CHILD-RESISTANT PACKAGING REVIEW
Technical Review Branch

IN 12/16/03 OUT 02/09/04

Reviewed by Rosalind L. Gross Rosalind L. Gross 02/09/04

EPA Reg. No. or File Symbol 4822-LGI

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Type Product(s) Insecticide

Data Accession No(s). 461142-04

Product Mgr./Chemical Review Mgr/Contact Person RM 07 (Tom Harris)
Division RD

Product Name(s) Raid CWR

Company Name(s) SC Johnson & Son Inc

Submission Purpose Examine test data to ascertain if CRP is acceptable (Force Testing, Weather Testing, 3 Month Analytical Summary with % Abamectin loss and bait loss)

Active Ingredient(s), PC code, & % Abamectin 0.05%

Summary of Findings

The spike station has a green polypropylene copolymer spike base and a tan polypropylene copolymer snap fit lid. The bait stations were exposed to a variety of weather conditions for 90 days before child testing. The three tests conducted each involved using 50 children 42-51 months of age, who each received 4 weathered, 6 non weathered, or 12 weathered individual bait stations at the beginning of the test. The results of all three 50 child tests indicated that no children accessed one or more bait stations. All three studies are a pass of the child test according to the sequential test chart in 16 CFR 1700.20. The CRP certification for the 4, 6, and 12 station packages of EPA Reg. No. 4822-LGI is acceptable.

Force Testing demonstrated that considerable force was necessary to bend the spike more than 30^0, separate the snap fit lid from the spike base, and/or expose the contents of the bait station. The data demonstrate that exposure to 90 day outdoor weathering did not make the bait station more fragile. The **90 day outdoor weathering** protocol developed by SC Johnson was acceptable. The results of the 90 day outdoor weathering study indicated water was not retained in the bait stations regardless of orientation (upright, upside down, on its side).

In conclusion the abamectin loss/bait loss of would not represent a toxic or harmful amount of abamectin, which is 2.85 mg. **Therefore all the CRP requirements for this product have been met.**

Bait Station

The station is a two piece spike station consisting of a green polypropylene copolymer spike base with a cup containing the bait and a tan polypropylene copolymer snap fit lid. The spike is 5.5 cm long with a bait cup 4.7 cm in diameter and 1.1 cm deep containing 6 openings 0.8 x 0.8 cm each. The bait well in the cup is 2.5 cm in diameter and 0.7 cm deep. The snap fit lid is hard to separate from the spike base unless a tool is used (e.g. scissors).

Company Data

SC Johnson performed actual time 90 day outdoor weathering of the bait stations containing placebo for child testing rather than accelerated weathering of the samples. The weathering data was provided. Additionally, some testing of the force required to bend the spike, separate the snap fit lid from the spike base, and/or expose the contents of the bait station was performed.

Force Testing demonstrated that considerable force was necessary to bend the spike more than 30^0, separate the snap fit lid from the spike base, and/or expose the contents of the bait station. The data demonstrate that exposure to 90 day outdoor weathering did not make the bait station more fragile, rather it increased the force required to bend the spike more than 30^0, separate the snap fit lid from the spike base, and/or expose the contents of the bait station. The **90 day outdoor weathering** protocol developed by SC Johnson was acceptable. The results of the 90 day outdoor weathering study indicated water was not retained in the bait stations regardless of orientation (upright, upside down, on its side).

The bait stations were exposed to a variety of weather conditions for 90 days before child testing. The three tests conducted each involved using 50 children 42-51 months of age, who each received 4 weathered, 6 non weathered, or 12 weathered individual bait stations at the beginning of the test. The results of all three 50 child tests indicated that no children accessed one or more bait stations. The definition of a

package failure was access to any amount of bait for one station. The definition of a child failure was access to one bait station to allow for toxicity variations based on different active ingredients using the same style bait station.

Abamectin/bait weight loss was determined by subjecting bait stations filled with 0.05% abamectin to the same outdoor weather conditions for 90 days as the placebo stations used for child testing. The bait stations with 0.05% abamectin were analyzed at the 1, 2, and 3 month mark to determine the loss of abamectin (AI) due to weather. The results indicate the lowest amount of abamectin was 0.043%. However, since the samples were laboratory filled and not production filled SC Johnson thinks this is just a low fill weight. This conclusion is supported by no visible signs of bait deterioration. Additionally the bait stations filled with 0.05% abamectin were analyzed at the 3 month mark to determine the loss of bait due to weather. The results indicate the maximum loss of bait was 0.09 g. SC Johnson indicated that bait loss was probably due to the bait drying out from the weathering because there was no evidence of the bait going anywhere.

Child Failure

A toxic or harmful amount of abamectin is 2.85 mg, which is equal to access to four spike bait stations based on each bait station having a maximum weight of 0.0525 oz. at 0.05% abamectin (0.0525 oz. per bait station x 30g/oz. x 0.05% x 1000mg/g = 0.79 mg abamectin per station).

Analysis and Conclusion

Force Testing demonstrated that considerable force was necessary to bend the spike more than 30^0, separate the snap fit lid from the spike base, and/or expose the contents of the bait station. The data demonstrate that exposure to 90 day outdoor weathering did not make the bait station more fragile, rather it increased the force required to bend the spike more than 30^0, separate the snap fit lid from the spike base, and/or expose the contents of the bait station. The **90 day outdoor weathering** protocol developed by SC Johnson was acceptable. The results of the 90 day outdoor weathering study indicated water was not retained in the bait stations regardless of orientation (upright, upside down, on its side).

The bait stations were exposed to a variety of weather conditions for 90 days before child testing. The three tests conducted each involved using 50 children 42-51 months of age, who each received 4 weathered, 6 non weathered, or 12 weathered individual bait stations at the beginning of the test. The results of all three 50 child tests indicated that no children accessed one or more bait stations. All three studies are a pass of the child test according to the sequential test chart in 16 CFR 1700.20. The CRP certification for the 4, 6, and 12 station packages of EPA Reg. No. 4822-LGI is acceptable.

Abamectin/Bait Loss

Bait stations filled with 0.05% abamectin were subjected to the same outdoor weather conditions for 90 days as the placebo stations used for child testing. The bait stations with 0.05% abamectin were analyzed at the 1, 2, and 3 month mark to determine the loss of abamectin (AI) due to weather. The results indicate the lowest amount of abamectin was 0.043%. Under a worst case scenario if there were actually a loss of 14% of the 0.05% abamectin, it would represent 0.11 mg abamectin per station ((0.0525 oz. per bait station x 30g/oz. x 0.007% x 1000mg/g = 0.11 mg abamectin per station). This would represent 1.32 mg abamectin for 12 bait stations.

Additionally the bait stations filled with 0.05% abamectin were analyzed at the 3 month mark to determine the loss of bait due to weather. The results indicate the maximum loss of bait was 0.09 g. Under a worst case scenario if there were actually a loss of 0.09 g at 0.05% abamectin this would represent 0.045 mg abamectin per bait station (0.09g x 0.05% x 1000mg/g). This would represent 0.54 mg abamectin for 12 bait stations.

In conclusion neither the abamectin loss of 0.11 mg per bait station (12 bait stations=1.32 mg) nor the bait loss of 0.045 mg abamectin per bait station (12 bait stations=0.54 mg) would represent a toxic or harmful amount of abamectin, which is 2.85 mg. **Therefore all the CRP requirements for this product have been met.**