



NIOSH Docket Office
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July 20, 1994

To whom it may concern,

This letter contains comment concerning the new Proposed Rule 42 CFR Part 84 for Respiratory Protective Devices. The comment is submitted by TSI Incorporated. TSI has a diverse product line including modern instrumentation for testing filters and respirators. It is important to TSI that we are able to provide our customers with instrumentation that conforms to the new regulations and performs the new tests easily and effectively.

Comment: Concerning the 30% maximum humidity specification for filter testing in *Section 84.184*

TSI filter testers, Models 8110 and 8130 provide a sodium chloride filter test at a relative humidity of about 38 %. The RH can be reduced by increasing the drying air, however the sodium chloride challenge aerosol concentration is reduced significantly. Tests performed at TSI show that a somewhat higher RH does not change the measured penetration value for glass fiber filter media. The test data is presented below:

Relative Humidity	Penetration (normal media variability)
(%)	(%)
50.4	.484
46.3	.523
39.3	.530
34.6	.497
27.2	.505

* Filter test instrument: TSI Model 8130 photometer based filter tester

* Humidity measurement: TSI Model 8550, used in humidity measurement mode

TSI is advocating increasing the maximum RH specification to 40 %. We understand that the relative humidity may have a larger effect on penetration for types of filter material other than glass-fiber.

Thank You,

Edward Johnson
Development Engineer
TSI Incorporated

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