

ENVIRONMENTAL CODES OF PRACTICE



Use and Maintenance of Personal Protective Equipment (PPE)

LIST OF ABBREVIATIONS

BIS	Bureau of Indian Standards
DMO	District Malaria Officer
IRS	Insecticide Residual Spray
KTS	Kala Azar Technical Support
MOIC	Medical Officer Incharge
MPW	Multipurpose Worker
MI	Malaria Inspector
MTS	Malaria Technical Support
NVBDCP	National Vector Borne Disease Control Programme
PPE	Personal Protection Equipment

ENVIRONMENTAL CODES OF PRACTICE -4 USE AND MAINTENANCE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

Table of Contents

1. INTRODUCTION	3
2. PUPROSE AND SCOPE	3
3. STATUS OF THIS CODE	3
4. DUTIES AND RESPONSIBILITIES	3
5. PERSONAL PROTECTIVE EQUIPMENTS USED IN IRS	3
5.1. NAME OF THE PPE- GLOVES	4
5.2. NAME OF THE PPE - FACE MASK	4
5.3. NAME OF THE PPE – APRON	5
5.4. NAME OF THE PPE – SHOES	5
5.5. NAME OF THE PPE – GOGGLES	5
5.6. NAME OF THE PPE – BROAD RIM HAT/CAP	5
5.7. GUIDANCE NOTES FOR USE AND MAINTENANCE OF PPE	6
5.7.1. Gloves	6
5.7.2. Face Mask	6
5.7.3. Aprons	6
5.7.4. Shoes	7
5.7.5. Hats/caps.....	7
6. REFERENCES	7

Document Revision and Approval History

(All revisions must be approved. Revision and Approval can be internal source or the client)

Version	Date	Reviewer & Approver	Remarks
V.0	27 th July 2011	Avijit Ghosh	Draft for Discussion
V.1	25 th September 2011	Avijit Ghosh	Comments of Expert Committee incorporated
V.2	20 th march 2012	Avijit Ghosh	Comments of the National Workshop
V.3	18 th July 2012	Avijit Ghosh	Illustration of ECoP

Document Distribution List

#	Name/ Company	Purpose

ECOP 4 – USE AND MAINTENANCE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. INTRODUCTION

During the handling and application of the insecticides used in the National Vector Borne Disease Control Programme, spray personnel are directly exposed to these chemicals and their hazards. The aim of the Programme is to ensure that risks from such hazards are reduced. Therefore, persons exposed to hazards have to be provided with, and trained in the use of, personal protective equipment (PPE). Separate policies and guidelines exist covering hazard control in different activities and the provisions mentioned adhered to. This document provides guidance on the use of PPE, its maintenance and on the responsibilities of various individuals associated with the Programme to implement this guidance.

2. PURPOSE AND SCOPE

The Codes of Practice have been defined to ensure that the Occupational Health Safety Aspects associated with the Programme are addressed. This Code of Practice is specially targeted towards personnel involved in Indoor Residual Spraying.

3. STATUS OF THIS CODE

The Codes of Practice are part of the Programme efforts to integrate Health Safety practices into the ambit of the Programme. This should be read in conjunction with other codes of practice which would be applicable. These Codes of Practice are not to be interpreted as statutory guidelines.

Further guidance on health and safety management is available from the Directorate at the National and State VBDCP.

4. DUTIES AND RESPONSIBILITIES

It would be the responsibility of the spray workers involved in the IRS to appropriately use the PPEs. They would also be responsible for using and maintaining the PPE. The Squad Supervisor/MI/MTS would be responsible for ensuring that the spray workers use their PPE while working. No spray worker should report to duty without proper PPE.

The respective DMO/MOIC/VBD would be responsible for making the PPEs available as per the requirement and monitoring their usage during spraying in their respective district.

5. PERSONAL PROTECTIVE EQUIPMENTS USED IN IRS

PPE (Personal Protective Equipment) is defined as “all equipment (including clothing affording protection against the weather) which is intended to be worn or held by a person at work and which protects them against one or more risks to their health or safety”. This does not include ordinary working clothes such as uniforms which do not have a specific health or

safety function. The PPE should be used over and above the normal clothing and should be worn alone.

The PPE are important and necessary consideration in ensuring safety in the programme. Once it is decided that PPE has to be used by the people associated with the programme, it becomes essential to ensure that all people associated with the programme are provided with the right kind of PPE and that they also use and maintain the same.

The PPE to be used under the programme have been defined in the following section.

5.1. NAME OF THE PPE – GLOVES

Purpose: Prevents direct exposure of hands (especially fingers) up to the wrist while handling insecticides, mainly when operators are preparing the aqueous solution and during spraying.

To be used by whom: Personnel involved in loading/unloading, the entire spray team member during spray operation, and personnel involved in the disposal of empty bags and container.

To be used when: During loading/unloading, preparation of suspension, spraying and disposal of remnants and empty containers.

Specification: Nitrile gloves of length 18 inches (upto arms length) and a thickness of 0.46 mm with diamond grip.

Life span: The gloves should be replaced when it is torn or cannot be used.



5.2. NAME OF THE PPE – FACE MASK

Purpose: Prevents direct exposure through inhalation of the insecticides.

To be used by whom: Personnel involved in loading/unloading, preparation of aqueous solution and spraying (sprayer only).

To be used when: During loading/unloading, preparation of aqueous solution and spraying.

Specification: The mask should be 3 ply, non-woven with tie-on. The mask should be fibreglass-free and latex free and should have a melt-blown polypropylene filtering media. Alternatively, cotton mask with tie-on should be provided, which would cover the nose and mouth.



