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(Mixed Office Waste)

: :
(NaOH)

(Old Magazine)
(H₂O₂)

(Old Newsprint)

(Holik, 2006)

(ONG ONP)

(Nie et al.,

.1997)

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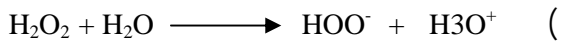
Ackermann

Renders (1995)

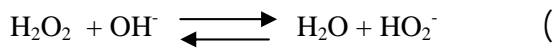
Costa

(2000)

.& Rubio (2005)



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.(Mirshokraei, 2001)

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(DTPA)

.(Helming et al., 1985)

.(Mc Cormick, 1990)

(Ackermann, 2000)
Rahmaninia et al., (2004)

NaOH

(Bajpai, 2005)

Ruzinsky & Bennington (2005) .

Van hierop (1993) .(McCormick, 1990)

Mirshokraei,)

(2001

COD

H₂O₂

NaOH

) NaOH H₂O₂

Bajpai)

(2005

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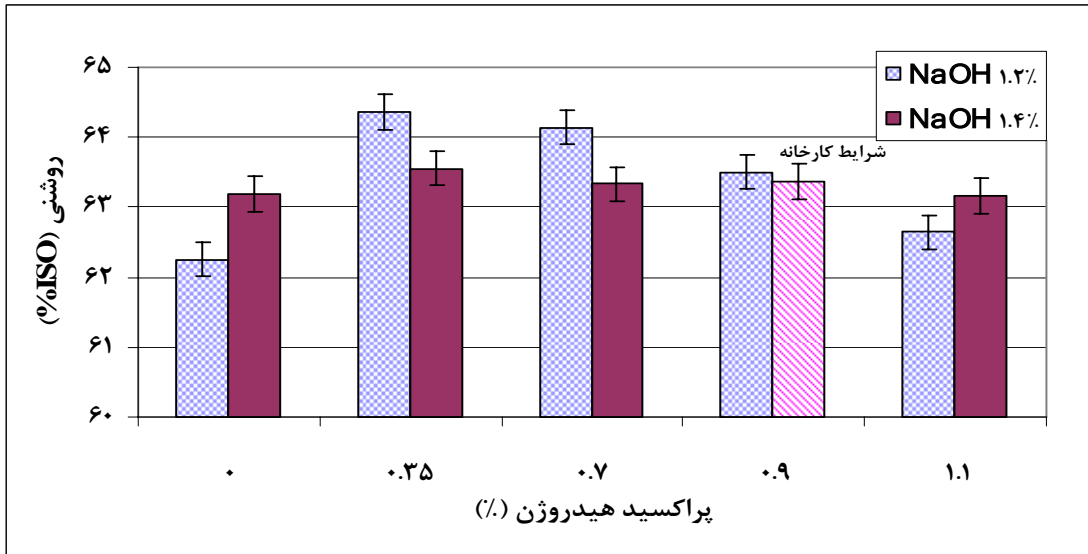
¹ Chemical Oxygen Demand

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/ / / /) H₂O₂ (
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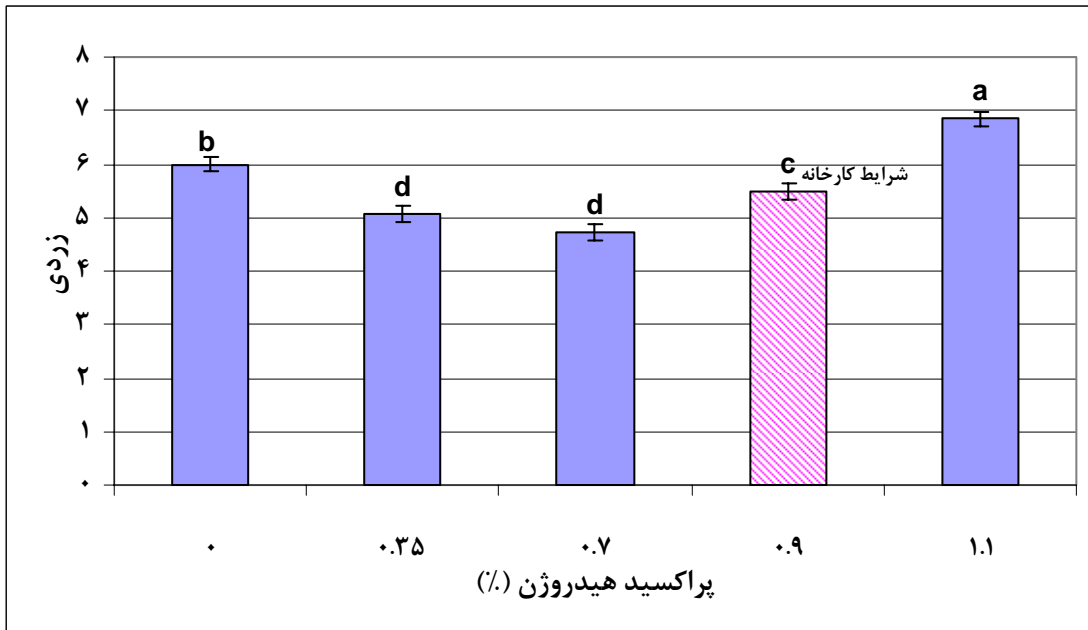


