

() , ()

(// : // :)

°C

%

°C

(R^2)

(*RMSE*)

(χ^2)

°C

/ × m²/s / ×
/ kJ/mol

:

(Mohammadzadeh et al., 2004; Azizi et al., 2000;
.Ahmadi & Javidfar, 1999)

%

Morison & .(Anon. 2004)

() Roberson
/

.(Anon.,2006)

°C

(Board, 2000)

°C

(Diamattia et al. , 1996)

°C

() Amiri Chaijan et al.

$l \times m^2/s \quad / \quad \times$

(Gazor & Minaee, 2008)

°C

() Turker et al.

°C

(Ng et

al., 2006)

°C

(Opera)

()

mm

mm

Srinivasakannan (Kalwar et al. 1991)

/ mm

()

mm

°C

(Srinivasakannan, 2008)

W

)

(°C

$l \times m^2/s \quad / \quad \times$

() Bauman et al.

°C

°C

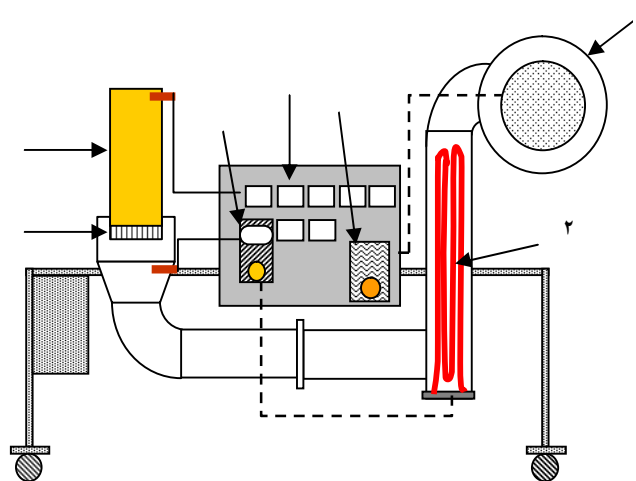
g

(R=0.99)

mm

% (d.b.)

() Gazor & Hoseinkhah



() () () () ()
() () ()
()

(Gazor

.et al., 2004; Rostami & Mirdamadiha; 2004)

% °C

AM-)

/ m/s (4205

± / g 300i AND
°C

.(Brooker et al. ,1992; Pagano et al. ,1999)

()

.(Srinivasakannan, 2008; Bauman et al., 2005)

Hz

$$M_f = \frac{W_1 - W_2}{W_2} \times 100$$

(

(g)

=W₂ (g)

=W₁

(Cubillos

.and Reyes, 2003; Bauman et. al, 2005)

(% d.b)

= M_f

°C

M_f

K

$$MR = \frac{M_t - M_e}{M_o - M_e}$$

Anon., 2003; Pagano et al., 1999;)

(

=M_t ()

=MR

.(Ward et al., 1985

(kg/kg, d.b)

=M_e (kg/kg, d.b) t

g

TEC-110

(Falade & Abbo, .

(kg/kg, d.b)

=M_o

g

...

:

()

$$\ln \frac{M_t - M_e}{M_o - M_e}$$

°C

(D_{eff})

(Falade & Abbo,

()

.2007; Mujumdar, 2000)

$$D_{eff} = D_o \exp \frac{-E_a}{RT}$$

(

()

(m^2/s)

= D_{eff}

(A)

(m^2/s)

= D_o

Pa A

(kJ/ mol)

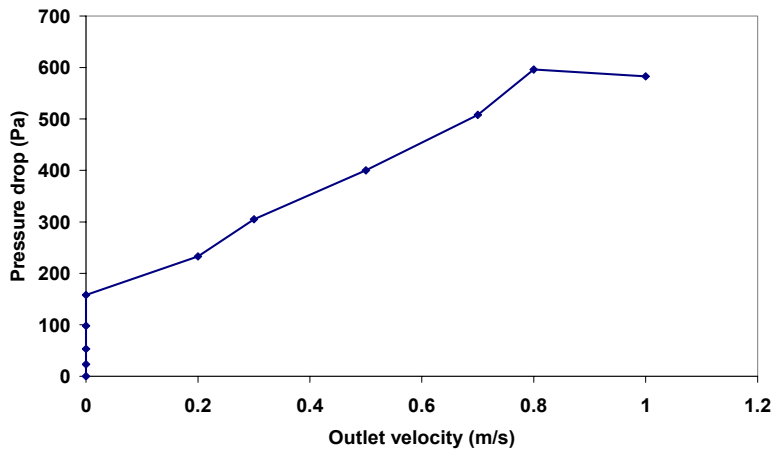
= E_a

(0.008314 kJ/mol.K)

