

US EPA ARCHIVE DOCUMENT

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SUBJECT: Product Chemistry Review of Polybutene

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TO: Linda Propst, Chief
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DP BARCODE: D245672

EPA REG NO: 8254-3

REGISTRANT: Bird Control International Corporation

PRODUCT: "For The Birds" Transparent Bird Repellent Liquid (49.0%)

INTRODUCTION

The Registrant has submitted a study, "Determination of Polybutene Content in Bird Repellent Liquid", to meet the reregistration requirements for the End-Use Product (EP), "For the Birds" Transparent Bird Repellent Liquid. (See Letter of M. Godfrey, BCI, 23 April 1998.) The study contains analyses of the EP and the analytical procedure used to analyze the EP.

FINDINGS

The analyses of samples of the EP meet the requirements of 40 CFR 158.170 (Preliminary Analysis). No additional information is needed.

The analytical method is adequately validated for the determination of the active ingredient polybutene in the EP.

The analytical method meets the requirements of 40 CFR 158.180 (Enforcement Analytical Method) and is adequate for enforcement purposes.

CONCLUSIONS

The information submitted satisfies the requirements (Preliminary Analysis and Enforcement Analytical Method) for the reregistration of the EP.

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830.1700: PRELIMINARY ANALYSIS (MRID)⁴4542901)

Samples of the pesticide product (EP) were analyzed for the active ingredient polybutene using infrared (IR) spectroscopy. The quantity of active ingredient in the sample is determined by comparison of the peak area of the sample and a standard curve prepared from different concentrations of polybutene standard. The standards were in the concentration range of 0.1 - 0.9 gms/mL in methylene chloride.

The polybutene found in the samples was 45.2- 48.7% (Average: 46.8%) with a standard deviation of 1.53% and an relative standard deviation of 3.27%.

The information meets the requirements of 40 CFR 158.170 (Preliminary Analysis). No additional information is needed.

830.1800: ENFORCEMENT ANALYTICAL METHOD (MRID)⁴4542901)

A sample is warmed at 40 C and stirred for about 30 minutes. A portion of of the sample is weighed to yield a given weight of the active ingredient polybutene. The weighed portion is treated with hydrochloric acid and extracted into methylene chloride. The methylene chloride is concentrated by evaporation, and the concentrate is diluted to a given volume with methylene chloride. An aliquot is then removed and examined with infrared spectroscopy. The peak at 1471/cm is used for quantitation purposes.

For validation purposes, known amounts of standard polybutene were added to samples which were then analyzed for the polybutene content. The amount of added polybutene recovered was 93.5-98.4% (average: 95.7%). The standard deviation was 2.48% and the percent relative standard deviation was 2.59%.

The method is adequately validated for the determination of the active ingredient polybutene in the product.

The analytical method meets the requirements of 40 CFR 158.180 (Enforcement Analytical Method) and is adequate for enforcement purposes.

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