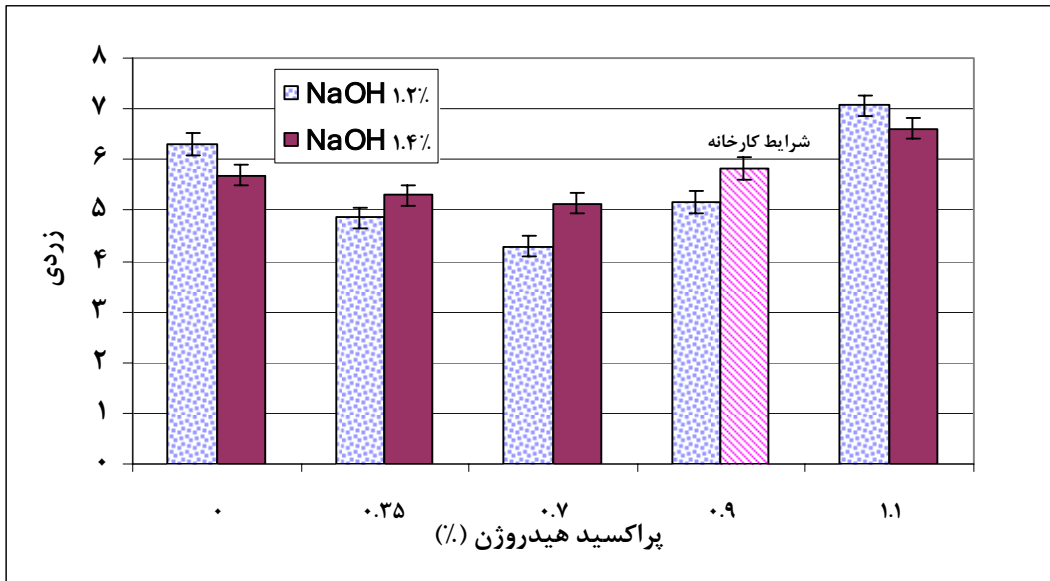
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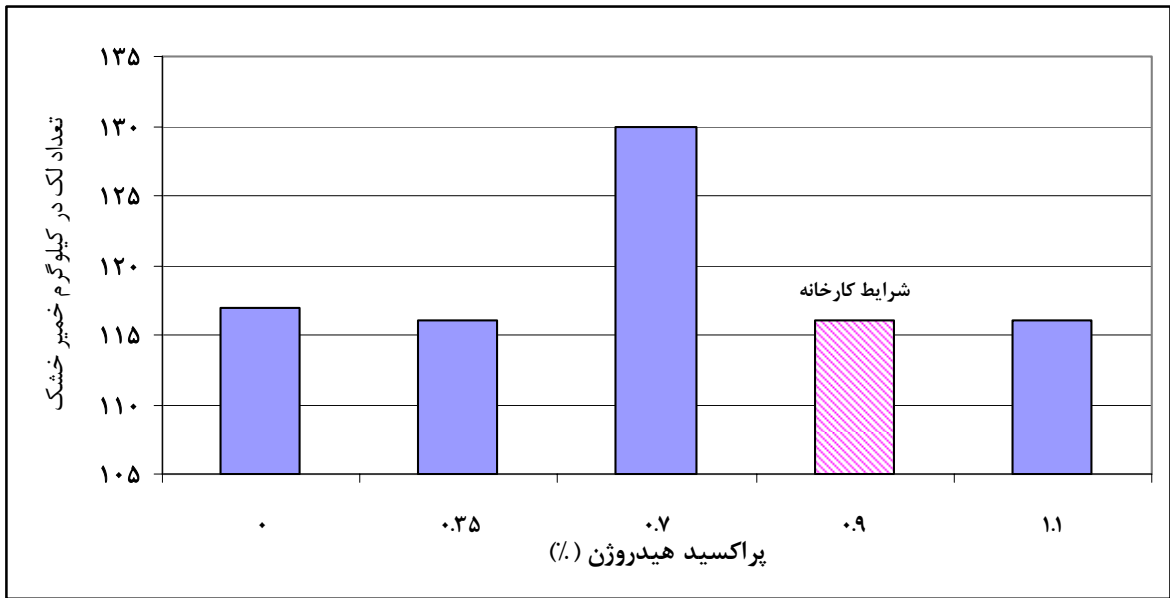
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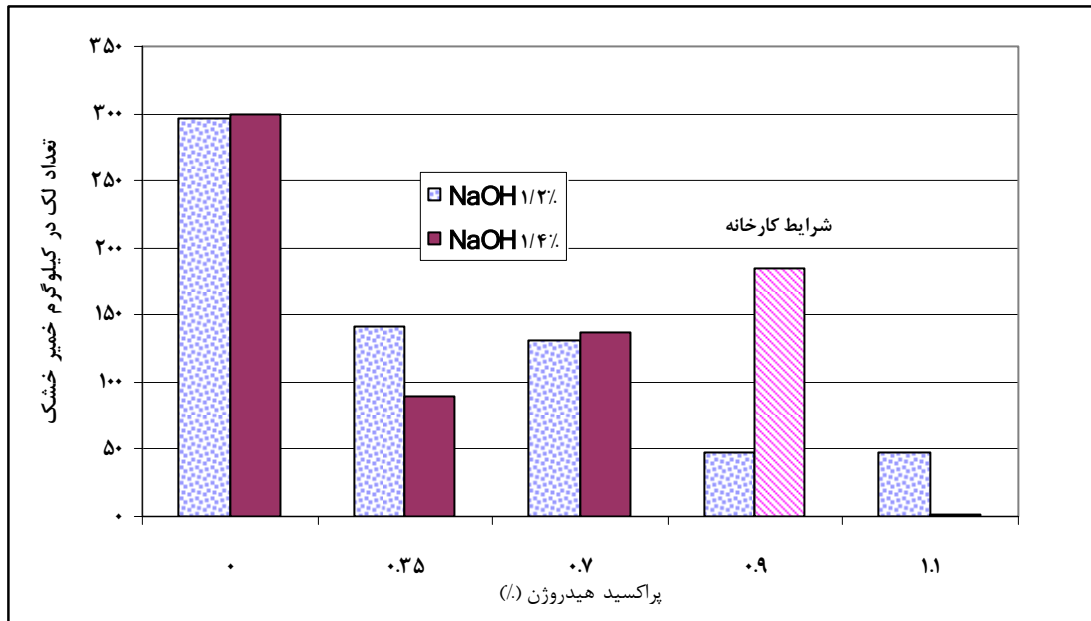




