
--

PT

PT

1

2

3

PT

			1	
			2	
			2	
			10	-5
			5	
			10	
			10	-5
			5	
			5	
			10	-3
			10	
			5	-2
			10	-5
		10		
	15		1	-1
			2	-2,
			2	
			100	



1 37

2 2000-2500r/min

5-10

3 2

0.5-1r ?8

<A> 0.5-1r ?8

0.5-1r ?8

0.5-1r ?8

U



			5		
		45	5		-2
			5		
		1/4	5		-5
			10		
			10		-4
		3 4	5		-5
			10		
					-2
					-4
			10		-4
					-5
					-10
					-10
		15	1		-1
			2		
			2		-2,
			100		

1

PH

2

± 0.1g/L
 + 0.1 0.5 g/L
 ++ 0.5 2.0 g/L
 +++ 2.0 5.0 g/L
 ++++ 5.0 g/L

3

(1)

- -

(2)

3

4

1

2

3

			1	
			2	
			2	
	1		5	

	2m		5		
			10		
		1/3	10		-2
			5		
		45	5		-2
		1/4	5		-5
			10		-4
			10		-5
		1: 10	5		-2
			5		
		1 2	5		-5
			10		-3
					-5
		15	1		
			2		-3
			2		-1
			100		

1

(-)

±

6mmol /L

+

6 28 mmol /L g/L

++

28 55mmol /L

+++

55 110mmol /L

++++

110mmol /L

2

1

10: 1

2

3

3

4

Cu²⁺

Lange

1

2

3

			1	-1
			2	-2
			2	
	1		10	

	2ml		10		
	30mg		20		
	0.5ml		10		- , 5
			20		-5
	1ml		10		-5
			10		-5
					-10
					-10
		15	1		-1
			2		
			2		-2,
			100		

1

(-) 10

± 10

+ 10

++

+++ ++++

2

1

2

3

3

Ehrlich

Ehrlich

1

100g/L

2

3

Ehrlich

			1		-1
			2		-2
			2		
	1 4:1		5		-,5 -5
			5		
		10			
		10			
	1 2ml		10		
	0.2ml	1:10	10		

	10	10	10		
			10		-3
			10		
			10		
			10		-10
					-10
		15	1		-1
			2		
			2		-2,
			100		

1

2

3

2 4

2 4

4

20

5

(-)

+ 10

++ 10

+++

1

10g/L

3%

2

3

			1	
			2	
			2	
1			5	
			5	
			10	
			10	
	g/L 2-3		10	
	3% 2-3	1: 10	10	
			10	
			10	
		15	1	
			2	
			2	
			100	



1

2

3

4

	1		10		-3
	2m		10		-2
			10		
			10		-2
	1 2		10		-3
			10		
			10		
			10		
			10		-5
			10		-10
				-10	
	15		1		
			2		
			2		
			100		

- 1
- 2
- 3
- 4
- 5

-
- +-
- +
- ++
- +++
- ++++

Ri val ta

- 1 100ml
- 2
- 3

Ri val ta

		1	
		2	
		2	
	100ml	10	
	100ml	10	-5
0.1ml)		10	
			-10
	PH	10	
			-5
		10	
		10	

					-5
			10		-10
			10		-5
			10		-10
	15		1		
			2		
			2		
			100		

1

PH=

2

3

4

5

-

+-

+

++

+++