

pH =

/
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()

(Deen, et al. 1972)

)
(WHO)

/ .()

(Kumar, 2006)

)

(

(Abdel-Ghani, et al. 2007)

() /

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(Han, et al. 2005)

Verma and Rehal,)

(1994

()

()

(Grist, 1975)

(II)

(GAC)

/

Verma)

pH

(and Rehal, 1994

()

(Merk)

Zn (II) Cu (II) Cd (II) Pb (II)

(Montanher, et al. 2005)

Mahvi, et al.)

(2004

pH

Abdel-Gani, et al. 2007

)

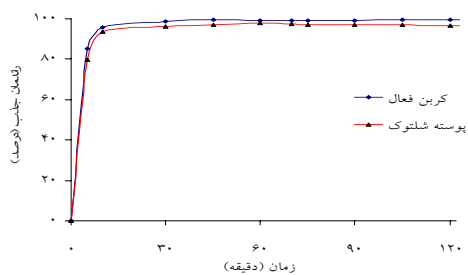
(Han, et al. 2005)

(/ /)
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(varian AA 220)

(

(PTR 79) pH
pH



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() ()

(/ / / / / / / /)
pH

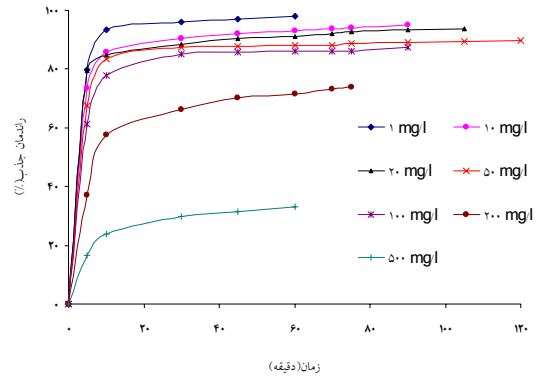
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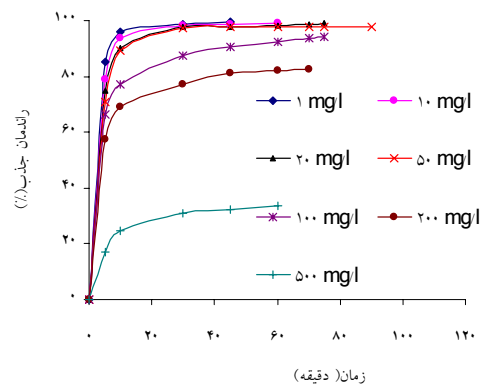
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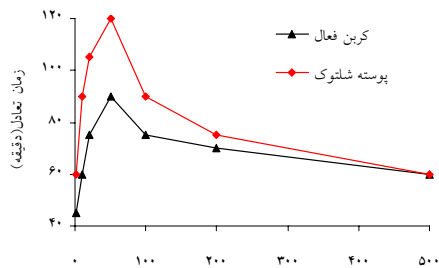
/



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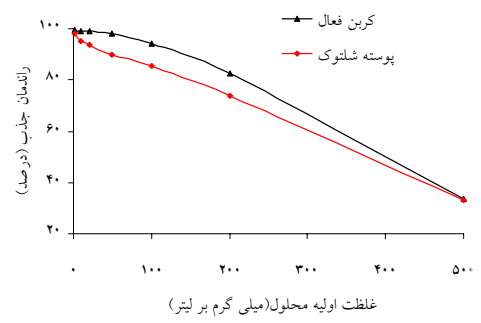


