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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

OPP OFFICIAL RECORD  
HEALTH EFFECTS DIVISION  
SCIENTIFIC DATA REVIEWS  
EPA SERIES 361

1/30/2008

**MEMORANDUM**

**SUBJECT: Registration: 65726-3; PIN NIP 98% Chlorpropham (018301). Label Amendment to Increase Application Rate.**

Petition No.	None	Decision No:	379732
DP Number:	341866	40 CFR:	§180.181
Chemical No.:	018301	Class:	Plant-Growth Inhibitor
Trade Name:	PIN NIP 98% Chlorpropham	EPA Reg. No.:	65726-3
MRID No.:	47166001		

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Health Effects Division (HED, 7509P)

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RAB1/HED (7509P)

To: Tony Kish/Tawanda Spears, RM 22  
Registration Division (7505P)

**INTRODUCTION**

The registrant, Pin/Nip, Inc., has submitted a label amendment (dated: 5/31/2007) for PIN NIP 98% Chlorpropham Aerosol Grade Potato Sprout Inhibitor (EPA Reg. No. 65726-3) to increase the application rate to stored potatoes. In conjunction with the amendment, the registrant has submitted data for the use of the active ingredient (ai) chlorpropham on potatoes to support the proposed label amendment.

Chlorpropham (isopropyl 3-chlorocarbanilate) is used to inhibit sprouting in potatoes. The Chlorpropham Reregistration Eligibility Document (RED) was issued 10/96, and the Report of FQPA Tolerance Reassessment Progress and Interim Risk Management Decision (TRED) for chlorpropham was issued 9/02. Chlorpropham is formulated as a ready-to-use aerosol (RTU).

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Tolerances are established (40 CFR §180.181) for residues of chlorpropham and its metabolite 1-hydroxy-2-propyl 3'-chlorocarbanilate in/on potatoes at 50 ppm. However, HED has requested the level of the tolerance be revised to 30 ppm for residues of chlorpropham, *per se* (TRED, 9/02).

#### **Use Directions for PIN NIP 98% Chlorpropham on Stored Potato:**

*Registered Use:* PIN NIP is used as a RTU aerosol for treating potatoes for sprout inhibition. Application of PIN NIP should be made anytime after the curing period and before sprouting of potatoes. The standard application rate is specified as 0.017 lb ai per 1000 lb potatoes. The label specifies that if long-term storage is anticipated, then the application rate can be raised to 0.033 lb ai/1000 lb potatoes.

The PIN NIP label states that "if potatoes are held in storage longer than originally anticipated, the potatoes may be retreated." The label language implies two treatments not to exceed 165% (for processing market) or 145% (for fresh market) of the standard rate.

In the TRED for chlorpropham the following modifications to the labels were requested: The labels should clearly state a maximum of two treatments not to exceed a total rate of 165% (or 145%) of the standard rate. The label should specify a minimum retreatment interval (RTI) of 3 months (90 days) to reflect the minimum retreatment interval used in the residue field trials. Subsequently, the issue of appropriate label amendments for these products was brought to the HED Chemistry Science Advisory Council (ChemSAC) for consideration (7/17/02 ChemSAC Meeting). It was determined that the current labels for these products do not need to be amended to specify a number of applications or a retreatment interval but *do need to be amended to include language that clearly specifies a maximum seasonal rate* (i.e. maximum seasonal rate not to exceed 0.028 lb ai/1000 lb potatoes for labels indicating use up to 165% of the "standard"(0.017 lb ai/1000 lbs of potatoes) rate. In the case of labels indicating 145% of the "standard" rate, the total seasonal rate should not exceed 0.025 lbs ai/1000 lbs of potatoes (Memo, 7/23/02, D. Drew, D284525).

Pin/Nip's response:

The registrant has submitted data concerning the use of chlorpropham on potatoes and has proposed to increase the use rate to 165% of the standard rate. A single trial was performed at a commercial potato storage facility. Approximately 5.5 million lb of potatoes were treated twice with solid formulated chlorpropham (PIN NIP 98% Chlorpropham) at the rate of 0.028 lb/1000 lb potatoes. The second application was 47 days following the first application. The total application rate was 0.0550 lb per 1,000 lb potatoes. This rate reflects single applications at 165% of the standard rate. The applications were made using standard aerosol generating equipment typically used for this type of application. The application involved generation of the chlorpropham aerosol and circulation of the aerosol by the storage facility ventilation system. The ventilation system of a commercial potato storage facility, pushes air from beneath the potato pile so that it may flow upward. Tuber samples were collected just prior to treatment, and

at specific intervals after both the first and second treatments. Samples were collected from three different pile depths.

