## i-Pro<sup>™</sup> Personal Respiratory Protective Mask – Features and Benefits





- 1 i-Pro<sup>™</sup> has been independently tested at Nelson Laboratories in USA against the standard 42 CFR PART 84 (N95 standards) and against standard EN 149-clause 7.9.2 (FFP2) has shown to have a filtration efficiency >99%.
- 2 i-Pro<sup>™</sup> has been independently tested at a specialist microbiology laboratory facility against a clinically relevant. Bacterial and Viral challenge that clinicians may see in the clinical setting. A challenge particle is chosen to simulate the size of commonly occurring bacteria/virus. Clinically relevant testing is carried out using Bacillus subtilis (1.0µm x 0.7µm) and Ø174 bacteriophage (0.027µm).
- 3 The challenge presented in the viral test protocol (Ø174 bacteriophage, 0.027 µm) will be at least as severe as that posed by COVID-19 (0.05 0.1µm). As such, it can be concluded that i-Pro<sup>™</sup> mask filter media is expected to provide at least the same level of efficiency as reported in the independent microbiology tests when challenged with Coronavirus.
- 4 A quantative fit test can determine the quality of the seal of a mask on a person's face with a numerical result, given as "Fit Factor". The Fit Factor can be measured using a TSI portacount machine. A fit factor is defined as the ratio of substance concentration outside to inside a respirator. A Fit Factor of 100 is required for N95, FFP2 and FFP3 masks.
- 5 The standard for an FFP mask allows up to an 8% inward leakage for FFP2 masks and a 2% inward leakage for FFP3 masks. This means with an FFP2 mask, potentially 8% of the air breathed in will not be effectively filtered. Independent testing has shown the i-Pro<sup>™</sup> to have <1% inward leakage, meaning >99% all of the air you breathe, will be filtered.
- 6 It has been tested that i-Pro<sup>™</sup> has lower inhalation and exhalation resistance to flow than what required by the N95 standards.



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