

June 29, 1998

PC
Per
M

Analytical
method o/c

SUBJECT: Product Chemistry Review of Polybutene

FROM: ^{AS} Alfred Smith, Chemist
Technical Review Branch/RD (7505C)

TO: Linda Propst, Chief
Product Reregistration Branch/SRRD (7508W)

DP BARCODE: D245675
EPA REG NO: 8254-1
REGISTRANT: Bird Control International Corporation
PRODUCT: 4-The-Birds Transparent Bird Repellent (80%)

INTRODUCTION

The Registrant has submitted a study, "Determination of Polybutene Content in Bird Repellent Gel", to meet the reregistration requirements for the End-Use Product (EP), 4-The-Birds Transparent Bird Repellent. (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.

1
ttt

830.1700: PRELIMINARY ANALYSIS (MRID 44542801)

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 0.01 - 0.09 gms/mL in methylene chloride.

The polybutene found in the samples was 78.8-85.3% (average: 82.6%) with a standard deviation of 2.41% and a relative standard deviation of 2.92%.

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

830.1800: ENFORCEMENT ANALYTICAL METHOD (MRID 44542801)

A weighed sample of the EP is soxhlet-extracted with methylene chloride for a total of seven hours. The extract is concentrated by removing the methylene chloride by rotary evaporation. The concentrate is taken up with methylene chloride and diluted to volume. An aliquot of the solution is taken for examination by infrared spectroscopy.

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 97.5-103.6% (average: 100.5%). The standard deviation was 3.05% and the percent relative standard deviation was 3.03%.

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.

2
112