

## COMPLETED PROJECT REPORT

**Project Title:** Method validation and storage stability of diphacinone bait.

**Research Agency:** HACCO Inc

**Principal Investigator:** Douglas

**Budget:** \$24,000.00

### **Background:**

The purpose of this study was to validate an HPLC method to analyze for diphacinone in Rodent Bait Diphacinone Treated Grain 0.005%. The method was used to analyze a batch of this product for use in a 1-year storage stability study. The product was analyzed at initial, and after approximately one year of storage. Corrosion characteristics will also be determined.

Storage stability and corrosion characteristics are important for product characterization. The behavior of a product over time can be indicated by observing changes in its physical and chemical properties.

Under normal warehouse conditions, changes in the test product's physical and chemical properties are examined. The active ingredient is measured using an appropriate analytical method at initial and subsequent sampling intervals. A change in the amount of active ingredient indicates storage instability and other analyses would need to be performed to determine degradation products. Changes in physical properties such as physical state, color, and homogeneity are also a measure of storage instability.

### **Summary:**

February 2003

The text below is derived from the contractor evaluation submitted by Duane Schnabel and provides an overview of the services/products provided by HACCO.

The contractor provided analytical chemistry services for 3 diphacinone-based rodenticide baits. Services included determination of certified limits, purity analysis, color determination, physical state, odor determination, bulk density, storage stability and corrosion characteristics for .01% and .005% diphacinone grain bait and .005% diphacinone wax bait block rodenticides. These studies were required to support the reregistration of the CDFA's rodenticide baits under a U.S. Environmental Protection Agency (USEPA) data call-in.

USEPA required CDFA to submit certain data, including these analytical chemistry studies to support continued registration of CDFA's rodenticide products. The analytical chemistry studies performed by the HACCO under federal Good Laboratory Practice regulations have been

submitted to the USEPA prior to the deadline for the data call-in to support continued registration and to meet the administrative requirements for reregistration.

**Last Updated:**

02/24/09