

**Cyfluthrin 10 WP**  
*Aspergillus amstelodami*

(2003/10/7                      2003/8/3                      )

Cyfluthrin 10 WP

(                      )

Cyfluthrin

*Aspergillus amstelodami*

.(8-Azg)

*A. amstelodami*

**The Mutagenic Effect of Pesticide Cyfluthrin 10 WP in Conidia of  
the Fungus *Aspergillus amstelodami***

**Rafia K. Gerges**

*Department of Biology  
College of Science  
Mosul University*

**Gehan M. Saeed**

*Department of Biology  
College of Education  
Mosul University*

**ABSTRACT**

Non-toxic concentrations of the pesticide Cyfluthrin 10 WP were tested for thier ability to induce forward point mutations resistant to the base analogue 8-azaguanine (8-Azg) in conidia of the ascomycetous fungus *Aspergillus amstelodami*. It appeared that pesticide Cyfluthrin 10 WP was aweak mutagenic under our experimental conditions.

(                      )

.(De Serris, 1982)

.(Moutschen, 1985)

DNA

DNA

DNA

.(Peter and George, 1996)

(Repair system)

.DNA

.(Muller and Young, 1998)

McCann and Ames, )

.(1977

.  
: (Moutschen, 1985)

.(Babudri and politi, 1989)

*Aspergillus amstelodami*

)

Cyfluthrin 10 WP

(

.(Martin and warthin, 1977)

Wolff et al.,

(Wesselin et al., 1996 1993)

.(Harris et al., 1999)

Cyfluthrin

.(Morgan, 1989)

.(Morgan, 1989)

Cyfluthrin 10 WP

*Aspergillus amstelodami*

( 253.7) FUV

(8-Mop) 8-Methoxy Psoralen

(Bredberg and Nachmansson, 1987)

( 365)

:

*Aspergillus amstelodami* A<sub>1</sub>(wA<sub>1</sub>)

:

Caten (1979)

M (Minimal medium)

:

MTS (Malt extract- Salt medium) -

%5 C (Complete Supplement)

Sodium (D) ) / 400 deoxycholate .( / ) .(1999

:

:(8-Azaguain) -1

1 / 1

(Haffman and 100

IN NaOH

100 1 Malling, 1974)

Fluka

:(8- MOP) -2

Koch-Light

25 8- MOP 20 / 0.4

100 1 (Alderson and Scott, 1970)

. 5

:Cyfluthrin 10 WP -3

100 5 / 50

: -4

*Aspergillus amstelodami* A<sub>1</sub>

.CMD

CMTS

/ 10<sup>8</sup>

.(Heamcytometer)

:(8- MOP) -5

8- MOP

.(Alderson and Scott, 1970) ( 365)

/ 4

10

.Photoreactivation

8- Azg

MD

.8- MOP

:FUV -6

/ 10<sup>8</sup>

. 10

30

253.7

..... Cyfluthrin 10 WP

MD

8-Azg

: -7

.( )

8- Azg

.(Fincham et al., 1979)

:

**:Plate incorporation method**

**-1**

MD

8- Azg

.(Kafer et al., 1986)

( )

30

**:Pretreatment method**

**-2**

Babudri

8- Azg

MD

*.A. nidulans*

and Politi (1989)

**:Growth mediated method**

**-3**

*.A. nidulans*

Kafer (1986)

MD

)

8-Azg + MD (

.(Brusick, 1980)

(Babudri and Politi,

Cyfluthrin

.1989)

*A.amstelodami*

.(Bridges et al., 1983 Auerbach, 1976 )

MD

(MIC)

( )

1.50,

( / 2500)

/ 2.5

/ 1.25, 1.0, 0.75, 0.5

FUV

(NUV)

+ (8-MOP)

( )

.3 2 1

(1)

(8-Azg)

.MD

(2)

(Lesions)

(DNA)

( )

(3)

CMD

( )

NUV +

FUV

$5.23 \times 10^{-5}$

$7.32 \times 10^{-7}$

*A. amstelodami*

Cyfluthrin

*Aspergillus amstelodami*

(Heath, 1978)

.(Jinks and Croft, 1971)

*Aspergillus* (10<sup>-7</sup>x) :1  
 Cyfluthrin *amstelodami*

	<b>R<sub>3</sub></b>	<b>R<sub>2</sub></b>	<b>R<sub>1</sub></b>	
0.45	0.55	0.50	0.13	-1
				( / ) -2
0.57	0.84	0.48	0.39	500 -
0.58	0.98	0.41	0.34	750 -
0.56	0.83	0.54	0.31	1000 -
0.52	0.83	0.43	0.29	1250 -
0.46	0.70	0.41	0.26	1500 -
				NUV + 8- MOP -3
0.36	0.26	0.67	0.15	(10 <sup>-7</sup> x) -
7.32	6.95	7.92	7.40	(10 <sup>-7</sup> ) -
				FUV -4
0.76	1.57	0.39	0.33	(10 <sup>-7</sup> x) -
5.23	5.50	4.81	5.38	(10 <sup>-5</sup> ) -

*Aspergillus* (10<sup>-7</sup>x) :2  
 Cyfluthrin *amstelodami*

	<b>R<sub>3</sub></b>	<b>R<sub>2</sub></b>	<b>R<sub>1</sub></b>	
0.84	1.58	0.57	0.39	-1
				( / ) -2
1.21	2.11	0.68	0.38	500 -
1.15	2.00	0.83	0.61	750 -
1.84	2.91	1.81	0.79	1000 -
1.54	2.60	1.31	0.72	1250 -
1.59	2.25	1.79	0.73	1500 -
				NUV + 8- MOP -3
0.36	0.26	0.67	0.15	(10 <sup>-7</sup> x) -
7.32	0.95	7.92	7.40	(10 <sup>-7</sup> ) -
				FUV -4
0.76	1.57	0.39	0.33	(10 <sup>-7</sup> x) -
5.23	5.50	4.81	5.38	(10 <sup>-5</sup> ) -



*Aspergillus* $(10^{-7}x)$ 

:3

Cyfluthrin

*amstelodami*

	<b>R<sub>3</sub></b>	<b>R<sub>2</sub></b>	<b>R<sub>1</sub></b>	
0.93	0.36	0.56	1.88	-1
				( / ) -2
1.81	1.41	0.42	3.60	500 -
1.93	1.54	0.56	3.69	750 -
1.55	1.58	0.40	2.40	1000 -
1.49	1.92	0.60	1.94	1250 -
1.61	1.88	0.55	2.41	1500 -
				NUV + 8- MOP -3
0.36	0.26	0.67	0.15	$(10^{-7}x)$ -
7.32	6.95	7.92	7.40	$(10^{-7})$ -
				FUV -4
0.76	1.57	0.39	0.33	$(10^{-7}x)$ -
5.23	5.50	4.81	5.38	$(10^{-5})$ -

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*Aspergillus amstelodami*

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