Life span: The face mask should preferably be used for a period of a week. However, in case the personnel complains of suffocation, the face mask should be changed.

In case of cotton masks, the same mask should be washed every week and reused till it is worn out.

5.3. NAME OF THE PPE – APRON

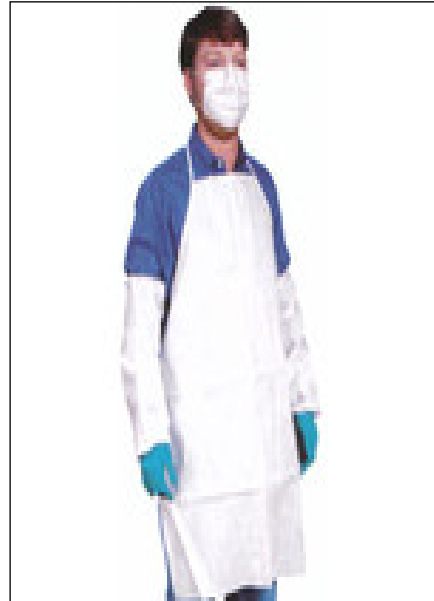
Purpose: Prevents direct exposure of the body to the insecticides.

To be used by whom: All the spray team members during spraying operation.

To be used when: During preparation of aqueous solution and spraying and also during disposal of empty bags and containers.

Specification: An apron should be worn over long sleeved shirt and full length trousers to reduce exposure from spray droplets. Aprons should be made of cotton fabric and **not plastic** and their size should 24"×36".

Life span: The apron should be washed every week and replaced when it is torn or cannot be used



5.4. NAME OF THE PPE – SHOES

Purpose: Use of covered shoes protects feet from getting exposed to insecticides during JRS & handling.

To be used by whom: Spray personnel during spraying operation.

To be used by when: During spraying activities.

Specification: Rubber shoes should be used, which would be suitable for washing and can be reused.

Life span: The shoes should be replaced when it is torn or cannot be used.



5.5. NAME OF THE PPE – GOGGLES

Purpose: Goggles reduce the chances of the operator being exposed to spray droplets.

To be used by whom: Spray personal during spraying operation.

To be used by when: During spraying activities.

Specification: As per BIS (IS: 5983:1980); soft vinyl frame with adjustable elastic head band which can be worn over personal spectacles without disturbing other safety equipment.

Life span: The goggles should be cleaned regularly. The goggles should be replaced when it is broken or cannot be used.

5.6. NAME OF THE PPE – BROAD RIM HAT/CAP

Purpose: A helmet is useful to protect the operator's head, neck and face from spray droplets.

To be used by whom: Personal involved in spraying operation.



To be used by when: During spraying activity.

Specification: The spray personnel can use broad-rimmed caps made of canvass which is washable and can be reused.

Life span: The hat should be replaced when it is torn or cannot be used.

5.7. GUIDANCE NOTES FOR USE AND MAINTENANCE OF PPE

The following are general guidance for use and maintenance of Personal Protective Equipment. However, individual equipment may have its own use and maintenance protocols which would be specified by the manufacturer. It is advisable that in such cases guidance provided by manufacturer should be followed.

5.7.1. Gloves

- Gloves should be regularly checked before spraying operations for any signs of wear and tear particularly in the regions between the fingers, at the tips or the palms. In case such signs are observed, the same should be reported to the Squad Supervisor/MPW (Male).
- Replace worn out gloves with new gloves immediately.
- At the end of each day, the gloves should be washed inside as well as outside and dried before they are further used.
- Gloves should be worn over long sleeved shirts. Half sleeve shirts/T shirts should be discouraged.

5.7.2. Face mask

- It is recommended that 3 ply, non-woven with tie-on masks should be used at a stretch for a week. In case there is difficulty in breathing while using the mask, it should be replaced.
- Used mask should be returned to the Squad Supervisor/MPW (Male) before a new is issued. These used masks should be returned to the MoIC/Storekeeper after the spraying season.
- These masks should be disposed in the deep burial pit in the PHC to prevent them from being reused.

5.7.3. Aprons

- Aprons should be washed with detergent and water after every spraying operation.
- Spray workers should use full-length trousers. This would protect the lower portion of the body form being exposed to the chemicals. Trousers should not be tucked into the shoes.
- It is preferred that every spray operator should have two sets of aprons/overalls, so that they can be used alternatively.

5.7.4. Shoes

- All the members of the spraying squad should be provided with rubber shoes.
- The shoes should be rinsed after a week's use and dried before further use.

5.7.5. Hats/Caps

Caps used should be washed with water after a week's use and dried before any further use.

6. REFERENCES

- 1 Food & Agricultural Organisation (1996), Pesticide Storage and Stock Control Manual, FAO of United Nations under the project GCP/INT/572/NET available at http://www.fao.org/ag/AGP/AGPP/Pesticid/Disposal/common/ecg/103809_en_No_3__Storage.pdf (accessed on 12.07.11)

The ECoP series also Contain:

1. Transport of Insecticides for IRS activities
2. Storage and Management of Insecticides Stock
3. Community Responsibility During IRS
5. Indoor Residual Spraying (IRS)
6. Disposal of waste water, empty bags/ Containers and bio-medical wastes



National Vector Borne Disease Control Programme (NVBDCP)

Directorate General of Health Services

Ministry of Health & Family Welfare

22, Sham Nath Marg, Delhi - 110054