CIPAC MT STATUS REPORT

11.08.2024

MT 148 Pourability of suspension concentrates

Allocated to DAPF

CIPAC methods published in:

CIPAC F, p. 348 CIPAC J, p. 133

CIPAC 24th meeting, May 1980 in Salobrena

<u>Decision</u> The method for the determination of the pourability of suspension concentrates, CIPAC/2847/R, app.C, was adopted as <u>provisional</u> CIPAC method.

CIPAC 36th meeting, October 1992 in Zürich

CIPAC 37th meeting, June 1993 in Paris

CIPAC 38th meeting, July 1994 in Annapolis

CIPAC 39th meeting, May 1995 in Limassol

Mr Galoux mentioned that it was not possible to perform a collaborative test because of the problem to mail the required big amounts of samples.

<u>Decision</u> The method for the determination of the pourability of aqueous suspension concentrates and capsule suspensions, CIPAC/3849, has been adopted as <u>tentative</u> CIPAC method. (MT 148.1 Pourability of SC and CS formulations)

CIPAC 40th meeting, May 1996 in Beijing

No progress.

CIPAC 41st meeting, June 1997 in Roskilde

The CIPAC ring test can now be started. A second Information Sheet will be distributed.

CIPAC 42nd meeting, July 1998 in York

Because of the danger that this test might lead to the misunderstanding that it is for rinsing commercial containers the publication had been postponed. Mr Parker said that it should be stated clearly that it is a laboratory test only and must not be applied to field packs. In any case the word "container" should be replaced by "cylinder" in the method. Mr Hill proposed the method should be re-written.

CIPAC 68th meeting, June 2024 Wageningen

MT 148.2 Pourability by Mr Burkhard Wiese (5355)

Mr Burkhard Wiese presented the results of eight years of investigations into CIPAC MT 148.2 Pourability. The objectivities were to consolidate MT 148 & MT 148.1, to improve the usability and to perform a general editorial revision. First was presented why this parameter should be investigated. The FAO/WHO manual formulates it as 'To ensure that formulations have characteristics that will

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enable them to be poured easily from containers. If required, a residue after rinsing with water can be determined.' The method consists of a pouring and a rinsing step. Pourability needs to be demonstrated for dispersed liquid formulations like SC, FS, OD / SE / CS / EW / ZC, ZW, ZE.... Changes were proposed for the container types: the use of Kilner jars, ISO certified cylinders (500 ml) and commercial pesticide formulation containers. Kilner jars are not useful due their unspecified shape. The graduations on ISO certified cylinders are not relevant, however the required dimensions remain unchanged. Commercial pesticide formulation containers remain applicable as they are relevant due to their use in agricultural practice.

In the method an ullage of 20% is mentioned. This translates best in a laboratory by using a 500 ml measuring cylinder, with a headspace above the liquid of \sim 100 ml (= 20 %). The next parameter which was assessed was rinsing as it is defined in MT 148 but not in MT 148.1. It was concluded that in the new MT method a tiered approach is defined where rinsing is required only when pourability is above 5% (or specified limit). Rinsing can be repeated twice, if needed. Further minor adjustments were related to the pouring time (less than 60 seconds is allowed), the rinsed residue (cannot be 0%) and the text explaining the 'Reason for revision'. In MT 148 the standing time is 24 hours and this was assessed by users of the method as much too long. This was underlined by the outcome of a DAPF round robin trial in which ten laboratories participated. The results indicated that the standing time has no influence on the pourability. Therefore 30 min standing time is acceptable.

In the same trial also the influence of the use of glass cylinders or HDPE bottles (as used by the producers of plant protection products) was investigated and it was concluded that 'Cylinder shape has strongest impact on variability of results, but further standardization is a challenge.' And 'The usage of commercial packaging is a valuable alternative.'Mr Burkhard Wiese concluded that the results obtained with the new MT 148.2 are equivalent to those obtained with MT 148 and MT 148.1 and recommended that MT 148.2 supersedes MT 148 and MT 148.1.

Questions and remarks from the meeting.

- Was the reduction of the volume investigated to use les product?
 - o No changes were considered.
- The revised method had made many good scientific and technical modifications. Suggestion was made to change the rinsed residue limit from 0.2% to 0.5% because of the uncertainty of the method.
 - The limits shouldn't be part of the method, this is up to the FAO Manual to recommend limits.
- It was proposed to change the wording "if required".
- It was asked if it is not possible to exclude the use of the cylinder
 - o For the quality control laboratories it is not possible to have these commercial packages as they are of different types
- It was asked if it wouldn't be beneficial to use a formulation of 5% for the test?

Closed meeting:

No comments were given or questions were asked by the meeting. The method was accepted as **provisional** method.