= R

(Srinivasakannan, 2008; Bauman et al., 2005)

(K) = T



m/s

(Cubillos & Reyes, 2003; Bauman et. al, 2005)

/ m/s

%

°C

°C

°C

()

/ m/s

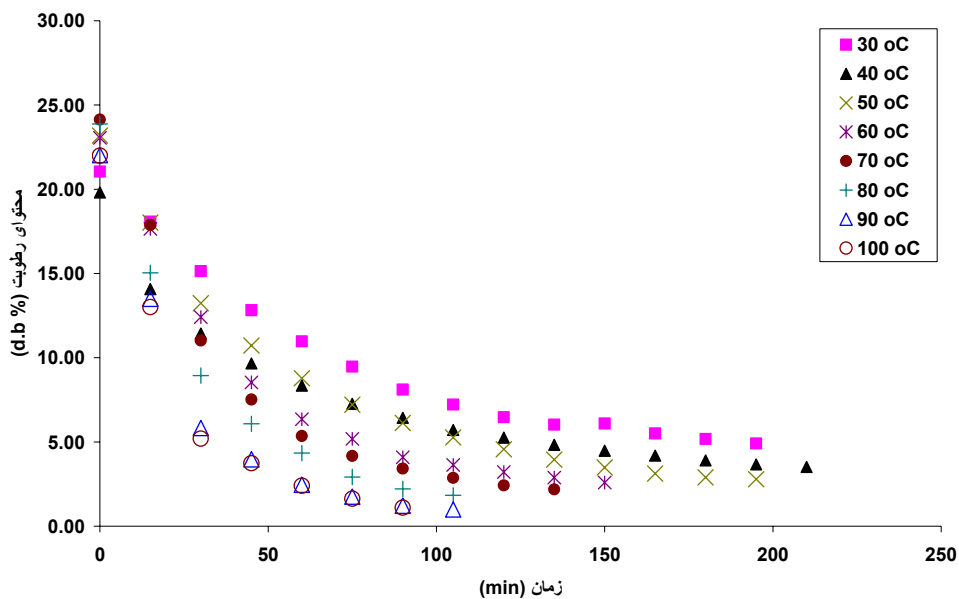
/ / °C

(Gazor & Minaee, 2008)

()

()

()

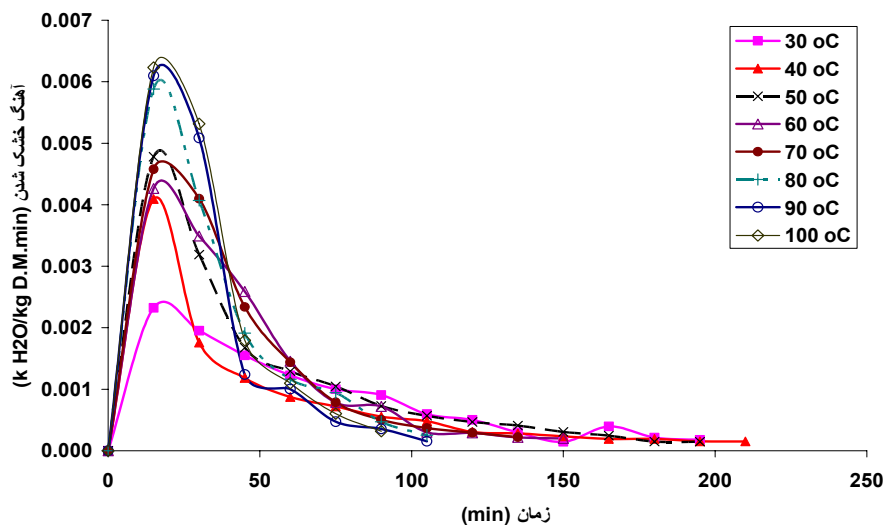


* (min)

(°C)

(min)

