

*Pilea cadieri*

\*

(*Pilea cadieri*)  
 - ( / 30) (1962) Skoog Murashige  
 (NAA) ( / 1.5 1 0.5 0) (BAP) ( / 7)  
 (MS) ( / 0.5 0)  
 1.5 1 0.5 0) (IBA) / 20  
 ( / 1.5) (BAP) .( /  
 .( / 9.45) .( / 3.3) (%100)  
 ( / 6.15)  
 / 1 (IBA)  
 7.52 3 (%100)  
 8 %79.62  
 :

*Urticaceae Pilea*

200

(2005 )

Malherbe, )

*Pilea cadieri* .(1986

(França *et al.*, 1995; Pereira *et al.*, 2005)

( )

\*

lnnhlayous@gmail.com

.2013/2/25

2012/11/22

Koriesh *et al.*, 2003; Souza *et* )

(Wojtania, 2010) / 1.2

Nisha *et al.* (2009) (*Jasminium azoricum*) (2004) (NAA)

%95 ( / 3) (BAP)

Nasib ) (Nisha *et al.*, 2009) 7) (%85)

%80 (*et al.*, 2008) (%90 -80) (Oo *et al.*, 2008) ( / 0.5)

Chakrabarty and Data, ) 1:1 Nasib *et al.*, ) ( 2.35) (2007) (2008)

(2008) (*Dianthus caryophyllus*) (IAA)

:

*Pilea cadieri* 2012-2011 (BA) ( / 1.4 4.4 ) (IAA)

(2-1) Mathan *et al.* ) ( / 10) (%83) (*al.*, 2009)

%70

%5.25 ( )

/ 1.58 1.05 1 IBA %85

.( 30 20 10) (2003 ) /

5 ( / 2 )

(Murashige and Skoog, 1962)

(54)

3 / 30)

( / 7) -

GENSTAT 12

1.5 1 0.5 0)

(BAP)

.%1

(L.S.D)

( / 0.5 0)

(NAA)

( /

.0.1 ± 5.6 (pH)

:

:

:

(Murashige and Skoog, 1962)

(IBA)

/ 20

( / 1.5 1 0.5 0)

1.05

.0.1 ± 5.4 (pH)

20

/

20

°121

(%100)

25)

16

( 150 X

BAP

(1)

24

°2 ±

NAA

(BAP)

16

.%80

3000

. / 1

(%85.18)

(NAA)

%86.1

2:1

( / 0.5)

%64.35

BAP

1.5)

(%100)

( /

(MS)

/ 0.5

(%46.3)

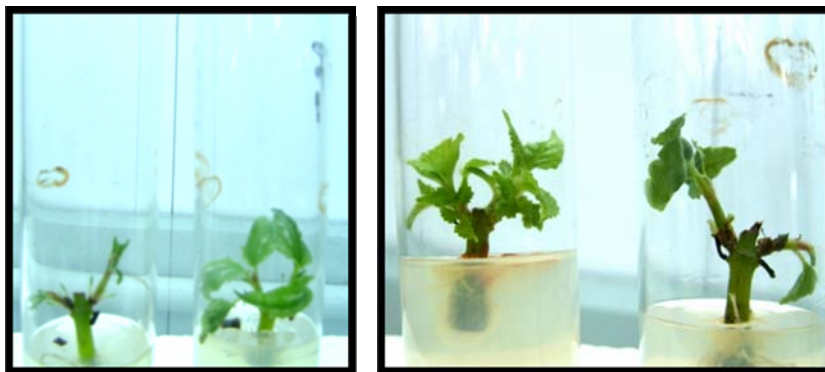
.(1 )

:(1)

( )			( / )			%			( / )
	0.5	0		0.5	0		0.5	0	NAA BAP
1.01 A	0.81 b	1.22 a	0.78 C	0.73 d	0.83 d	54.62 B	46.29 d	62.96 cd	0
0.56 C	0.52 d	0.6 cd	1.29 B	0.93 d	1.66 c	81.47 A	75.92 bc	87.08 ab	0.5
0.67 C	0.56 d	0.77 bc	1.86 A	1.26 cd	2.46 b	85.18 A	75.92 bc	94.44 ab	1
0.86 B	0.79 b	0.93 b	2.22 A	1.13 cd	3.3 a	79.62 A	59.25 cd	100 A	1.5
	0.67 B	0.88 A		1.01 B	2.06 A		64.35 B	86.10 A	
BAP*NAA	BAP	NAA	BAP*NAA	BAP	NAA	BAP*NAA	BAP	NAA	L.S.D
0.17	0.12	0.09	0.64	0.32	0.45	19.24	13.60	9.62	(0.01)

.(0.01)

\*



:(1)

BAP

.( / 2.22)

( / 1.5)

)

(1)

(

NAA	( / 0.5)			(2.06)
. 0.52		BAP		.( / 1.01)
:		-		
			BAP	( / 3.3)
			/ 1.5	
			.(0.73)	(NAA)
			(2012)	
			. / 2	
%100				
(2)				
	BAP			
	/ 0.5		(1)	
4.01	( / 1.5)	/		BAP
			( 0.56)	( 1.01)
4.08			/ 1.5	/ 0.5
	(2010)			
		(2008)		(2009)
				(BAP)
		(1.5)		( 0.88)
	( 6.15)	( 0.67)	/ 0.5	
.( 1.58)	/ 0.5			
	(Juvenility)			
Almaarri et al., )				(2010)
	(1986)			
			( 1.22)	

