

# Market research report

## personal protective equipment for the respiratory system, eyes, face, head and hearing and medical masks

**Central Institute for Labour Protection**  
- National Research Institute

**Selected offer of tests of personal protective equipment listed in the report** (within and outside the scope of certification) **and medical masks**

### Testing of respiratory protective devices (RPD)

- COVID ATTESTATION – testing of filtering half masks for private use
- Practical performance tests and determination of the workplace protection factor for respiratory protective devices
- Tests of the operation of exhalation and inhalation valves as well as leak-tightness and strength of connections
- Flammability and thermal radiation resistance tests
- Field of vision tests (with the use of head models)
- Breathing resistance, work of breathing and peak pressure tests of RPD
- Physiological parameters of oxygen breathing apparatus tests
- Penetration tests for micro-aerosols and nano-aerosols (filtration efficiency)
- Total inward leakage tests with the use of standard NaCl aerosol, nanoaerosols and SF6
- Filtering devices testing in accordance with the new ISO standards series for RPD
- Strength tests of RPD elements
- Dolomite dust clogging tests for filtering RPD
- Tests of carbon dioxide content in the inhaled air for RPD facepieces
- Selection of respiratory protective devices for workplace conditions

### Testing of eye and face protective equipment

- Testing the temperature distribution on the surface using a thermal camera
- Testing the transmission and reflection of optical radiation of the windows used in construction (including systems actively changing the level of transmission)
- Testing of the transmission and reflection of optical radiation of glasses used in motor vehicles

### Acoustics

- Testing and selection of hearing protectors
- Determining the perception of speech sounds and the direction of incoming sounds when wearing hearing protectors
- Identification of industrial noise sources using sound visualization techniques
- Measurement of noise generated by IT and telecommunication equipment
- Measurement and evaluation of noise from sound sources placed close to the ear
- Measurement and evaluation of ultrasonic/ infrasonic noise in the working environment
- Measurement and evaluation of noise in the working environment – Determination of occupational noise exposure

- Measurement and assessment of acoustic properties of rooms, including open-space offices
- Measurement of impulse noise parameters (including attenuation of hearing protectors)
- Visualisation and evaluation of machine or equipment noise under industrial and laboratory conditions using sound visualisation techniques
- Determination of emission sound pressure levels of noise sources
- Determination of sound power levels and sound energy levels of noise sources
- Determination of sound power levels, emission sound pressure levels and directional characteristics of sound energy emission from noise sources within the frequency range of 20-40 kHz
- Determination of sound insulation of acoustic enclosures within the frequency range of 20-40 kHz

### Medical mask testing

- Medical mask testing for compliance with PN-EN-14683+AC:2019 concerning bacterial filtration efficiency, microbial cleanliness and breathing resistance



# To date no comprehensive research of the **personal protective equipment** market has been conducted in Poland. In order to assess the profitability of operations, each new market entrant must conduct this research itself.

This increases market entry time and the risk. This is the reason why the Central Institute for Labour Protection – National Research Institute, which is engaged in comprehensive activities for employee safety, considered it justified to conduct a market survey on selected personal protective equipment (PPE) and medical masks. It commissioned the company Grupa BST Sp. z o.o., based in Katowice, to conduct such a survey (on a sample of more than 200 respondents – suppliers and recipients of PPE and medical masks) in the middle of 2021.

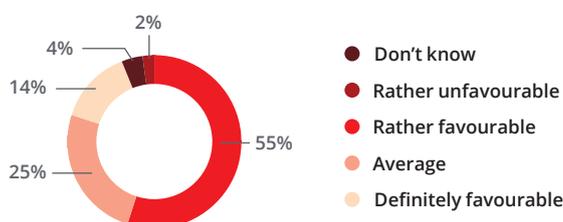
**The report identifies major suppliers** (importers, manufacturers, authorised representatives, distributors) **and recipients of PPE and medical masks, and specifies:**

- the level of competition and concentration of the PPE and medical mask market in Poland
- the volume and value of production and sale of the above-mentioned devices in Poland
- market innovation potential
- barriers to market entry and key supply chain elements
- pricing factors and factors affecting demand for the above-mentioned products
- factors affecting the behaviour of suppliers and recipients

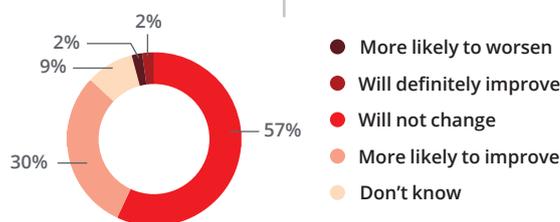
**Overall research results** (user information) **are included in the Market Research Report** while **detailed research results** (materials for manufacturers and distributors) **are included in a supplement to the above-mentioned report.**

## Personal protective equipment market

Self-assessment of suppliers' current financial position



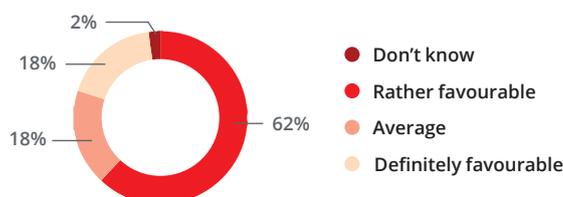
Growth forecasts



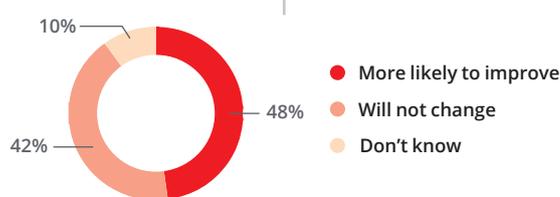
**89%** of manufacturers /distributors will improve their financial position

## Medical masks market

Self-assessment of suppliers' current financial position



Growth forecasts



**90%** of manufacturers /distributors will improve their financial position

*This paper has been based on the results of a research task carried out within the fifth stage of the National Programme "Improvement of safety and working conditions" partly supported in 2021–2022 — within the scope of state services — by the Minister responsible for labour (task no. 4.SP.24 entitled "Development of a diagnosis and forecasting trends in the development of personal and collective protective equipment market in Poland").*

**The Central Institute for Labour Protection – National Research Institute is the Programme's main co-ordinator**