

## INFORMATION SHEET

### RESPIRATORY PROTECTION EQUIPMENT (RPE) FACE FIT TESTING

#### What is RPE face fit testing?

It is important to ensure that RPE fits each individual wearer correctly. As the name suggests, the performance of a tight-fitting face piece (i.e. full face mask, a half face mask, or a filtering face piece) relies heavily on the fit of the face piece to the wearer's face. An inadequate fit will significantly reduce the protection provided to the wearer.

Fit testing checks that the selected tight fitting face piece matches the person's facial features and seals adequately to the wearer's face to provide protection from inhalation hazards.

There are two basic types of RPE fit testing – qualitative and quantitative:

**Qualitative fit testing** - a pass/ fail test based on the wearer's subjective assessment of leakage (through the face seal region) of a test agent. If the wearer can taste the bitter or sweet test agent, the fit test is failed. This test is used for all tight-fitting filtering face pieces and half facemasks.

**Quantitative fit testing** – provides an objective measure of face fit. The test uses specialised equipment which can measure the number of particles entering the mask. In general this test is used to test the fit of full face masks.

#### Who should be tested?

Qualitative face fit testing should be carried out on:

- All existing staff and postgraduate research students who wear tight fitting face pieces such as disposable respirators and half masks;
- Individuals who are about to start wearing RPE in order to ensure that the respirator being considered fits correctly.

Quantitative face fit testing should be carried out on:

- All existing wearers of tight-fitting full face masks;
- Individuals who are about to start wearing full face masks to ensure that incorrectly fitting masks are not selected for use.

#### How often should people be face fit tested?

Face fit testing should be repeated at regular intervals or at appropriate times such as:

- If the RPE wearer significantly loses or gains weight, has major dental work or sustains a major facial injury;
- If a different size or model of RPE is specified;
- At 3 yearly intervals.

#### What happens during face fit testing?

##### Qualitative test

Individuals should bring their own RPE, in a clean and uncontaminated condition to the face fit test. If more than one mask is worn, it is important that the individual is fit tested for each mask (even if it is the same make and model). If an individual does not yet have RPE, a half-face test mask can be provided to determine

the right size and model of mask to suit them. If they are intending to wear disposable filtering face-pieces, the users must bring these with them.

The mask must have particulate or combination particulate and gas/ vapour filters.

The test consists of:

- Checking existing half-face masks for defects e.g. missing valves, worn straps.
- If the mask check is passed, the individual will be asked to put on/ don their mask under the observation of the tester to check that it is donned correctly, straps are tightened etc.
- Sensitivity test – the individual is asked to wear the test hood (without their RPE) and indicate when they can taste the sensitivity test solution that is sprayed inside the hood.
- Face fit test – the individual dons their RPE and the test hood and completes a series of seven routines e.g. bending forward and back or moving their head from side to side whilst the test solution is sprayed inside the hood. If all routines are completed without tasting the solution the test is passed. If at any time the solution is tasted, the test is failed and the fit tester will review the RPE, RPE seal around the face and may change the size or model of RPE and repeat the test until it is passed.

### **What records are kept?**

A record sheet is completed for each individual and will be kept for 5 years by the Health & Safety Team.

A copy of the record is sent to the individual. If the fit test is failed, a copy will also be sent to the line manager and College H&S Lead/ PSU H&S Advisor. If the test result is 'fail' and an alternative mask was not tested successfully, the individual must not continue to use a respirator until a new respirator has been selected and a successful test has been completed.

### **Arranging a face fit test**

Contact your College H&S Lead/ PSU H&S Adviser to discuss the need for a face fit test. They will advise on whether a qualitative or quantitative test is required and can refer your details over to the Scientific Safety Team. Qualitative face fit tests are completed in-house by the Occupational Hygienist/ Scientific Safety Officer. Quantitative tests will be carried out by an external company and costs re-charged to the College/ PSU.