

PLEASE NOTE – THE INFORMATION CONTAINED IN THIS GUIDANCE NOTE IS HISTORICAL AND MAY NOT BE THE CURRENT GUIDANCE – CHECK THE WEBSITE FOR ALL CURRENT GUIDANCE AND PROCEDURES

Mandatory face-fit testing of persons who wear respirators (masks) at work to control exposure to an inhalation hazard

Background introduction

Of the two face-fit test methods available, qualitative and quantitative, the only meaningful one is the quantitative test method, which provides a numerical measure of fit, called a 'fit factor'. The qualitative test is extremely subjective in nature and is subject to so many variables and potential interference as to be almost meaningless and indeed open to abuse. The University has therefore decided to accept only quantitative test certificates as evidence of successful face-fit test.

Occupational Hygiene Update #16 noted that we, in the Health and Safety Department, recognised that the requirements of the legislation impacts significantly on both individual Schools/Units and the University as a whole. There are substantial implications in terms of administration and financial cost, this in organising tests for all individuals with a consultancy, cost of testing, cost of suitable and varying types of respirator, provision of suitable instruction and training, and record keeping. It was therefore felt necessary to develop a University wide Policy on this aspect of compliance with the Regulations in an attempt to minimise the impact on Schools/Units; with this in mind the Occupational Hygiene Unit has purchased, at considerable cost to the Unit, a Portacount Respirator Fit Tester and has arranged for four of the Health and Safety Department's staff to be trained to 'competent person' level in both the operation of the equipment and instruction and training of respirator wearers. This, and the standardising of respirator type, has allowed us to supply a face fit service, including information and training, at an extremely favourable costing (compared to individual Schools/Units organising this separately), this is passed on to Schools/Unit as the service runs on a no profit basis.

Reasons for Standardising Respirator Types

It has been shown that, because of better and more consistent fit results and ease of operator adjustment, re-usable respirators provide a more consistent and higher degree of protection than disposable (paper mask) respirators, (and indeed some interpret HSE's intention as being to direct employers to move away from the use of disposable respirators where at all practicable).

For this reason and taking into account that costly dedicated adapters are required for the testing of each manufacturer's respirators, it has been decided that wherever possible respirator type should be standardised across the University. This approach has been fully endorsed by the Procurement Department.

In the case of persons who at present wear disposable (paper mask) or re-usable half-face respirators, the respirator of choice will now be the 3M 7500 re-usable half-face respirator. It should be noted that, in the long term, these respirators are much more adaptable, comfortable and cost efficient than disposables. P3 standard disposables retail at circa £4.00 each and require to be disposed of entirely at the close of a one-shift use, whilst reusable respirators have a slightly higher initial cost, but only the filters require to be subsequently be changed and of course, dependent on usage, one can get several weeks of use out of a set of filters. Also, should a user have need for protection against multiple hazards e.g. gases or vapours in addition to, or instead of, particulates, multi-filters can be fitted to the same respirator. Paper type disposable masks only protect against particulate hazards and protection against gases or vapours would require face-fitting to an additional and separate respirator.

The 3M 7500 is adjustable to suit the individual wearer and all components of the respirator can be replaced individually e.g. straps, seal, etc. as these components wear out, rather than having to replace the entire respirator, as is the case with most other makes. The 7500 incorporates two filters, one positioned either side of the face piece, so weight is distributed evenly and downward vision is not obscured by a central filter canister, as with some other manufacturer's respirators. Importantly, this arrangement of the filters allows microscopy work to be undertaken without impediment.

The full-face respirator chosen to standardise on is the 3M 6000 range as the same fit-testing adapters are used and, should it be required, the filters can be interchanged with those of the 3M 7500.

As a result of rationalisation to one manufacturer type and one supplier we have been able to negotiate with both companies to result in extremely favourable prices for all types of respirator quoted above.

Respirators supplied by the Occupational Hygiene Unit at the time of testing are supplied at cost. Also see section below headed 'Payment for respirators' for details of zero VAT rating for medical, veterinary and research purposes.

There may be those who currently use disposable respirators (masks) for protection against particulate hazards on an ad hoc basis of perhaps very short periods on only a few days in a year, for these exceptional cases it may be more cost effective to remain with disposable respirators. If this is the case, then standardisation is again beneficial and the respirators of choice are the 3M 9000 (fold-flat) series, or the Alpha Solway 3000 series of masks as they have proved to consistently return a higher degree of pass test results than some others.

Any queries on the selection or use of appropriate RPE for a given task should be addressed to the University Health and Safety Adviser (occupational.hygiene@ed.ac.uk).

Face fit test procedures

An individual test takes approximately 30 minutes - this involves an element of respirator fit training, which also meets a legislative requirement. The test requires some simple exercises to be undertaken whilst wearing the respirator (stepping, head movement, talking, etc.) and the equipment evaluates fit during these exercises.

