8.2 **VAPORIZING MATS (MV)**

Note for preparation of draft specifications. Do not omit clauses or insert additional clauses, nor insert limits that are more lax than those than given in the guidelines, without referring to section 4. From the “Notes” provided at the end of this guideline, incorporate only those which are applicable to the particular specification.

**...... [ISO common name] VAPORIZING MATS**

[CIPAC number]/MV (month & year of publication)

The material, sampled from any part of the consignment in accordance with the procedure described in Note 1 or any other acceptable procedure, shall comply with the specification.

8.2.1 **Description**

The vaporising mat shall consist of a pulp‑made mat, or a mat made of other suitable inert materials, impregnated with an insecticide. Stabilisers, synergists, slow‑release agents, perfumes and colouring agents may be added. The mat is intended for use in a heating unit (Note 2) designed to produce slow volatilisation of the active ingredient. The ...... [ISO common name] technical material used in the manufacture of the mat shall comply with the requirements of WHO specification ......

8.2.2 **Active ingredient**

8.2.2.1 **Identity tests** (Note 3)

The active ingredient shall comply with an identity test and, where the identity remains in doubt, it shall comply with at least one additional test.

8.2.2.2 **...... [ISO common name] content** (Note 3)

The ...... [ISO common name] content shall be declared (mg/mat) and, when determined, the average content measured shall not differ from that declared by more than ± 15%.

8.2.3 **Relevant impurities**

8.2.3.1 **By-products of manufacture or storage** (Note 4), if required

Maximum: ..….% of the …… [ISO common name] content found under 8.2.2.2.

8.2.4 **Physical properties**

8.2.4.1 **Size of mat** (Note 5)

The size of the mat should be compatible with the associated heater.

8.2.4.2 **Evaporation rate**

After heating the mat on the appropriate heating unit for 4 hours, a minimum of 20% of the active ingredient content found under 8.2.2.2 should remain.

8.2.5 **Storage stability**

8.2.5.1 **Stability at elevated temperature**

After storage at 54 ± 2 ºC for 14 days (Note 6), the determined average active ingredient content must not be lower than ......% relative to the determined average content found before storage (Note 7) and the formulation shall continue to comply with the clause for:

- by-products of manufacture or storage (8.2.3.1).

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Note 1 Sampling

*General requirements*

a) Samples shall be stored in such a manner that there is no deterioration of the material.

b) The sampling instrument shall be clean and dry.

c) Samples shall be protected against contamination.

*Sampling, testing and acceptance*

a) In any consignment, all the master cartons containing mats of the same type shall constitute a lot.

b) Samples shall be drawn from each lot and individually tested to ascertain whether the material complies with the specified requirements.

c) Any sample failing to comply with the specified requirements shall be termed as defective. The acceptance number shall be the maximum number of defective samples permissible for a lot to be accepted.

d) The number of mats to be drawn from the lot and the acceptance number shall be as shown in the following Table.

|  |  |  |
| --- | --- | --- |
| Total number of containers in lot | Number of mats to be tested | Acceptance number |
| 300 or less  301 to 1200  1201 to 2000  2001 to 7000  7001 to 15000  15001 to 24000  24001 to 41000  over 41000 | 3  6  13  21  29  48  84  126 | 0  1  2  3  4  6  9  13 |

e) Each of the mats to be tested shall be drawn from a different master carton which shall be selected at random. In order to ensure randomness of selection, random number tables shall be used. If such tables are not available, the following procedure may be adopted.

Starting from any master carton, count the master cartons as 1, 2, 3...... r in a systematic manner. Every rth carton shall be drawn, r being the integral part of N/n, where N is the total number of master cartons in the lot and n the number of master cartons to be selected.

Note 2 The heating unit must comply with all relevant national safety standards.

Note 3 Method(s) of analysis must be CIPAC or AOAC. If the methods have not yet been published then full details, with appropriate method validation data, must be submitted to WHO by the proposer.

Note 4 This clause should include only relevant impurities and the title should be changed to reflect the name of the relevant impurity. The method(s) of analysis must be peer validated.

Note 5 This clause is to ensure easy insertion and removal of the mat. Typical size of the mat is 35 mm by 22 mm, 2.6 mm thick.

Note 6 Unless other temperatures and/or times are specified. Refer to Section 4.6.2 of this Manual for alternative storage conditions.

Note 7 Samples of the formulation taken before and after the storage stability test should be analyzed concurrently after the test in order to reduce the analytical error.