

# Qualitative Face Fit Testing for tight fitting respirators

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Guidance for Hospitals and PCT's on establishing an in-house capability to conduct Qualitative Face Fit Testing for wearers of tight fitting disposable or re-usable respirators.

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## Introduction

Detailed information on Qualitative Fit Testing is given in the 'Guide to using the 3M Qualitative Fit Test Kit' which is available from your local 3M Representative or by calling the 3M Helpline 0870 60 800 60 and asking for literature Reference CHFTG.

This note is intended to assist Hospitals and PCT's to understand some of the key issues that need to be considered when introducing an in-house Fit Testing capability. These can be summarised as follows:

1. Who can conduct Fit Testing?
2. How many Fit Testers will I need?
3. What competencies are required of Fit Testers?
4. What support is available from 3M?
5. How do you suggest we approach training?
6. Will 3M do the training for us?
7. What facilities are needed for training?
8. Who assesses the competency of staff to conduct Fit Testing?
9. How common are fit test failures?
10. Further Information or Advice

### Appendix:

Note 1: HSE Competencies for Fit Testing

Note 2: Further reading on selection of respirators

Note 3: Details of 3M Qualitative Fit Test Kits & Spares

Note 4: List of 3M Support & Training Materials

## 1. Who can conduct Fit Testing?

- Fit Testing should be conducted by a competent person. Guidance on the competencies expected is given in para 3 below and there is a list in the Appendix to this note. You will see that achieving competency involves much more than just knowing how to use a test kit and requires commitment to a period of study and practice.

## 2. How many Fit Testers will I need?

- It is suggested that each relevant department (e.g. hospital ward) have one or more competent Fit Tester. The number needed depends on how many staff in the department need to be tested.
- One person with one kit can test around 2 to 2.5 persons per hour. A department with a large number of respirator wearers may need several testers and several test kits.
- In a large organisation with many people to be tested you may need to consider how much time any one person can reasonably devote to fit testing. This may affect your calculation of how many testers you will need.

### 3. What competencies are required of Fit Testers?

- According to guidelines issued by the Health & Safety Executive (HSE), fit testing should be conducted by a 'competent person'. The skill set suggested for a competent person includes such topics as adequate knowledge in the selection of suitable respiratory protection equipment (RPE), an ability to correctly fit the selected RPE and follow manufacturers guidelines, an ability to recognise a poorly fitting facepiece and coach others in the correct fitting procedure, an ability to recognise poorly maintained facepieces (in the case of reusable masks) and, of course, an ability to use the Fit Test kit correctly etc. (See also para 8 below).
- For full details of suggested competencies please refer to the HSE Document 282/28 which can be downloaded from [www.hse.gov.uk](http://www.hse.gov.uk) (search for document 282/28). A summary of the relevant paragraph in 282/28 is given in the Appendix at the foot of this document.

### 4. What support is available from 3M?

- 3M has comprehensive support materials to help fit testers. This includes video demonstrations of the use of the test kit, fitting videos for most 3M tight fitting respirators, and a comprehensive manual entitled 'Guide to using the 3M Qualitative Fit Test Kit' which is full of practical tips on how to set up and conduct a fit test session.. There is sufficient material available from 3M to help individuals learn how to conduct fit testing (downloadable at [www.3m.co.uk/fittestsupport](http://www.3m.co.uk/fittestsupport)) and with practice and experience, this will help become competent.
- A list of some of the 3M Training & Support Materials in the Appendix at the bottom of this document.

### 5. How do you suggest we approach training?

- Achieving competency in Qualitative Fit Testing requires an investment of time and effort by the individuals concerned. It will not be achieved in a single, short training session and it will require adequate practice in both the correct fitting of selected respirators and the use of the qualitative test kit itself. It is suggested that the steps taken to build competency should include the following:
  1. Firstly, understand the competencies required and cover these in the training (Download and study the HSE Document 282/28 on Fit Testing & competencies)
  2. Watch the 3M demonstration video on the use of the Fit Test Kit
  3. Carefully read and study the booklet entitled 'Guide to Using the 3M Qualitative Fit Test Kit'.
  4. Watch the video clip showing the fitting procedure for your *selected* 3M respirator and practice putting these on in front of a mirror until you feel competent to fit them correctly and to coach others in the correct procedures. Pay particular attention to learning and demonstrating the 'fit check' part of the fitting procedure.
  5. Know what 2<sup>nd</sup> or 3<sup>rd</sup> alternative respirator model will be offered to those who do not pass the fit test on the first (or second) model and repeat (4) above for each alternative.
  6. Ensure that you have a Fit Test Kit and samples of the various selected 3M respirators with which to practice.
  7. Continue to practice conducting Fit Tests until you are confident you can do it correctly and you can demonstrate this competency to others. This may well require several practice sessions before your first "real" test.

8. Have your competency to conduct Fit Testing recognised, certified or signed-off by an appropriate person. This could be an approved person within your own organisation or an outside provider of this service (see para 8 below).

## 6. Will 3M do the training for us?

- In some cases 3M can, by arrangement, run a training session in the use of the Qualitative Fit Test Kit and the correct fitting of 3M tight fitting respirators. *Such training should be seen as a contribution to the training of a Fit Tester and not as a comprehensive training session intended to achieve competency. It is not a substitute for in-house self-training in the use of the Fit Test Kit.*

### Prior requirements for 3M Training

Before any on-site training is conducted by 3M the following steps should have been completed and agreed. These steps ensure that the organisation is ready and properly prepared for the 3M training input:

1. 3M respirators have been selected, purchased and delivered (3M cannot train on non-3M respirators).
2. 3M Fit Test Kits have been procured and delivered.
3. The customer will provide the sample 3M respirators and Fit Test Kits to be used in the training (3M cannot undertake to provide these for everybody's training).
4. That a decision has been made on a 2<sup>nd</sup> and 3<sup>rd</sup> choice of 3M respirator (and samples or stocks of these are held).
5. Confirmation that the persons attending the training will be designated 'Train-the-trainers' and will be the people who will train other staff if more fit testers are needed. This is vital to ensure that a sustainable, in-house capability to carry out fit testing is created within the organisation. Please note that further training visits by 3M may not be possible as training priority must be given to those in greatest need who have also not yet received a 3M training visit.
6. The training will consist of an explanation of the purpose of fit testing and the competencies required, a demonstration of correct fitting of the selected 3M respirators, a demonstration of a Fit Test, discussion on the preparation and setting up of fit test sessions, and guidance on the steps needed to achieve competency as a fit tester.
7. 3M will provide selected support materials, including the relevant training videos, information leaflets and training booklets for post-training study, plus access to 3M support and 3M Helplines for further assistance.

## 7. What facilities are needed for Training?

- When in-house training includes a demonstration of Fit Testing (or the opportunity for attendees to practice fit testing on each other) you will need suitable facilities in addition to fit test kits and respirator samples. Further guidance on equipment and facilities is given in the booklet 'Guide to using the 3M Qualitative Fit Test Kit' available from 3M.

## 8. Who assesses the competency of staff to conduct Fit Testing?

- It is important to understand that it is responsibility of the fit tester's own employer to assess their competency to carry out fit testing and to provide appropriate training and support. Manufacturers such as 3M may be able to provide much of the training

material but they are not in a position to finally assess competency. That is likely to be achieved only at the end of a learning, training and practice process that may be spread over a period of days or even weeks, culminating in an assessment of competency by someone within the organisation (e.g. a Health & Safety or Occupational Health Professional) deemed qualified to perform the task.

- The British Safety Industry Federation (BSIF, [www.bsif.co.uk](http://www.bsif.co.uk)) working with the Health & Safety Executive (HSE, [www.hse.gov.uk](http://www.hse.gov.uk)), has recently launched a scheme to confirm the competency of Fit Testers. The scheme is not compulsory, and employers are free to take other action to comply with the law, but if organisations follow this scheme they will be considered to be doing enough to demonstrate good practice. Details can be found at [www.fit2fit.org](http://www.fit2fit.org).