Samples of potato peel, pulp, chips, and flakes were analyzed for residues of chlorpropham using a high-performance liquid chromatograph with an ultraviolet/visible light detector (HPLC/UV). This method was previously submitted to the Agency (MRID 46151702). Residues in whole potatoes were calculated by summing the actual residues quantified in the potato peel and pulp and dividing by the whole potato weight. The registrant reported the method has a limit of quantification (LOQ) as 0.05 ppm; however, the method was concurrently validated to a limit of 2 ppm chlorpropham in/on potatoes and to 0.5 ppm in/on potato chips. Adequate method recoveries were observed from whole potato samples fortified at 2 and 20 ppm and from chip and flake samples fortified at 0.5 and 2 ppm. The limit of detection (LOD) was not reported. This method is adequate for data collection based on acceptable concurrent recovery data.

Residues of chlorpropham ranged from 3.97 to 5.73 ppm in potato tubers harvested 1 to 47 days following a fumigant application at 0.0275 lb ai/1000 lb potato. Additionally, residues of chlorpropham ranged from 11.2 to 14.8 ppm in potato tubers harvested 1 to 92 days following the two fumigant applications at 0.0275 lb ai/1000 lb potato for a total rate of 0.055 lb ai/1000 lb potato. Apparent residues of chlorpropham were 0.032 ppm in/on one sample of untreated potato. Residue levels remained relatively stable as the time between treatment and sampling was increased. The residue data are summarized in Tables 1 and 2.

The maximum storage interval from harvest to analysis was 20 days. Thus, storage stability data for residues of chlorpropham in/on potato are not required.

Trial ID (City, State; Year)	Crop Variety	Total Rate (lb ai/ 1000 lb potatoes)	PTI <sup>1</sup> (days)	Residue Levels ± Std. Dev. <sup>2</sup> (ppm)		
				Peel	Pulp	Whole Tuber
01 (Rexburg, ID, 2005)	Russet Burbank	0	0	0.126	0.019	0.032 ± 0.005
		0.0275	1	30.4	0.55	3.97 ± 0.61
			15	43.4	0.107	5.77 ± 1.2
			47	43.3	0.024	5.73 ± 1.1
		0.055	1	89.4	0.039	11.4 ± 2.5
			15	85.3	NA <sup>3</sup>	11.4 ± 1.6
			30	98.7	0.065	12.8 ± 2.3
			60	113	0.185	14.8 ± 2.3
			92	78.9	0.200	11.2 ± 2.34

<sup>1</sup>PTI = post-treatment interval.

<sup>2</sup>Residue levels are the average of levels for samples taken from the top, middle and bottom of the pile. Residue levels are not corrected for residues in the controls. Std. Dev. = standard deviation.

<sup>3</sup>Data are not available due to chromatographic interferences.

Trial ID (City, State; Year)	Crop Variety	Total Rate (lb ai/ 1000 lb potatoes)	PTI <sup>1</sup> (days)	Residue Levels ± Std. Dev. <sup>2</sup> (ppm)
01 (Rexburg, ID, 2005)	Russet Burbank	0.055	30	0.312 ± 0.15
			92	0.655 ± 0.195

<sup>1</sup>PTI = post-treatment interval.

<sup>2</sup>Residue levels are the average of levels for samples taken from the top, middle and bottom of the pile. Residue levels are not corrected for residues in the controls. Std. Dev. = standard deviation.

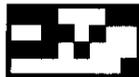
**Conclusions/Recommendations:**

Residues of chlorpropham ranged from 3.97 to 5.73 ppm in potato tubers harvested 1 to 47 days following a fumigant application at 0.0275 lb ai/1000 lb potato. Additionally, residues of chlorpropham ranged from 11.2 to 14.8 ppm in potato tubers harvested 1 to 92 days following the two fumigant applications at 0.0275 lb ai/1000 lb potato for a total rate of 0.055 lb ai/1000 lb potato. Apparent residues of chlorpropham were 0.032 ppm in/on one sample of untreated potato. Residue levels remained relatively stable as the time between treatment and sampling was increased. For all samples, residue levels were significantly lower than the established tolerance level of 50 ppm and lower than the tolerance level recommended for in the TRED (30 ppm for residues of chlorpropham *per se*).

HED recommends for the proposed label amendment provided: the label clearly states that the maximum rate must not exceed a total rate of 165% (or 145%) of the standard rate.

As this action does not involve the establishment or changing of previously established tolerances, a human-health risk assessment is not required.

RDI: RAB1 Chemists: 01/30/2008  
Registration Number: 65726-3  
DP Number: 379732  
PC Code: 018301



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# R157583

**Chemical:** Chlorpropham

**PC Code:**  
018301

**HED File Code:** 11000 Chemistry Reviews

**Memo Date:** 1/30/2008

**File ID:** DPD341866

DPD284525

**Accession #:** 000-00-0124

**HED Records Reference Center**  
3/11/2008