NOSB COMMITTEE RECOMMENDATION

Form NOPLIST1. Committee Transmittal to NOSB

For NOSB Meeting: Spring 2009 Substance: Isoparaffinic Hydrocarbon							
Committee: Crops X Livestock Handling Petition is for: inclusion of <u>Isoparaffinic Hydrocarbon</u> under <u>Synthetic substances allowed for use in organic crop production</u> on the National List <u>§ 205.601</u>							
A. Evaluation Criteria (Applicability noted for each category; Documentation attached) 1. Impact on Humans and Environment 2. Essential & Availability Criteria 3. Compatibility & Consistency 4. Commercial Supply is Fragile or Potentially Unavailable as Organic (only for 606) 4. Commercial Supply is Fragile or Potentially Unavailable as Organic (only for 606) 4. Substance Fails Criteria Category: 1,2 & 3 Comments: It is a synthetic which fails all three categories. See evaluation criteria citing TR information and PAN (Pesticide Action Network Database). There are strong pyrethrum extraction alternatives available. Substance is not essential due to the existence of other pyrethrin extraction methods and materials that are available and better meet the evaluation criteria. C. Proposed Annotation (if any): Basis for annotation: To meet criteria above: Other regulatory criteria: Citation: D. Recommended Committee Action & Vote (State Actual Motion): To include Isoparaffinic hydrocarbon On the National List §205.601 Motion by: Gerry Davis Seconded: Tina Ellor Yes: O No: 5 Absent: 1 Abstain: O							
Crops X Agricultural Allowed¹ Livestock Non-Synthetic Prohibited² Handling Synthetic X Rejected³ No restriction Commercially Un-Available as Organic¹ Deferred⁴ 1) Substance voted to be added as "allowed" on National List to § 205 with Annotation (if any)							
Describe why a prohibited substance: 3) Substance was rejected by vote for amending National List to § 205Describe why material was rejected: 4) Substance was recommended to be deferred because If follow-up needed, who will follow up							
E. Approved by Committee Chair to transmit to NOSB: Tina Ellor Committee Chair Date							

NOSB EVALUATION CRITERIA FOR SUBSTANCES ADDED TO THE NATIONAL LIST

Category 1. Adverse impacts on humans or the environment? Substance - <u>Isoparaffinic Hydrocarbon</u>

Contamination Case
1. Are there adverse effects on environment from manufacture, use, or disposal? [§205.600 b.2] 2. Is there environmental contamination during manufacture, use, misuse, or disposal? [§6518 m.3] 3. Is the substance harmful to the environment? [§6517c(1)(A)(i);6517(c)(2)(A)i] 4. Does the substance contain List 1, 2, or 3 inerts? [§6517 c (1)(B)(ii); 205.601(m)2] 5. Is there potential for detrimental chemical interaction with other X TAP lines 2247-258 TAP lines 247-258 TAP lines 263-266 "Isoparaffinic hydrocarbon (CAS 64742-8) produces some harm to the environment. According to the US EPA (2008) in Table 3 of 40 CFR Part 63, Subpart MMMM, the petitioned substance solvent produces 0.001 material for detrimental chemical interaction with other X Strong oxidizers Petition page 13 (Isopar M Fluid MSDS)
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chemical interaction with other
materials used?[§6518 m.1]
6. Are there adverse biological and X TAP lines 283-288 "there is potential for impairing the
chemical interactions in agro- hatching of bird eggs according to the U.S. EPA (2006), if the
ecosystem? [§6518 m.5] spray substance is applied directly to eggs in the nest."
7. Are there detrimental X TAP lines 293-300 "the petitioned substance has detrimen
physiological effects on soil physiological effects on citrus crops and foliage, fruit, and
organisms, crops, or livestock? seedlings of other plants."
[§6518 m.5] 8. Is there a toxic or other adverse X TAP lines 305-315 "Isoparaffinic hydrocarbon and its
action of the material or its A
breakdown products? adverse action according to S. E. Kegley (2009). It is not a
[§6518 m.2] cholinesterase inhibitor in humans (Kegley 2009). According
the US EPA (2008) in Table 3 of 40 CFR Part 63, Subpart
MMMM, isoparaffinic hydrocarbon contains just 0.001 mass
fraction of toluene as hazardous air pollutant (HAP) in the
solvent. According to ExxonMobil Chemical (2008) the
petitioned substance contains typical toxic chemical
concentrations of <0.4ppm of benzene, <1ppm naphthalene,
and <1ppm ethylbenzene. Thus the benzene content in the
petitioned substance is negligible. This is significant since benzene is linked to increased incidence of leukemia in
humans."
9. Is there undesirable persistence X TAP Lines 320-324
or concentration of the material or
breakdown products in
environment?[§6518 m.2]
10. Is there any harmful effect on X1 X2 X1: TAP Supplemental Information lines 359-364-1 st S & T
human health? [§6517 c (1)(A)(i); TAP
6517 c(2)(A)i; §6518 m.4] X2: TAP Lines 329-337-2 nd S & T TAP
11. Is there an adverse effect on human health as defined by X1 X2 X1: TAP Supplemental Information lines 359-364-1 st S & T TAP
human health as defined by applicable Federal regulations? TAP X2: TAP Lines 329-337-2 nd S & T TAP
[205.600 b.3]

