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Agrobacterium vitis *A.tumefaciens* biovar1

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Agrobacterium vitis

A. tumefaciens biovar1

A. tumefaciens *A. vitis*

biovar1

(Slide agglutination test)

(Agar gel diffusion)

(Chloroplast agglutination)

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A. vitis *A. tumefaciens* biovar 1

.vitis vinifera Agrobacterium vitis :

Amplidaceae

vitis

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Agrobacterium vitis

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A.tumefaciens *A.radiobacter* ,*A.rehizogenes*

(PAGE)

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()
() () ()
(separating gel) *A.tumefaciens*
(staking gel) ()
()

(tris - glycin) -
() (agar gel diffusion)
(agglutination)
(chloroplast agglutination)
()
()

(agar gel diffusion)
() (agglutination) ()
(chloroplast agglutination) *A. vitis*
A. tumefaciens
()

A. vitis
A. tumefaciens biovar 1 (MixB) B
A. vitis
(Nutrient agar +1% Yeast Extract)YNA B
(2- mercaptoethanol)
() (Mix A) A
() pH ()
() SDS

...
°C
(sodium dodecyl sulfate) SDS / (.)

cm

(incomplet adjuvant)

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(sodium azide)

(.)

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A. vitis

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A. tumefaciens

YNA

(.)

A. vitis

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A.

A. vitis

tumefaciens biovar 1

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(.)

A. vitis

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A. tumefaciens

A. vitis

A. tumefaciens

(Agar gel diffusion test)

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Agrobacterium

			<i>A. vitis</i>
			<i>A. tumefaciens</i> biovar 1
			<i>A. vitis</i>
			(<i>A. vitis</i>)
			(<i>A. tumefaciens</i> biovar 1)
<hr/>			
+	+	+	<i>Nicotiana tabacum</i>
+			<i>Pelargonium</i> sp .
			<i>Gamphrena globosa</i>
+			<i>Chenopodium quinoa</i>
			<i>Vigna unguiculatus</i>
			<i>Zea maiz</i>
			<i>Capsicum annum</i>
			<i>Beta vulgaris</i>
<hr/>			
		()	() +

A. tumefaciens () () biovar 1

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Agrobacterium

(*A. vitis*)

(*A. vitis*)

A. tumefaciens

A. tumefaciens biovar 1) biovar 1

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		<i>Agrobacterium</i>
+		<i>A. vitis</i>
+		<i>A. vitis</i>
+		<i>A. vitis</i>
+		<i>A. vitis</i>
		<i>A. tumefaciens</i> biovar 1
		<i>A. tumefaciens</i> biovar 1
+		<i>A. vitis</i>
+		<i>A. vitis</i>
+		<i>A. vitis</i>
+		<i>A. tumefaciens</i> biovar 1
		<i>A. tumefaciens</i> biovar 1
		<i>A. tumefaciens</i> biovar 1
		<i>A. tumefaciens</i> biovar 1
		<i>A. vitis</i>
		<i>A. tumefaciens</i> biovar 1
+		<i>A. vitis</i>
+		<i>A. vitis</i>
+		<i>A. vitis</i>
+		<i>A. vitis</i>
		<i>A. tumefaciens</i> biovar 1
		<i>A. tumefaciens</i> biovar 1
+		<i>A. vitis</i>
		<i>A. tumefaciens</i> biovar 1
		<i>A. vitis</i>
		<i>A. vitis</i>
		<i>A. tumefaciens</i> biovar 1
		<hr/>
		= = +

A. tumefaciens biovar1 *A. vitis*

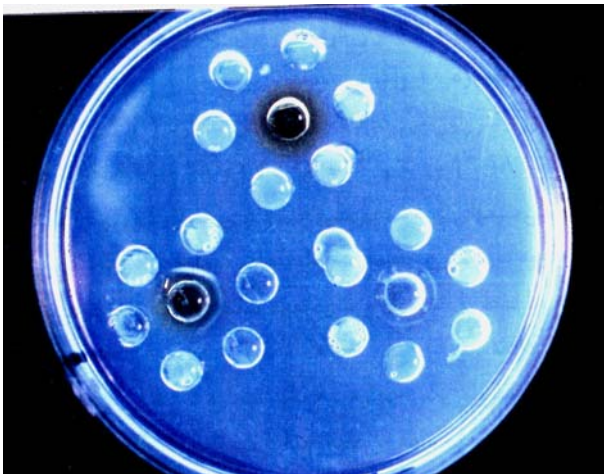
A. tumefaciens biovar 1

A. tumefaciens biovar 1)

A. tumefaciens biovar 1

A. vitis

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Agrobacterium

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A. vitis ()

A. tumefaciens biovar 1

() ()

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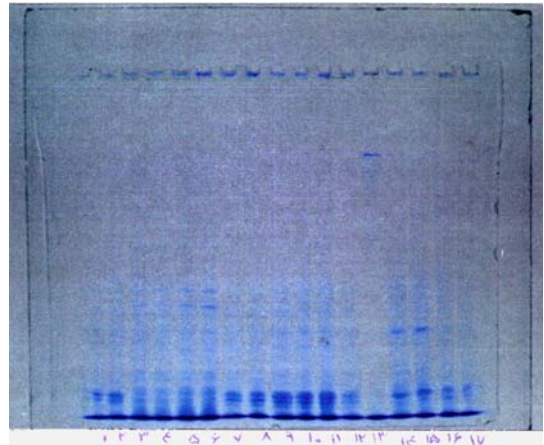
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Agrobacterium

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(ELISA) enzyme-linked immunosorbent assay

(SAT) slide agglutination test



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Agrobacterium

(*A. tumefaciens* biovar1

(*A.vitis*)

A. tumefaciens biovar 1)

A.vitis)

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A. vitis

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A. vitis

(*A.vitis*)

G-Ag-26 (A)G-Ag-27
(C) 60-G-Ag (B)
) G -Ag - 19 (D) NCPPB 2562

(*A. vitis*)

NCPPB NCPPB 1777

(2562

A.vitis
(*A.tumefaciens* biovar1)

A.

(*A.vitis*) *tumefaciens* biovar3

A.

tumefaciens biovar 3

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()

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A. tumefaciens biovar 3

SAT

A. vitis

SAT

A. vitis

()

(Agglutinaon)

(flagellate)

A.tumefaciens

A.vitis

biovar 1

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