CONNECTICUT CENTER FOR APPLIED SEPARATIONS TECHNOLOGIES (CCAST)

Mask, Respirator & Filter Testing

The **Connecticut Center for Applied Separations Technologies (CCAST)** is offering mask, respirator, and filter testing services in Storrs, Connecticut. These services can evaluate the performance of PPE as well as other filter media intended for air and gas filtration.

Mask and respirator evaluation are performed using a sodium chloride (NaCl) or dioctyl phthalate (DOP) aerosol challenge test. This is based on the National Institute for Occupational Safety and Health (NIOSH) testing protocol. These tests provide quantitative comparison to N95 and other standards using the NIOSH standards.

The NaCl aerosol test uses a widely accepted method of challenging mask or respirators with NaCl aerosol and measuring particle retention and air flow resistance. The DOP test is used to evaluate particle retention and air flow resistance properties for a variety of filtration materials such as high efficiency particulate air (HEPA) filters.

CCAST offers these tests using a commercial automated filter tester (TSI Filter Tester Model 8130A) and an in-house built testing rig. The automated tester can test masks and filter media according to NIOSH protocols while our customized testing rig offers customized "rough cut" testing for large particle sizes (300 nm and above) following NIOSH procedure.

Our testing service pricing is provided in the table below, with NIOSH certified testing offered alongside customized testing services. If you are interested our services, please contact Jeffrey McCutcheon, Executive Director of CCAST, at jeffrey.mccutcheon@uconn.edu. For more information on the other services provided by CCAST at UConn, please visit our website at https://ccast.uconn.edu/.

Test	Costs
With TSI Instrument	
Quality control tests[1]	$577
NIOSH NaCl or DOP Test[2]	$3059
Hourly Equipment Usage Cost [3]	$158
With Customized Material Tester	
Screening Test[4]	$470

[1] Performing standard penetration NIOSH tests on one batch of sample material (useful for materials under development or with unknown efficiency)
[2] The standardized NIOSH test which requires 20 masks or 20 sample materials
[3] With minimum of 8 hours
[4] Utilizing 4-5 samples for qualitative rough-cut particle efficiency tests with larger particle sizes