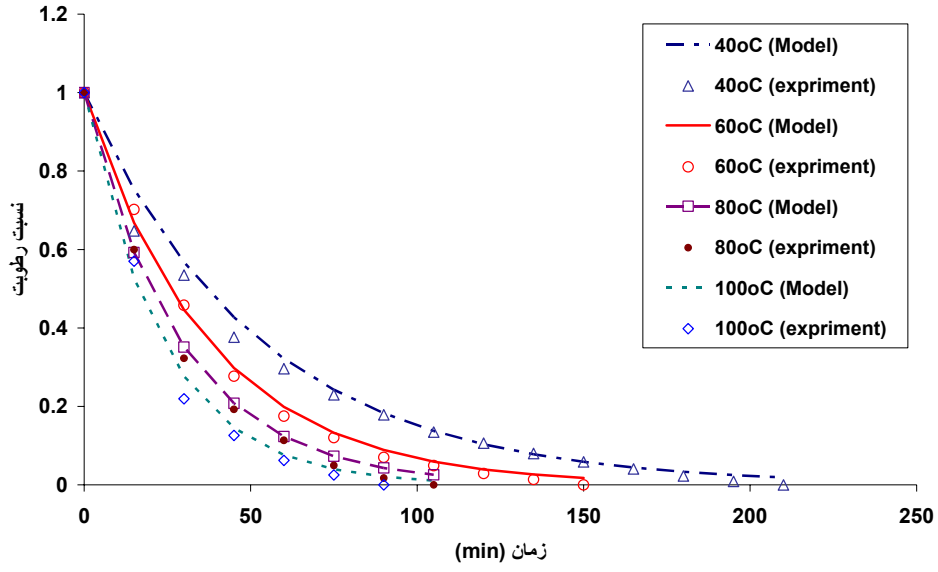
* متوسط زمان خشک شدن دانه ها تا محدوده رطوبتی ۸-۶ درصد بر پایه خشک محاسبه شده است.



()

(NM)

TEM ADM



°C

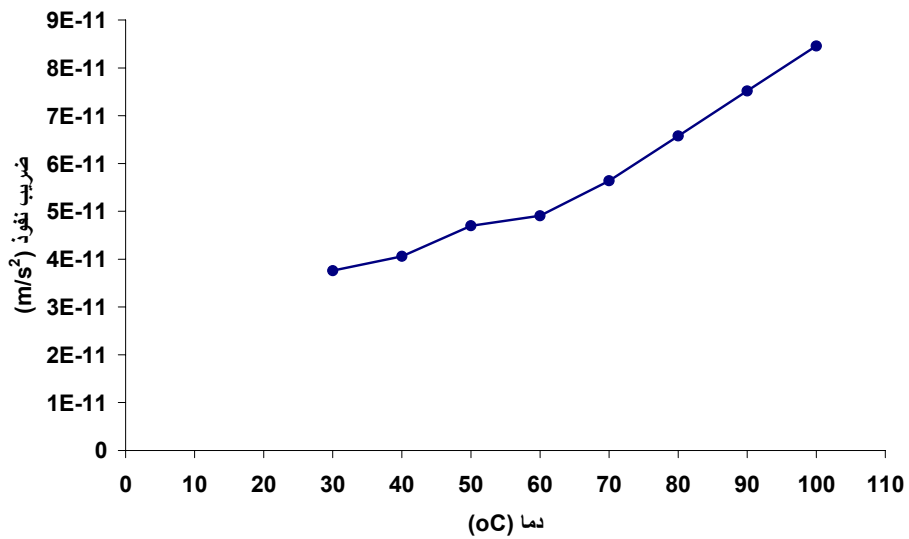
Gazor & Minaei,)

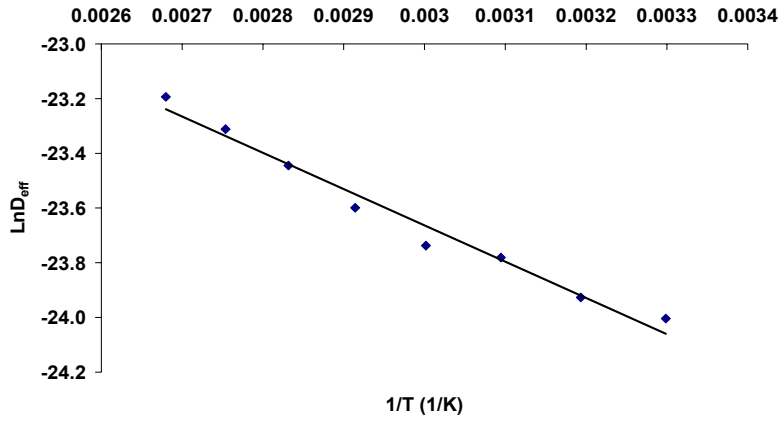
(2008; Srinivasakannan,2008 ; Mujumdar, 2000

$$\left(\frac{1}{T} \right) \ln(D_{\text{eff}})$$

$$\ln D_{\text{eff}} = 1326.5 \left(\frac{1}{T} \right) - 19.684 \quad R^2=0.977 \quad \left(\frac{\text{m}^2/\text{s}}{\text{K}} \right) \times \text{K}$$

/ kJ/mol





Pa

Pa

m/s

°C

%

TEM ADM

(NM)

°C

/ × m²/s / ×

/ kJ/mol

)

(

()

$$t = a \exp(-bT) \quad ($$

T (min)

t
a b (°C)

b a

$$t = 189.52 \exp(0.0188T) \quad R^2 = 0.991 \quad ($$

(min) (°C)

/

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