
*

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

() () () ()

()

()

()

PVAc)

SBR

(()

(

Severtson
Freeland
Gornagul
Coating binder

pH

/ (K₂SO₄)

/

/

()

()

()

Tappi T204 om-88

()

()

()

T 414 om-

T 403 om-97 98

Reject

d- limonene

E-flute

pH	A0	(0	(A)
	A1	NaOH (
	A2	NaOH+K2SO4 (
	A3	NaOH + (Na2SiO3 + d-limonen	
	B0	(0	(B)
	B1	NaOH (1	
	B2	NaOH+K2SO4 (
	B3	NaOH + (Na2SiO3 + d-limonen	
	C0	(0	(C)
	C1	NaOH (1	
	C2	NaOH+K2SO4 (
	C3	NaOH + (Na2SiO3 + d-limonen	

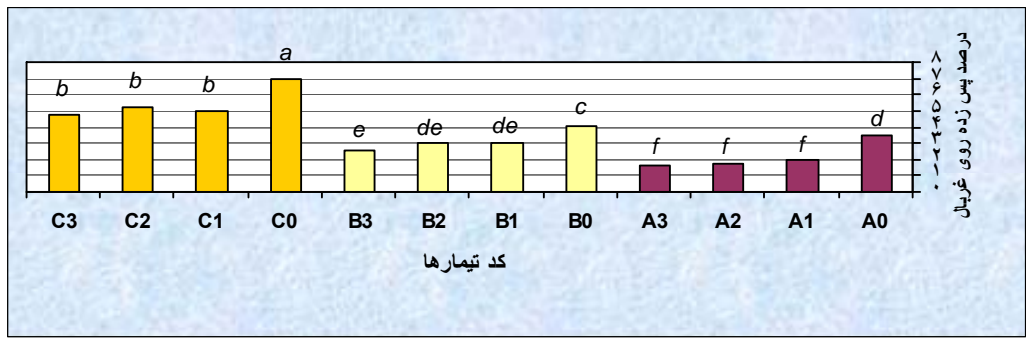
) pH () pH
pH / (A0 C0 pH
/
() . / pH

	C0	B0	A0	
/	/	/	/	pH

(C)
(B)
(A)
 $\alpha = \%$

	C ₃	C ₂	C ₁	C ₀	B ₃	B ₂	B ₁	B ₀	A ₃	A ₂	A ₁	A ₀
**	(1 0)											
NS	(2 1)											
NS	(3 1)											
**	(C A)											
**	(B A)											
NS)											
NS	(

%
**
NS



(A3,A2,A1)

f

...

(B)

a

(C0)

.()

B3	B2	B1	B0	
/			/	(mgr/gr)

.()

(A1- A 0> B 1- B 0)

()

.()

.()

()

()

(C, B, A)

B0

A0

B1 ,B2 ,B1 A3, A2 ,A1

()

A1

A3

a

a

A1 d

A3

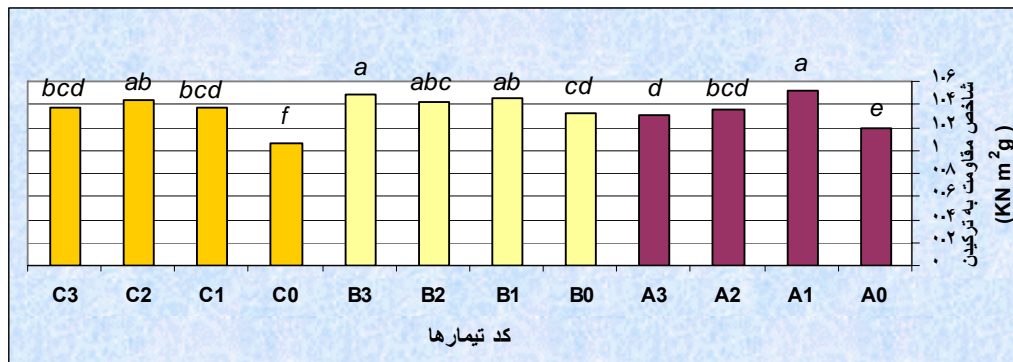
.()

(:A1)

(C1)

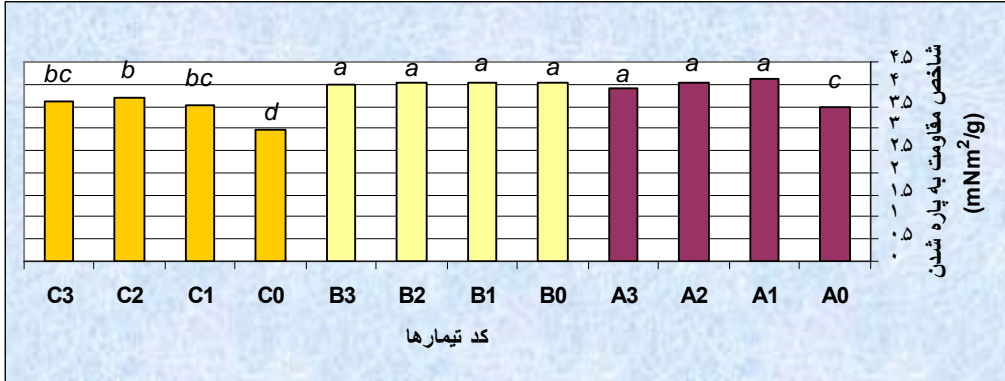
(B)

	C3	C2	C ₁	C0	B3	B2	B ₁	B0	A ₃	A2	A1	A0
**	(1 0)											
NS	(2 1)											
NS	(3 1)											
NS	(C A)											
**	(B A)											
NS)											
NS	()											
	% : **											
	: NS											



	C3	C2	C1	C0	B3	B2	B1	B0	A3	A2	A1	A0
**	(1 0)											
NS	(2 1)											
NS	(3 1)											
**	(C A)											
**	(B A)											
NS	()											
**	()											
	% : **											
	: NS											

(C A) ()



(.)

Dispersants

Passivation methods

() ()

()

(A1, A3)

()

)
(
(B1-B0 <A1-A0)

(B)

Hornification

(:)

(A C)

B0

B1

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(Micro slotted screens)

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A Study on the Effect of Two Chemicals in Agglomerating Stickies

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Abstract

Removing contaminants is the most costly step in recycling waste paper and processing recycled pulp. Adhesive materials are insoluble additives found in the water in recycled papers. If not removed, these adhesive materials may adhere to wet-web, wire, felts, dryer cylinders and even appear in the final product and cause numerous problems. This research considers using two chemicals for removing adhesive materials from corrugated containers coated by paraffin and old corrugated containers covered by coating binders that release adhesive materials. The results show that simple screening could remove large particles of paraffin (the amount of rejects was %3.5 for simple corrugated container but increased to %7 for containers coated with paraffin) but screening was inefficient in removing small particles or adhesive materials. Although agglomerating compounds did not have negative effect on the strength of the handsheets but were not able to improve the efficiency of simple screening significantly. Generally, the addition of sodium hydroxide reduced screen reject in all three types of OCC and improved burst and tear indices. Of course, its effect depends on the type of recycled pulp.

Key Words: Stickies, OCC, Paper Recycling, Agglomerating Chemicals, Screening