2022_0002,
Microbial cleanliness issued 31. 01. 2022)

Test result:

The test results are given in the following table:

Table No. II – Results of visual check – sample 462204624/01

Test		Results
Visual control	Description of construction ¹⁾	Polygon shape Dimensions (132x90)mm Folded: no Nose bridge: yes
	Method of fixing the mask on the face ¹⁾	2 elastic bands on the shorter sides of rectangle
	Mask structure ¹⁾	5 layers; fixed on edges acc. Fig.No.2
	Other characteristics ¹⁾	Face masks in two colour version (surface with LEGO motive and FLOWER motive)

¹⁾ acc. P-20-25



Fig. 4 – Picture of sample No. 462204624/01

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Table No. III – Results of visual check – sample 462204624/01

Test	Testing person with face size ¹⁾ :	Visual and function evaluation after 5 application
Practical test of cohesion	Girl; 3 years old	Mask without defect
	Boys; 7 and 9 years old	Mask without defect
	Girl and Boy; 12 years old	Mask without defect, non-comfortable and short elastic ban, mask is very tight on the face

¹⁾ acc. P-20-25

Table No. IV – Results for practical application – sample 462204624/01

Test	Testing person with face size ¹⁾ :	Evaluation of the test
Practical test of fixing mas on face and head of testing person	Girl; 3 years old	Attaching the face mask: The mask holds firmly on head and face. Mask does not deform unnaturally under various movements of head, does not fall down to chin or does not move towards eyes. Mask tightness on face: The mask copies shape of face. When inhaling and exhaling, most of air passes through mask
	Boys; 7 and 9 years old	Attaching the face mask: The mask holds firmly on head and face. Mask does not deform unnaturally under various movements of head, does not fall down to chin or does not move towards eyes. Mask tightness on face: The mask copies shape of face. When inhaling and exhaling, most of air passes through mask
	Girl and Boy; 12 years old	Attaching the face mask: The mask holds firmly on head and face. Mask does not deform unnaturally under various movements of head, does not fall down to chin or does not move towards eyes. Mask tightness on face: The mask copies shape of face. When inhaling and exhaling, most of air passes through mask

¹⁾ acc. P-20-25

Table No. V – Results for bacterial efficiency test – sample 462204624/01

Specimen No.	Unit	Test result
1	%	100,00
2		100,00
3		99,77
4		99,77
5		100,00
Mean Value		99,91

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Table No. VI – Result for microbial cleanliness – sample 462204624/02

Characteristics measured	Unit	Separate values ²⁾	Test result
Microbial cleanness (Total count x correction factor) ¹⁾	cfu	12, 12, 3, 0, 0	5
Microbial cleanness (Total colony forming units per unit of weight sample)	cfu/g	3, 3, 1, 0, 0	1

1) Correction factor = 3

2) Separate values are given 5 test samples

Comment on the results of the tests - beyond the scope of accreditation:

Table No. VII – Summarization of the result – samples 462204624/01 and 462204624/02

Characteristics measured	Unit	Test result	Value required ¹⁾ (For type I, II and IIR)	Evaluation
Construction and design – visual and function evaluation Samples No. 462204624/01	-	No defect ²⁾	The face mask shall not disintegrate, split or tear during intended use	Pass
Construction and design – fixing the mask on the face. Samples No. 462204624/01	-	The mask holds firmly on head and face ²⁾	Attaching and tightness on face	Pass
Bacterial filtration efficiency Samples No. 462204624/01	%	99,99	≥ 98	Pass
Cleanliness Samples No. 462204624/02	Cfu/g	1	≤ 30	Pass

1) Requirements of EN 14683 + AC

2) Results are described in tab. No. II-IV

Evaluation and comment on the results of the tests carried out by:

Ing. Martin Juříčka, Ph.D.

M.Sc. Roman Dlabaja, Ph.D.
Head of Laboratory of Physics

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