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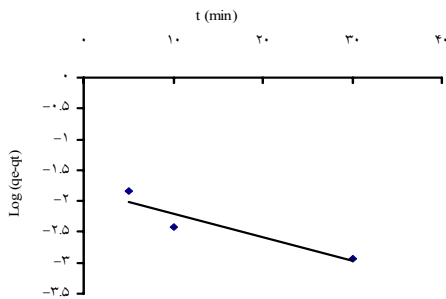
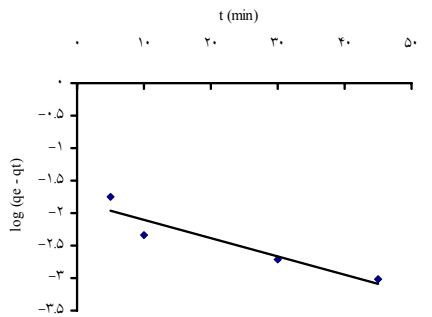
غلظت اولیه محلول (میلی گرم بر لیتر)

() :



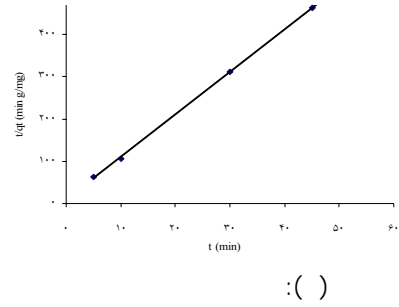
() ()
 $\text{Log}(q_e - q_t)$
 t
 (Lagergren, 1898) () ()
 t t/q_t

() () (Ho, et al., 1996)



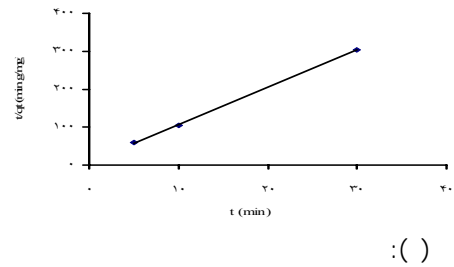
(%) (/ %)
 % / % /
 % /
 % /

$$k_2 = \frac{q_e}{(q_{ecal}) - (q_e)} \quad (k_2 = /)$$



(reundlich, 1906 Langmuir, 1916)

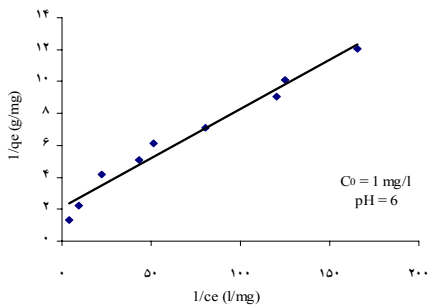
$$() ()$$



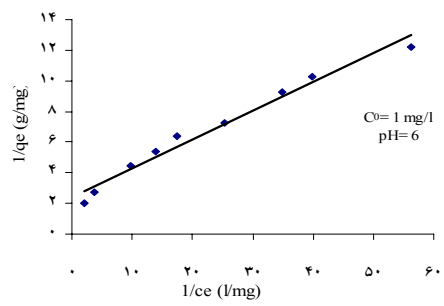
$$k_2 = \frac{q_e}{k_1 (q_e - q_{ecal})} \quad (R^2)$$

:()

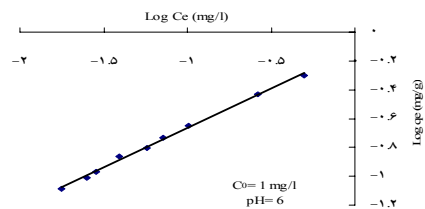
R^2	k_1	q_e cal	R^2	k_2	q_e cal	q_e exp
/	/	/	/	/	/	/
/	/	/	/	/	/	/



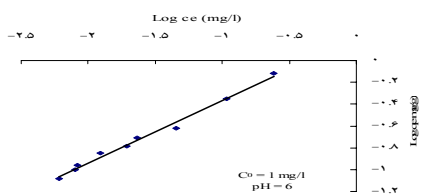
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R ²	a	b	R ²	k	n	
/	/	/	/	/	/	
/	/	/	/	/	/	

() ()

- 1-World Health Organization
- 2-Powdered activated carbon
- 3-Granular activated carbon
- 4-Lagergren
- 5-Ho et al
- 6-Langmuir
- 7-Freundlich

n : ()

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