Important - beards and facial hair - persons to be tested must be clean-shaven.

Face fit testing cannot legally be carried out on individuals who present for test with facial hair in the area where the respirator face seal meets the face and therefore wearers of most beards cannot wear tight fitting respirators as a means of controlling an inhalation risk. Beards or stubble in the area of the respirator seal will result in the tester refusing to test and the School/Unit will be charged at full test price for this failure to test.

There is no intention to force individuals to shave against their will, but persons who normally wear beards must not use a tight fitting respirator as a means of controlling exposure to an inhalation hazard, therefore an alternative approach to respiratory protection has to be applied in such cases! Such persons should be supplied with a positive pressure hood or prevented from coming in contact with the particular hazard that requires respiratory protective equipment to be worn. N.B. Some very small goatee type beards may allow for face-fitting, should there be any dubiety guidance can be sought from occupational.hygiene@ed.ac.uk.

If you are a *smoker* you will be required to refrain from smoking for at least one and a half hours prior to the fit test, this is because the sensitive equipment may detect particulate in exhaled breath which may result in a false failure.

Important - risk assessment and respirator wear.

It should be understood that where a risk assessment, or the operating rules of a particular Unit e.g. animal facility, has indicated the need to wear a tight fitting respirator as an exposure control measure, then the person(s) wearing such respiratory protection must, by law, be face fit tested. Failure to be face fit tested will result in the individual concerned being prevented from participating in the work that involves the inhalation hazard, or gaining access to a particular facility. Should such work proceed in breach of the Regulations, it could result in action being taken against the University, or an individual School/Unit, by the Enforcing Authorities (this has already occurred at an Further Education College in England).

The bulk of University personnel involved in respirator wear are Animal Facility users and technicians, followed by Workshop/Trades staff, Laboratory workers (especially members of spill teams), Landscape workers and specialist cleaners.

Medical Conditions

Any staff that have an existing physical or mental condition, which they feel may place them at risk when participating in practical testing should contact the Occupational Health Unit for advice (514261) e.g. cardiovascular or heart disease, acute or chronic respiratory disorders, impairment of sight or hearing, claustrophobic or acute anxiety states.

The Occupational Hygiene Unit of the University Health and Safety Department reserve the right to restrict the level of involvement in practical testing, or refuse to allow the delegate to be tested. No responsibility is accepted for injury caused by undisclosed medical conditions.

Requesting a test

Prior to requesting a test with the Health and Safety Department, ensure you have sufficient authorisation from your Head of School/Unit for the payment of the test and any respirators supplied after the test has been completed.

To request a test, email facefit.testing@ed.ac.uk with the following information;

- Your full name and email address
- Staff number
- School/Unit
- Work address, contact number and Supervisor name
- Name of eIT authoriser and School/Unit your work area comes under in the eIT system (if unsure, please contact your local Finance Administrator)
- Preferred date and time of test - we will try and accommodate special requests, however tests are normally held on a Tuesday

Please note all tests are held in the Health and Safety Department, Charles Stewart House, 9-16 Chambers Street, EH1 1HT.

Supply of respirators

The aim of this legislation is to ensure that wearers of RPE are fitted with the correct size of respirator to suit their facial size and shape, and that the respirator fits properly. It is suggested that it may be prudent for each person to be supplied with a respirator of the correct size and type, that they have been tested and passed on, at the testing session. With this in mind, we have arranged for a stock of varying sizes of 3M 7500 half-face re-usable respirators, 3M 6000 full-face respirators and the 3M 9332 and Alpha Solway 3030V disposable respirators, to be held at the site of the testing sessions

and supplied to Schools/Units at the preferred prices, via internal order to the Health and Safety Department.

Payment for testing

Each face fit test will include an element of training, as required by the legislation, on respirator fitting, wearer checks and filter selection. Schools/Units will be charged after the test has taken place and any equipment provided, see below.

Please note that if an individual does not turn up for their allocated time slot, we have no alternative other than to charge the School concerned the full rate for that test, and apply a further charge for any subsequent test, this will also be the case for persons who are refused test due to facial hair being present, or because they have been smoking within 1.5 hrs of the test.

We require at least 24 hours notice of any cancellations.

Payment for respirators

If required, candidates will be supplied with a respirator and filters suitable to their work activities at the time of test. The cost of these will subsequently be invoiced to the individual's School/Management Unit by way of an electronic Internal Order from the Health and Safety Department.

Please note that tests can not be VAT exempt as they are classed as a service.

Further queries

For queries regarding face-fit testing please see 'Frequently asked questions regarding face-fit testing' or contact occupational.hygiene@ed.ac.uk, or telephone 514255.