

**(MDMV)**

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Maize dwarf mosaic virus (MDMV)

Tissue Blot Immunoassay

.(TBIA)

( PEG)

. 1,12

512/1

**The Purification of Maize Dwarf Mosaic Virus (MDMV) and  
Preparation of its Antiserum**

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**ABSTRACT**

Maize dwarf mosaic virus (MDMV) was diagnosed on corn crop in Ninewah province by using tissue blot immunoassay (TBIA). The virus isolate was propagated in corn plants. The virus was purified by differential centrifugation and precipitated by polyethylene glycol (PEG) and then by sucrose density gradient. The efficiency of purification method

was evaluated biologically and spectrometrically, and virus purity was 1.12 . Its antiserum was prepared by using rabbit, the end the dilution point ( titer ) of antiserum was 1/ 512. The efficiency of antiserum was tested by agglutination, and agar double diffusion tests .

**Keywords :** Maize dwarf mosaic virus, Virus antiserum

(Indian corn) *Zea mays* L.

. ( 1982 )  
25  
( MDMV) Maize dwarf mosaic virus  
( 2008 2007 ) % 25  
750 x 13 Potyviridae *Potyvirus*  
Van ; Gibbs , 1999 ) (+) sense ssRNA  
(Regenmortel, 2001  
2005  
K<sub>2</sub>HPO<sub>4</sub> 7,2 pH 0,01  
600  
(TBIA) Tissue Blot Immuno Assay

..... (MDMV)

(Nitrocellulose membrane)

: ( )

(TBIA)

(MDMV)

0,45

Potyviridae

(PBST) Phosphate Buffered saline Tween-2

/ 1 PBST

Polyvinylalcohol

Phosphate

1000:1

(PBS) Buffered saline

20 - 15

Goat Anti- rabbit conjugate

10

5-bromo-4-chloro-3-indolylphosphate

3,5

0,05

0,1

9,5 pH

0,1

Tris-HCL

(MgCl<sub>2</sub>)

.(Lin *et al.*, 1990)

PBST

20

200

Makkouk *et al.*, (1982)

K<sub>2</sub>HPO<sub>4</sub>

Ethylene diamine tetra acetate

0,005

8,5 pH

0,05

Triton-X 100

%1

(DIECA)

Diethyl dithio carbamate

0,01

(EDTA)

2

20

%25

/ 10000

GS-3

Sorvall

%6

Polyethylene glycol (PEG)

/ 10000

4

%1

8,2 pH

0,01

(Borate buffer)

10000

24

10 /

Beckman

90

/

30000

20

TY 35

4

(

4

4)

TY 65

/

60000

10

(

)

15-10 )

SW 28

100

/

24000

(%

(Density gradient fractionator ISCO)

/ 30000

20-

TY 35

:

:

:

Shimadzu spectrophotometer

320

220

280 / 260

1700

10

60 x 8 x 40

Normal serum

15

%70

..... (MDMV)

10 / / 2000  
18-

20

.( Noordam, 1973 )

**(Titer)**

(Noordam , 1973) Microprecipitin test

( Petri-slide)

7,2 pH 0,01  
/ / 5000

K<sub>2</sub>HPO<sub>4</sub>

25

25

25 2/1

4/1

128/1 64/1 32/1 16/1 8/1 4/1 2/1 :

25 .1024/1 512/1 256/1

:

**Agglutination test**

)

.( 2006

(Noble agar)

1,8 (1977) Batchelor Purcifull

Sodium Dodecyl

7,2 pH 1 K<sub>2</sub>HPO<sub>4</sub> 100

1 100 % 5 Sulphate (SDS)

/ 15

8,5

15 / 121

24

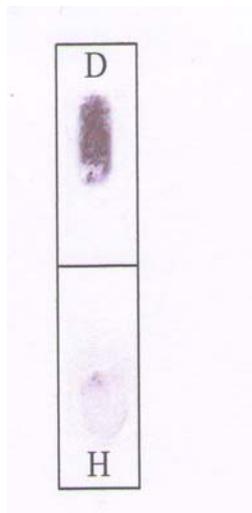
/ 15

7

48 24

TBIA  
(MDMV)

