

# A Comparison of Respirator Fit Factors Determined by Portable Condensation Nuclei Counting and Forward Light-Scattering Photometric Methods

Application Note ITI-020

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The purpose of this study was to compare fit factors determined by a recognized photometer quantitative fit test system (Model 264, Dynatech-Frontier Corp.) and a portable condensation nuclei counter respirator fit test instrument (PORTACOUNT, TSI Inc.). The study was performed by conducting sequential fit tests with the two methods on human subjects wearing the same respirator at the same fitting. The fit factors obtained by the two methods were compared by several statistical tests. The results of these analyses indicated that there was good agreement in determining pass/fail at a critical fit factor. It was further concluded that fit factors for groups of wearers measured by the condensation nuclei counter instrument are comparable to those obtained by the photometer method.



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