## **9. How common are fit test failures?**

- It is impossible to design a respirator that fits everybody, so there will always be some people for whom a particular mask design or size will not give an effective seal on the face. The object of Face Fit Testing is to identify who these staff are so that they can be offered an alternative that will provide an adequate fit.
- A common cause of a failed fit test is that the person being tested did not know, or was not adequately coached, in how to correctly fit the chosen respirator in accordance with the manufacturer's instructions. This underlines the importance of Fit Testers becoming very familiar with the correct fitting procedure for every model and being able to communicate this effectively to the test subject.
- The percentage of people passing or failing the fit test on any particular respirator can vary quite a lot. It is not particularly uncommon, for example, to require up to 3 different types or sizes of respirator to achieve a good fit across a large number of respirator users.
- This means that a percentage of people will invariably need to be tested more than once. It also means that two or three alternative 3M respirators (or sizes) offering the same level of protection will need to be available to the Fit Testers. 3M can advise on the options available.
- Generally, reusable respirators (such as the 3M 7500 Series), are often found to give higher % pass rates than disposable respirators.
- Persons with beards and those who are unshaven at the start of their shift should not use tight-fitting respirators and should not be Fit Tested. The implications of this may need to be considered for certain staff. 3M Powered respirators suitable for use with beards are available.

## **10. Further Information or Advice**

**We are here to help. Please call us to discuss your needs:**

- For further assistance please contact your local 3M Representative. If you are unsure who this is please contact the 3M Occupational Health & Environmental Safety Helpline on 0870 60 800 60.

## Appendix:

**Note 1: HSE Information Note 282/28 (Para 24) on competencies of Fit Testers (Extract)**  
(Available from HSE website [www.hse.gov.uk](http://www.hse.gov.uk) and search for 282/28)

### 24. Who can conduct respirator Fit Testing?

Respiratory Protection Equipment (RPE) Fit Testing should be carried out by a competent person. To be competent the person should have adequate knowledge and have received adequate instruction and training in the following areas:

1. selection of adequate and suitable RPE
2. examination of RPE and the ability to identify poorly maintained facepieces
3. ability to correctly fit a facepiece and perform pre-use fit checks
4. ability to recognise a poor fitting facepiece
5. the purpose and applicability of fit testing; the differences between, and the appropriate use of, quantitative and qualitative fit testing methods
6. the purpose of the fit test exercises
7. preparation of facepieces for fit testing
8. how to carry out diagnostic checks on the facepiece and the fit test equipment
9. capabilities and limitations of the fit test equipment
10. how to perform a correct fit test with the chosen method
11. be aware of and know how to prevent and correct problems during fit testing
12. understand how to interpret fit test results
13. have an understanding of the differences between fit factor, workplace protection factor, assigned protection factor and nominal protection factors
14. understand HSE Regulations and the Approved Codes of Practice relating to fit testing.

### **Note 2: Further Information on selection of respirators.**

Copies of *Respiratory Protective Equipment at Work: A Practical Guide*, HSG53, ISBN 0 7176 2904 X, price £ 10.95, are available from HSE Books, PO Box 1999, Sudbury, Suffolk CO10 2WA, tel: 01787-881165 or fax: 01787-313995. Priced publications are also available from good booksellers.

### Note 3: Details of Fit Test Kits & Spares

(Available through Bunzl Healthcare or NHS Supply Chain)

#### Bitter Tasting Test Kit & Spares

Reference (Suppliers code)	NHS Supply Chain/Bunzl Healthcare Catalogue Code	Description
FT30	BTP047 /MMFT30	Fit Test Kit (Bitter)
FT31	BTP048 /MMFT31	Spare sensitivity Solution (bitter)
FT32	BTP049 /MMFT32	Spare Fit Test Solution (bitter)

#### Sweet Tasting Test Kit & Spares

Reference		Description
FT10	BTP041 /MMFT10	Fit Test Kit (Sweet)
FT11	BTP042 /MMFT11	Spare sensitivity solution (sweet)
FT12	BTP043 /MMFT12	Spare Fit Test Solution (sweet)

#### Spares common to both kits

Reference		Description
FT13	BTP044 /MMFT13	Spare nebulisers
FT14	BTP045 /MMFT14	Spare Hoods
FT15	BTP046 /MMFT15	Spare Collar

Content of Fit Test Kits (FT30 or 10)	Qty
Hood	1
Collar	1
Sensitivity Solution (bitter or sweet)	1
Fit Test Solution (bitter or sweet)	1
Nebuliser for sensitivity solution	1
Nebuliser for Fit Test Solution	1
User Instructions (printed)	1
CD Rom containing Training video	1