(1 )



TBIA

: 1

( )

PEG

1,86 260

Harrison Gibbs

( 2 )

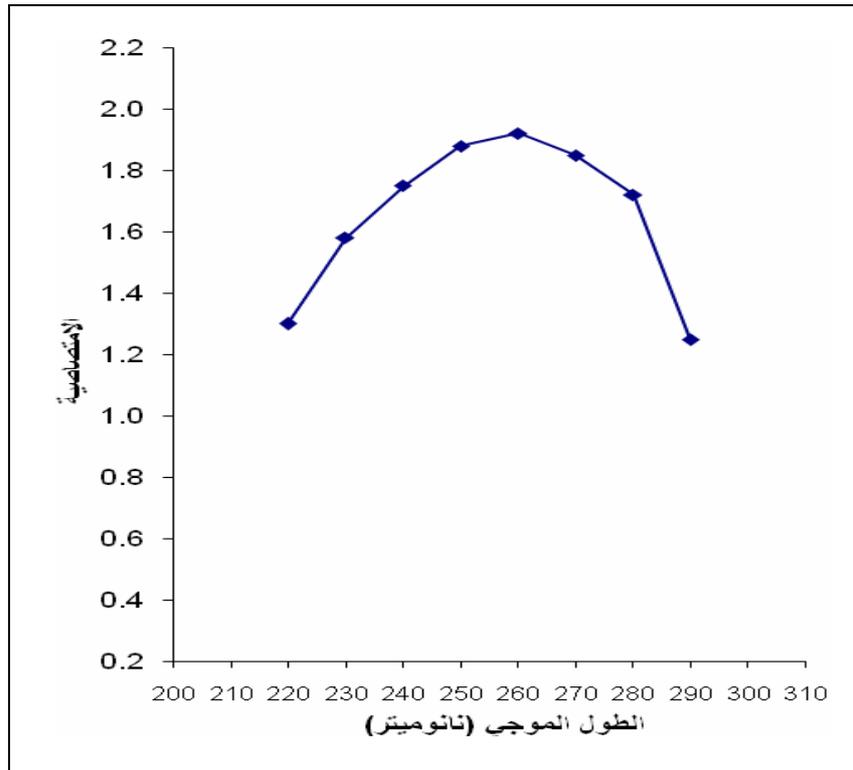
,(2002) Hull (1980)

1,12 A 260 / 280 ratio

260

Ford (1973) Langenberg MDMV

(1989)



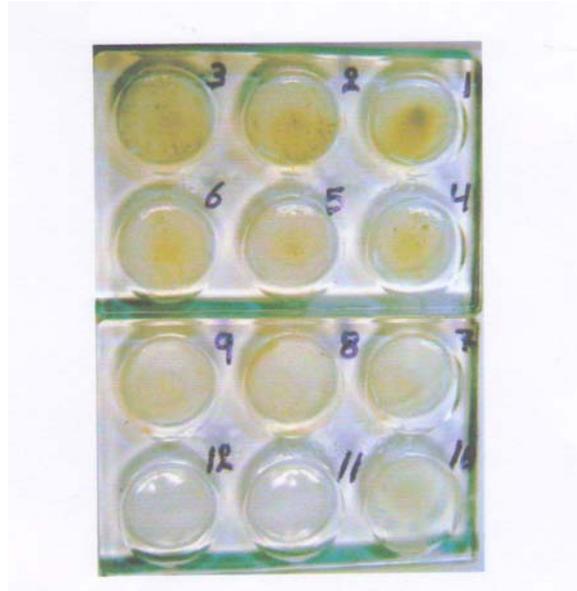
: 2

512/1-256/1 ( Titer)

(1972) Ford Totic

(3 )

.1024/1-512/1



Petri-Slid

:3

.(MDMV)

(1972) Ford Totic

.(1982)

. 323

.(2006)

.147-140:4 34

.(2007)

.(2008)

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