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(Garver, 2000)

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(HOO-)

(Hipolit, 1992)



Ferguson (1992)

HOO-

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pH

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Investigation on the Optimal Dosage of Hydrogen Peroxide and Sodium Hydroxide to Improve Flotation Deinking Efficiency for Mixed Waste Papers

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(Received: 04 July 2010, Accepted: 19 May 2012)

Abstract

Flotation deinking is the prominent technology for ink removal from waste paper. In this study, flotation deinking was carried out applying two levels of sodium hydroxide and five levels of hydrogen peroxide on a mixture of waste papers consisting of: 30, 30 and 40 weight percent OMG, ONP and MOW, respectively. The deinking efficiency was evaluated based on brightness, yellowness and dirt count of hand sheets. The results showed that increasing hydrogen peroxide dosage can increase hand sheets brightness, however, at higher hydrogen peroxide levels, the brightness was reduced probably due to the presence of more NaOH and the limitation of hydro peroxide efficiency for chromophore elimination. Optimal ratio of H₂O₂/NaOH, significantly increase the efficiency of deinking at lower alkali usage. This research showed that higher deinking efficiency may not be necessarily reached applying more chemicals, but optimal chemicals ratio plays an important role in deinking efficiency.

Keywords: Flotation deinking, Waste paper recycling, Hydrogen peroxide, Sodium hydroxide, Brightness, Yellowness, Dirt count