11.55 17.5

(Elsner, 1992)

7- 6

(Abdullah, 1990)

(Layous, 1992)

:(2)

	( / ) BAP				NAA ( / )
	1.5	1	0.5	0	
4.08 A	6.15 a	5.17 a	3.3 b	1.72 c	0
1.80 B	1.87 c	2.13 c	1.58 c	1.63 c	0.5
	4.01 A	3.65 A	2.44 B	1.67 B	
	0.55		NAA		L.S.D. ( 0.01)
	0.78		BAP		
	1.09		BAP * NAA		

.(0.01)

(3)

BAP

(2012)

.(2008)

/ 0.5

( 2.1)

( 2.25)

.( 1.82)

(2009)

( 1.67)

. / 1.5

(3):

	BAP ( / )				NAA ( / )
	1.5	1	0.5	0	
1.82 B	1.67 b	1.7 b	1.83 ab	2.1 ab	0
2.25 A	2.4 a	2.1 ab	2.33 ab	2.2 ab	0.5
	2.03 A	1.9 A	2.08 A	2.15 A	
			0.33	NAA	L.S.D. (0.01)
			0.4	BAP	
			0.66	BAP * NAA	

(0.01).

- :

(0.5 / 1)

(4)

IBA

/ 1

% 68.51

(%100)

(2 )

(2008)

)

(2009)

(1995).

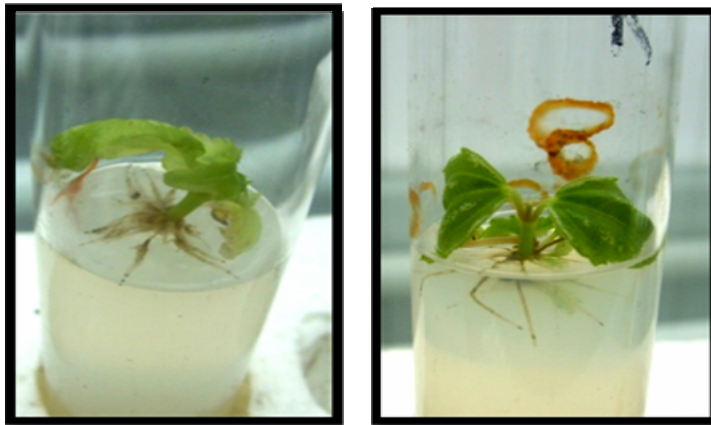
(George, 1996)

(IBA) / 1

(%100)

4	IBA	:(4)
(%)	( / ) IBA	
68.51 b	0	
96.29 a	0.5	
100 a	1	
88.88 ab	1.5	
23.95	L.S.D (0.01)	

.(0.01)



:(2)

.(2012 )

: -

( 9.45)  
(6.15)

2:1

(3.3)

(%100)

%79.62

(7.52)

( 9.45)

(7.52)

.(%79.62)

(%73.33)

(%80)

8

(%76.92)

(2010 )

*Callistemon*

(%73.33)

(2008 )



:

.%79.62

( / 1.5)

*Pilea*

1 IBA

/

(%100)

.66

)

2005

2010

(

*Callistemon*

.332

.68

1995

*Dieffenbachia*)

2003

( )

(*amoena*

.256

.187-171 :46

2010

2004

(*Jasminium azoricum*)

.91

12

2009

.308 - 293 :(2)

.2008

*Gerbera jamesonii* hybr.

*Dianthus caryophyllus*

.46 -29 :(1)

(25)

2012

.119-107 :(67)

(*Wisteria sinensis*)

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## Response of *Pilea cadieri* for Micropropagation using Tissue Culture Techniques

Laurene Layous<sup>✉</sup>

### ABSTRACT

An efficient micropropagation of *Pilea cadieri* using tissue culture techniques were developed. The shoot cultures were cultured on Murashige and Skoog media supplemented with 30 g/L sucrose, 7g/L agar – agar, and different concentration of benzyl amino purine (BAP) (0, 0.5, 1 , 1.5 mg/L), and Naphthalene Acetic Acid (NAA) (0 , 0.5 mg/L). While reducing mineral to half with 20 g/L sucrose and addition of indole-3-butyric acid (IBA) at different concentrations (0, 0.5, 1, 1.5 mgL<sup>-1</sup>). Maximum open buds was obtained with BAP only in the media at the phase of initial culture, concentration (1.5 mg/L) gave the highest values of open buds (100%) and maximum number of shoot per initial explant (3.3). Also secondary multiplication for a greater number of shoots (6.15 shoot/explant), thereby increasing the overall propagation rate (9.45 shoot/explant). The *in vitro* propagated shoots produced roots when transferred to MS medium containing indole-3-butyric acid (IBA) at various concentrations, at 1.0 mg/L (IBA) 100% shoot were successfully rooted after one month of culture. Rooted micro shoots were potted and hardened. 79.62% microshoots were successfully rooted after three months. The profitability final per explants is 7.52 viable plants successfully in ambient conditions after 8 months of primary culture and after taking into account both the rate of rooting and the success rate of hardening.

**Keywords:** *Pilea* Plant, *In vitro*, Micropropagation, Rooting, Growth Regulators.

✉ Department of Horticulture, Faculty of Agriculture, University of Aleppo, Aleppo, Syria.

Innhlayous@gmail.com.

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