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مقایسه کموتاکسی در استوباکتر دی ازوتروفیکوم و ریزویوم ملیلوتی در شرایط آزمایشگاه

NaCl Zn⁺⁺ Mn⁺⁺ .

(%) NaCl Zn⁺⁺ Mn⁺⁺ EDTA

EDTA

:

Chemotaxis of Acetobacter Diazotroph and Rhizobium Meliloti to Roots Exudates

G. Emtiazi, Z. Etemadi and A. Sanjabi

Department of Biology, University of Isfahan

Abstract

Considering biological fertilizer for non host plant, the effect of different compounds and root exudates on chemotaxis of two strains isolated from sugarcane and meliloti was examined. The presence of 1mM EDTA increased the chemotaxis of Rhizobium to Malic acid while decreased principle attractant to Aspartate. The Rhizobium was most attracted to Amino acids while Acetobacter was attracted to Cytokine and Jibereline. The presence of Mn, Zn cationic and NaCl in appreciable concentration reduced the movement of Rhizobium to roots.

Keywords: Chemotaxis, Acetobacter, Rhizobium, Root, Symbiosis

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0.6 K₂HPO₄ 0.2 K₂HPO₄]:

0.01 FeCl₃ 0.002 Na₂M₈O₄ 0.2 MgSO₄ 0.002 CaCl₂

/ KOH /

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/ PH

Aza

Aza

)

.()

(/ pH

() % /

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Grim ()

.()

(

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)

(EDTA / K₂HPO₄

1.5 600nm

(% / +

)

14ml

1ml

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°C

/ /)

°C

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.()

mm

.()

(μl)

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EDTA (%)

(%) Mg

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NaCl (%) Zn⁺⁺ (%) Mn⁺⁺ (%)

Zn⁺⁺ Mn⁺⁺ EDTA

EDTA

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() EDTA

EDTA

EDTA.
NaCl Zn⁺⁺ Mn⁺⁺

NaCl Zn⁺⁺ Mn⁺⁺

EDTA

NaCl Zn Mn EDTA

%

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/

(mm)	(mm)	
		/ gr :
+	+	
	+	
+	+	/ gr
+	+	/ gr :
	+	
+	+	
+	+	/ gr :
	+	-L
+	+	
+	+	-L
+		-L
		μL :
	+	(20 ppm)
		(10 ppm)
	+	(5 ppm)

:

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/...

(Mm)						
			*			EDTA % /
			*			EDTA % /
						EDTA %
			*			Mg % /
						Mg %
			*			Mn % /
						Mn %
			*			Zn % /
						Zn %
						NaCl %
						NaCl %
	+		+	+	+	
		-L		-L		
						EDTA %
						Mg %
						Mn %
						Zn %
						NaCl %
	+		+	+	+	
						(ppm)
						EDTA %
						Mn %
						Zn %
						NaCl %
						Mg %

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	-		-												
		+		+		+		++		+		+			EDTA %
		+		+		+		+		+		+			Mn %
		+		+		+		+		+		+			
		+		+				+		+		+			
+		+		+		+		+		+		+			

(mM)

:

%

b	a
c	a
D	b
E	F

(mM)

:

)

.(

%

/...

c	b	a	E	a	a	EDTA %
	E	E	D	c	b	Mg⁺⁺ %
	D	D	E	c	a	Mn %
	D	E	E	c	b	ZN %
a	E	E	E	c	b	NaCl %

.()

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% /

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.()

(NaCl)

Mg⁺⁺ EDTA

/

.()

NaCl Zn⁺⁺ Mn⁺⁺

EDTA

%

EDTA

EDTA

pH

EDTA

NaCl

.()

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