



STANDARD OPERATING PROCEDURE

Data Quality Task Force

Issued: XX/YY/ZZ

XXth Edition: This edition replaces all previous editions of the Standard Operating Procedure (SOP)

TITLE: Collection of samples for determination of spray quality

INTRODUCTION:

The purpose of this SOP is to provide instructions on how to check the quality of indoor residual spray (IRS) applications in experimental huts. Monitoring the quality of spraying before the start of each trial is fundamental. It will ensure that the correct dosage, as stated in the study protocol, has been applied in the experimental huts. Quantity of insecticide sprayed will be estimated using filter papers fixed to the interior walls of experimental huts prior to the start of IRS applications and HPLC analysis of these filter papers for insecticide content.

AUTHOR: Graham Small

Signature:.....

Date:.....

AUTHORISED BY:

Signature:.....

Date:.....

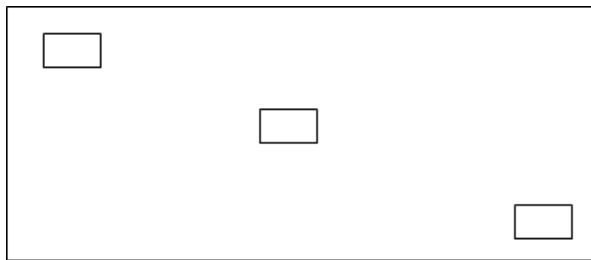
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Equipment & Materials

- Whatman filter papers, 3mm, 5 x 5 centimetres
- Pencil
- The supervisor collecting the samples must wear all items of personal protective equipment as described in the WHO handbook and in the material safety data sheet for the insecticide formulation

1. Preparation

- 1.1. In each huts, Whatman filter papers, 3mm thick, 5 cm x 5 cm, must be fixed on the experimental hut wall using pins just before spraying.
- 1.2. They must be placed on the wall opposite the door in the following positions:
One at the top left of the wall, one at the middle centre of the wall and one at the bottom right of the wall.



- 1.3. The filter papers must be labelled on the back top with pencil before fixing the paper with the date, the hut number and the position on the wall (1/top left, 2/middle, 3/right bottom)
- 1.4. Filter papers must also be fixed in a control hut where water is sprayed.
- 1.5. A positive control paper with the required concentration of the insecticide will be made in the lab as a reference.
- 1.6. A sample of the insecticide formulation used in IRS applications must be retained shipped to Gembloux (WHOPES approved pesticide analytical centre) to check that (a) the insecticide formulation conformed with manufacturer's specifications and (b) had not degraded prior to treatment applications.

2. After spraying

- 2.1 Filter paper must be left to dry on the experimental hut walls for 24 hours
- 2.2 Filter papers should then be removed from the walls using forceps
- 2.3 Filter paper must then be cut in half and the two pieces for each filter paper folded and placed into aluminium foil
- 2.4 The aluminium foil containing the filter papers must be placed into labelled plastic bags (location, date, hut number, position on the wall, insecticide).
- 2.5 The spray quality record sheet (Appendix 1) must be completed.
- 2.6 Half of the samples should be shipped to Gembloux (WHOPES approved pesticide analytical centre) by the manager to receive results within one week.
- 2.7 The remaining samples must be stored in a refrigerator at 4 ± 2 °C.



Appendix 1: Copy of spray quality record sheet

Estimation of insecticide concentration on sprayed hut walls

Date	Location	Hut No.	Insecticide formulation	Filter paper number (1/top left, 2/middle, 3/right bottom)	Wall Surface	Time sprayed	Status of solution in tank	Result of quantity analysis

Data entered by:	Date:
Study Director:	Date: