UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 10 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Review of Changes in Quality Control Procedures Used to Manufacture Mycogen's CellCap® Products

TO: Willie Nelson (PM-18)
Insecticide-Rodenticide Branch
Registration Division (7505C)

FROM: John L. Kough, Ph.D., Biologist
Biological Pesticides Section
Science Analysis Branch
Health Effects Division (7509C)

THROUGH: Roy D. Sjoblad, Ph.D., Section Head
Biological Pesticides Section
Science Analysis Branch
Health Effects Division (7509C)

DATA REVIEW RECORD

Active Ingredients:	δ-endotoxins expressed in *Pseudomonas fluorescens*
Product Name:	MVP and M-Peril Bioinsecticides
ID No:	053219-00003
Submission No:	S463271
Chemical No:	006409
DP Barcode:	D201938
MRID:	431768-01: Preliminary Analysis of Product Samples, Certification of Ingredient Limits and Analytical Method

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ACTION REQUESTED

To review Mycogen's proposed changes to their product analysis and quality control procedures to verify that these are adequate and acceptable methods for their MVP and M-Peril products.

BACKGROUND

Mycogen Corporation has been making pesticides using a *Pseudomonas fluorescens* host microbe engineered to produce δ-endotoxins originally derived from *Bacillus thuringiensis*. Due to the hazards associated with release of a gram-negative microbe engineered to contain novel *B.t.* toxins, the company chose to manufacture a product that incorporated a thorough cell kill step. As quality control for this product the company has used a [redacted]

The data presented here is being used to justify a modification in

QUALITY CONTROL PROCEDURE INFORMATION IS NOT INCLUDED

the QC procedures to substitute [redacted]

SUMMARY OF REVIEW

Manufacturing Process, Quality Control (MRID 431768-01)-

Data has been presented that indicate the revised HPLC method is comparable to another HPLC method but has several advantages for manufacturing use such as [redacted]

CLASSIFICATION: Supplementary. The revised HPLC method is an acceptable substitute for the currently used HPLC method but there is no indication how it relates to either the original [redacted]

DATA EVALUATION REPORT

Reviewed by: John L. Kough, Ph.D., Biologist, SAB/HED JLK
Secondary Reviewer: Roy D. Sjoblad, Ph.D., Microbiologist, SAB/HED RDS

STUDY TYPE:	Manufacturing Process, Quality Control (62-1, 62-2, 62-3)
MRID NO:	431768-01
CHEMICAL NO:	006409 δ-endotoxin in killed *Pseudomonas*
TEST MATERIAL:	MVP® and M-Peril™ formulations
STUDY NO:	QC-0174
SPONSOR:	Mycogen Corporation, San Diego, CA
TESTING FACILITY:	Mycogen Corporation, San Diego, CA
TITLE OF REPORT:	Preliminary Analysis of Product Samples, Certification of Ingredient Limits and Analytical Method
AUTHOR:	William J. White, Jr. and Christopher Davis
STUDY COMPLETED:	March 17, 1994
CONCLUSION:	Data has been presented that indicate the revised HPLC method is comparable to another HPLC method but has several advantages for manufacturing use such as [redacted]
CLASSIFICATION:	Supplementary. The revised HPLC method is an acceptable substitute for the currently used HPLC method but there is no indication how it relates to either the original [redacted]

STUDY DESIGN

Samples of several lots of both liquid formulations of MVP and granular M-Peril were analyzed by the proposed HPLC revised method to compare the results to the current method [redacted] The criteria used to evaluate the techniques were based on both objective endpoints like a [redacted]

MATERIALS

[redacted]

METHODS

[redacted]

MANUFACTURING PROCESS INFORMATION IS NOT INCLUDED

QUALITY CONTROL PROCEDURE INFORMATION IS NOT INCLUDED

[redacted]

Both the methods referred to in this study make use of a δ-endotoxin reference standard for quantification. No description of this standard is available or how its value is determined. The protocol makes reference to the use of a confirmatory insect bioassay which was eliminated from the final study.

RESULTS

The revised HPLC method appears to offer similar sensitivity to the original HPLC method with the added advantage that it has [redacted]

SAB CONCLUSIONS

Judged by the criteria assigned for the study: increased throughput, similar statistical power, ease of sample preparation and instrument maintenance, the revised HPLC method is an acceptable substitute for the originally developed HPLC method. It is unclear how this assay system correlates to the original [redacted] assay system for QC since no [redacted] was presented. Historically HPLC methods offer greater sensitivity and precision for quantification compared to [redacted]

[redacted] SAB understands that bioassays are inherently more variable than methods such as HPLC but feels that until the relationship between the two systems is clear both an analytical method such as the HPLC and a bioassay should be run on the samples for QC.