12. Is the substance GRAS when used according to FDA's good manufacturing practices? [§205.600 b.5]	X	TAP lines 279-288—although the TAP states it does not need to be GRAS listed because of it's place on 21 CFR 172, § 172.882. Natamycin is also on this list. This information is missing from the more recent TAP from S & T
13. Does the substance contain residues of heavy metals or other contaminants in excess of FDA tolerances? [§205.600 b.5]	X	TAP lines 307

¹If the substance under review is for crops or livestock production, all of the questions from 205.600 (b) are N/A—not applicable.

Category 2. Is the Substance Essential for Organic Production? Substance - Isoparaffinic Hydrocarbon

Question	Yes	No	N/A ¹	Documentation (TAP; petition; regulatory agency; other)
1. Is the substance formulated or manufactured by a chemical process? [6502 (21)]	X			TAP lines 220-228
2. Is the substance formulated or manufactured by a process that chemically changes a substance extracted from naturally occurring plant, animal, or mineral, sources? [6502 (21)]		X		TAP lines 234-236
3. Is the substance created by naturally occurring biological processes? [6502 (21)]		X		TAP lines 241-242
4. Is there a natural source of the substance? [§205.600 b.1]		X		TAP lines 214-217-information from previous S & T Tap, not present in more recent edition.
5. Is there an organic substitute? [§205.600 b.1]		X1		TAP lines 219-222-Question not addressed in newer version of S & T TAP
6. Is the substance essential for handling of organically produced agricultural products? [§205.600 b.6]			X	
7. Is there a wholly natural substitute product? [§6517 c (1)(A)(ii)]	X			US Pat#4,281,171 Liquid Carbon Dioxide Extraction of Pyrethrins. Also there are commercially available pyrethrins extracted by other means for example Pyganic Crop Protection EC 1.4 and EC 5.0; Safer Brand Yard and Garden Insect Killer and Insect Killer Concentrate. Their extraction methods, however, are confidential.
8. Is the substance used in handling, not synthetic, but not organically produced? [§6517 c (1)(B)(iii)]			X	
9. Is there any alternative substances? [§6518 m.6]	X			See #7 above
10. Is there another practice that would make the substance unnecessary? [§6518 m.6]	X			Alternative extraction methods as listed in #7 above; also other insecticides approved for use in organic agriculture without this petroleum product extraction ingredient. See also TAP lines 360-365.

TAP lines 360-365.

If the substance under review is for crops or livestock production, all of the questions from 205.600 (b) are N/A—not applicable.

