

HOT STABILITY TEST PROTOCOL

➤ **Test Overview & Procedure**

General Information

- 1) Sample Name: CHLORPYRIPHOS 50 % + CYPERMETHRIN 5 % EC
- 2) Batch Number: SAGCC25001
- 3) Report Date: 01.04.2025
- 4) Client Name & Address: INTERNAL
- 5) Testing Laboratory: AGRISERVE HALOL
- 6) Analyzed By: Mr. Chirag Rami

➤ **Purpose of the Test :**

The purpose of this hot stability test is to assess the stability of the sample by evaluating its physical characteristics and active ingredient (%AI) after exposure to elevated temperatures over a defined period. This test helps predict long-term product stability.

Storage Conditions for Stability Study

Temperature: 54°C ± 2°C (or as per product requirements)

Duration: 14 Days (or defined period as per product specification)

Storage Equipment: Stability oven with temperature monitoring and calibration

➤ **Safety Precautions :**

Wear appropriate Personal Protective Equipment (PPE) (e.g., gloves, lab coat, and goggles).

Handle the sample carefully to avoid contamination and exposure.

Ensure proper labeling of all containers during storage.

Follow Good Laboratory Practices (GLP) and dispose of tested samples according to hazardous waste protocols.

➤ **Sample Preparation :**

Ensure the sample is homogenous before testing.

Weigh the required amount (e.g., 20 g) accurately.

Seal the sample in an airtight, temperature-resistant container.

Label the container with sample name, batch number, and date of initiation.

➤ **Analytical Method & Results :**

Test Methodology

Appearance Check: Visual inspection for color, texture, or physical changes.

Active Ingredient (%AI) Analysis: Conducted by titration, chromatography (HPLC/GC), or other validated methods.

➤ **Sample Frequency:**

Initial analysis (Day 0)

Final analysis (after 14 days at 54°C)

Test Results

Sr. No	Test Parameter	Batch No	Initial Result	Result After 14 Days at 54°C
1	Description	#SAGPC25001	Yellow to yellow brown colour liquid	Yellow colour liquid
2	Chlorpyrifos (%AI)	50 % Min	50.38 %	50.17 %
3	Cypermethrin (%AI)	5 % Min	5.31 %	5.28 %
4	Cold test at 10° C	No turbidity or separation of solid or oily matter	No turbidity or separation of solid or oily matter	No turbidity or separation of solid or oily matter
5	Emulsion Stability	No separation including creaming at top and sediment in bottom of 100 ml emulsion	No separation including creaming at top and sediment in bottom of 100 ml emulsion	No separation including creaming at top and sediment in bottom of 100 ml emulsion

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6	Acidity by H ₂ SO ₄	0.2 % Max	0.019 %	0.038 %
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Acceptance Criteria

No significant change in physical appearance.

%AI should be within $\pm 5\%$ of the initial value.

No phase separation, precipitation, or degradation observed.

- **Conclusion** :- The sample (Chlorpyrifos 50 % + Cypermethrin 5 % EC) subjected to hot stability conditions (54°C for 14 days) has been tested for appearance and active ingredient content. Based on the results, the sample:

☒ Passes the stability test.

☐ Fails the stability test.

Tested By
Mr. Chirag
(Name & Date)

Reviewed By
Mr. Prashant
(Name & Date)

Approved By
Mr. Amit
(Name & Date)

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