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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁵ : A01N 53/00, 41/02, 37/44 A01N 37/38, 31/14	A3	(11) International Publication Number: WO 93/03618 (43) International Publication Date: 4 March 1993 (04.03.93)
(21) International Application Number: PCT/US92/07288 (22) International Filing Date: 27 August 1992 (27.08.92) (30) Priority data: 238,923 27 August 1991 (27.08.91) JP 289,157 8 October 1991 (08.10.91) JP (71) Applicant (for all designated States except US): UNIROYAL CHEMICAL COMPANY, INC. [US/US]; World Headquarters, Middlebury, CT 06749 (US). (72) Inventors; and (75) Inventors/Applicants (for US only) : KATAOKA, Masaaki [JP/JP]; NAKAMURA, Takehiko [JP/JP]; WAKAI, Akira [JP/JP]; Nippon Soda Co., Ltd., Haibara Agricultural Research Station, 62-1 Sakbe, Haibara, Haibara-gun, Shizuoka (JP).		(74) Agents: THOMPSON, Raymond, D. et al.; Uniroyal Chemical Company, Inc., World Headquarters, Middlebury, CT 06749 (US). (81) Designated States: AU, BG, US, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 13 May 1993 (13.05.93)
(54) Title: INSECTICIDE COMPOUNDS FOR AGRICULTURAL AND HORTICULTURAL USE (57) Abstract Compounds comprised of 2-(4-tert-butylphenoxy) cyclohexyl prop-2-ynyl sulfite and a synthetic pyrethroid exhibit synergistic pesticidal activity.		

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 92/07288

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all)*		
According to International Patent Classification (IPC) or to both National Classification and IPC		
Int. Cl. 5	A 01 N 53/00	A 01 N 41/02 A 01 N 37/44
A 01 N 37/38	A 01 N 31/14	
II. FIELDS SEARCHED		
Minimum Documentation Searched ⁷		
Classification System	Classification Symbols	
Int. Cl. 5	A 01 N	
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁸		
III. DOCUMENTS CONSIDERED TO BE RELEVANT⁹		
Category ¹⁰	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³
A	CHEMICAL PATENTS INDEX, DOCUMENTATION ABSTRACTS JOURNAL Section Ch, Week 9032, 3 October 1990 Derwent Publications Ltd., London, GB; Class C, AN 90-241983/32 & JP,A,2 167 207 (MITSUI TOATSU CHEM) 27 June 1990 see abstract & PATENT ABSTRACTS OF JAPAN vol. 14, no. 431 (C-759)(4374) 17 September 1990 see abstract ---	1-3
A	CHEMICAL ABSTRACTS, vol. 95, no. 1, 6 July 1981, Columbus, Ohio, US; abstract no. 1918d, SUMITOMO CHEMICAL 'Synergistic acaricide composition' page 205 ;column 2 ; see abstract & JP,A,8 129 509 (...) --- -/-	1-3
¹⁰ Special categories of cited documents : ¹⁰ "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report	
01-12-1992	20. 04. 93	
International Searching Authority	Signature of Authorized Officer	
EUROPEAN PATENT OFFICE	W. LAMERS	

III. DOCUMENTS CONSIDERED TO BE RELEVANT (CONTINUED FROM THE SECOND SHEET)		
Category °	Citation of Document, with indication, where appropriate, of the relevant passages	Relevant to Claim No.
A	CHEMICAL ABSTRACTS, vol. 85, no. 19, 8 November 1976, Columbus, Ohio, US; abstract no. 138545t, C.B.RATHBURN ET AL. 'Tests of resmethrin with several synergists in a laboratory wind tunnel against caged adult mosquitoes' page 152 ;column 2 ; see abstract & MOSQ. NEWS vol. 36, no. 2, 1976, pages 204 - 205 ---	1-3
A	US,A,3463859 (R.A.COVEY ET AL.) 26 August 1969 see column 1, line 29 - column 2, line 17 see column 7, line 12 see column 8, line 15 - line 17 ---	1-3
A	EP,A,0412937 (CIBA-GEIGY) 13 February 1991 see claim 6 ---	1-3
A	CHEMICAL PATENTS INDEX, DOCUMENTATION ABSTRACTS JOURNAL Section Ch, Week 9049, 13 February 1991 Derwent Publications Ltd., London, GB; Class C, AN 90-365870/49 & JP,A,2 264 702 (NIPPON SEIKA) 29 October 1990 see abstract -----	1-3

INTERNATIONAL SEARCH REPORT

Internat. 1 application No.

PCT/US 92/07288

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. claims : 1-3 (incomplete)
 2. claims : 1-3 (incomplete)
 3. claims : 1-3 (incomplete)
 4. claims : 1-3 (incomplete)
- see for further information PCT/Form 206 (extra sheet).

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1. claims : 1-3 (incomplete)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

**ANNEX TO THE INTERNATIONAL SEARCH REPORT
ON INTERNATIONAL PATENT APPLICATION NO.**

US 9207288

SA 64171

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on 06/04/93. The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US-A- 3463859	26-08-69	BE-A- 648821	01-10-64
		CH-A- 430314	
		DE-A- 1567205	23-11-72
		FR-A- 1404674	
		GB-A- 1012496	
		LU-A- 46280	09-12-64
		NL-A- 6406854	19-01-65
		US-A- 3272854	
EP-A- 0412937	13-02-91	AU-A- 6085490	14-02-91
		JP-A- 3083903	09-04-91
		US-A- 5093358	03-03-92