Category 3. Is the substance compatible with organic production practices? Substance - $\underline{\text{Isoparaffinic}}$ $\underline{\text{Hydrocarbon}}$

0 4	▼7	N.T.	NT/A 1	D (1)
Question	Yes	No	N/A ¹	Documentation (TAP; petition; regulatory agency; other)
1. Is the substance compatible with organic handling? [§205.600 b.2]			X	(TAT, petition, regulatory agency, other)
2. Is the substance consistent with organic farming and handling? [§6517 c (1)(A)(iii); 6517 c (2)(A)(ii)]		X		This is a petroleum product which is present in the final pesticide formulation and to which there are alternatives without the petroleum extraction.
3. Is the substance compatible with a system of sustainable agriculture? [§6518 m.7]		X		As above.
4. Is the nutritional quality of the food maintained with the substance? [§205.600 b.3]			1X	TAP says yes (lines 253-259) but refers only to non-food use.
5. Is the primary use as a preservative? [§205.600 b.4]			1X	It is used as a preservative, but that is not what the petition is for. TAP lines 270-277. The newer version has an approved use for pickles and froth-flotation cleaning of vegetables-Line 167.
6. Is the primary use to recreate or improve flavors, colors, textures, or nutritive values lost in processing (except when required by law, e.g., vitamin D in milk)? [205.600 b.4]			X	
7. Is the substance used in production, and does it contain an active synthetic ingredient in the following categories: a. copper and sulfur compounds;		X		TAP lines 17-22
b. toxins derived from bacteria;		X		TAP lines 17-22
c. pheromones, soaps, horticultural oils, fish emulsions, treated seed, vitamins and minerals?		X		TAP lines 17-22
d. livestock parasiticides and medicines?		X		TAP lines 17-22
e. production aids including netting, tree wraps and seals, insect traps, sticky barriers, row covers, and equipment cleaners?		X		TAP lines 17-22

¹If the substance under review is for crops or livestock production, all of the questions from 205.600 (b) are N/A—not applicable.

Category 4. Is the commercial supply of an agricultural substance as organic, fragile or potentially unavailable? [§6610, 6518, 6519, 205.2, 205.105 (d), 205.600 (c) 205.2, 205.105 (d), 205.600 (c)]

Sul	stan	ce -			

Question	Yes	No	N/A	Comments on Information Provided (sufficient, plausible, reasonable, thorough, complete, unknown)
1. Is the comparative description			X	
provided as to why the non-organic				
form of the material /substance is				
necessary for use in organic handling?				
Does the current and historical			X	
industry information, research, or			Λ.	
evidence provided explain how or why				
the material /substance cannot be				
obtained organically in the appropriate				
form to fulfill an essential function in				
a system of organic handling?			37	
3. Does the current and historical			X	
industry information, research, or				
evidence provided explain how or why				
the material /substance cannot be				
obtained organically in the appropriate				
quality to fulfill an essential function				
in a system of organic handling?				
4. Does the current and historical			X	
industry information, research, or				
evidence provided explain how or why				
the material /substance cannot be				
obtained organically in the appropriate				
quantity to fulfill an essential				
function in a system of organic				
handling?				
5. Does the industry information			X	
provided on material / substance non-				
availability as organic, include (but				
not limited to) the following:				
a. Regions of production (including				
factors such as climate and number of				
regions);				
b. Number of suppliers and amount			X	
produced;			71	
produced,				
a Current and historical supplies	l I		X	
c. Current and historical supplies related to weather events such as			Λ	
hurricanes, floods, and droughts that				
may temporarily halt production or				
destroy crops or supplies;				
d Tundo moletad increase of the	l 	L	v	
d. Trade-related issues such as			X	
evidence of hoarding, war, trade				
barriers, or civil unrest that may				
temporarily restrict supplies; or				
And those other issues which we	l I		v	
e. Are there other issues which may			X	
present a challenge to a consistent				
supply?				
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