

(Cocus Spp.)

/ /

(NJC)

(2005/ 6 /22)

(2004/ 10 / 25)

(NaOH)

Abstract

The study involve production of activated carbon from residual Cocus Spp.

The materials contain a large amount of phenolic compound in the form of lignin and its carriers. These sorts of woods are very hard and solid in nature, the main reason for the materials choice to produce activated carbon of medical grade that have a good adsorptive ability.

In this work constant amounts of the Cocus Spp. is mixed with different amounts of the carbonizing materials (NaOH).

The material after good mixing is carbonized through straight fusion without addition of water. The carbonization and activation was continued for the given period of time.

The product carbon was purified from residual base and metal contamination by treatment with diluted HCl. The properties of the produced carbon after drying is studied for its adsorptive properties. The activated carbon produced is a good quality and composed with commercial sample and have some superiority is some other case.

CO Zn Pb Cu CN I₂ Cl₂ H₂S)
 (HgCl₂

(7)

(8)

()

(9)

N₂O

(¹⁰)N₂

(11)

(1)

⋮
 (Granular Form)

-1

(12)

(2)

(Powder Form)

-2

(3)

(4)

(5)

(6)

)

(

Dispersion)

(14)

(Forces
(Vander Walls)

(Non Polar)

(2)

(15)(Yamaguchi)

(13)

:) (2:1)

°(550) (

Wennerberj,)

(16)(O'Grady

°(500-400)

. / (2500)

(17)()

:) (2:1) (1:1)

(FeCl₃)

(
(ZnCl₂)

°(250)

(3:1) (2:1) (1:1) °(500) (3-2.5)

(:) °(1000)

()⁽¹⁸⁾()

: -1 °(250)

°(500)

°(1000)

Preparation of) Sato and)

-2 °(600)

:(Activated Carbon

:

(10)

(0.5:1) Wang and)

:) (2:1) (1.5:1) (1:1)

(

(3) °(25±550)

Purification of)

:(Activated Carbon

⁽²¹⁾()

(10)

(0.1)

(:) (0.5:1)

(1·2·3·4·5) °(550)

(1)

(1) °(1000)

(23)

-3

Determination of)

-4

:(Humidity

-110)

(3) °(120

Measurement of Bulk)

:(Density

$$X = A - [2.2B \times$$

$$A = N_1 \times 12693$$

$$B = N_2 \times 126.93$$

$$= X$$

$$(0.1 \text{ N}) = N_1$$

$$(0.1 \text{ N}) = N_2$$

$$I.N = \frac{X}{M} D \quad (22)$$

$$= (3 /)$$

$$= M$$

$$(Correction Factor) = D$$

:(Determination of Ash)

(24)

(0.1)

(1)

(2-0.5)

()

°(550)

(25)(1996)

(HCl)

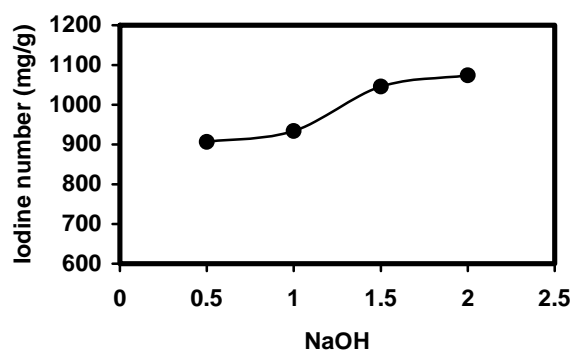
-38.25

124.8

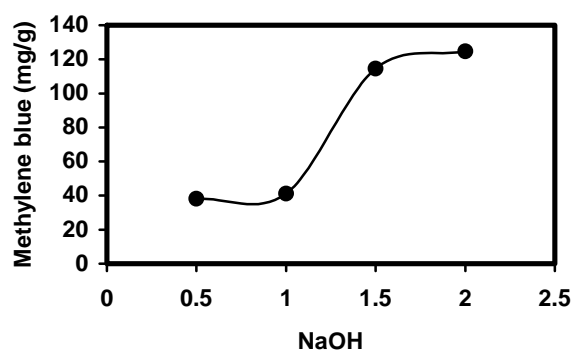
(1)

:(1)

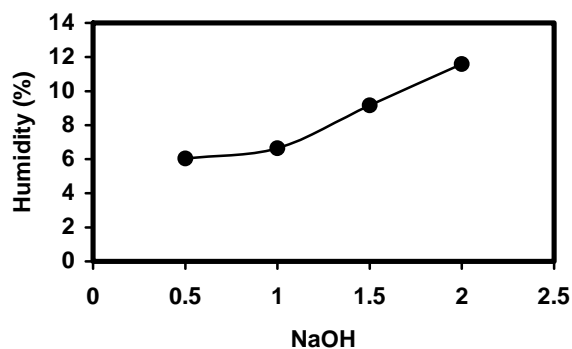
Sample	Wood: sodium hydroxide	Iodine number (mg/g)	Methylene blue (mg/g)	Ash %	Humidity %	Density (g/cm ³)
1	1:0.5	906.2	38.25	0.91	6.04	0.29
2	1:1	934.2	41.25	1.12	6.64	0.11
3	1:1.5	1045.9	114.6	1.25	9.16	0.16
4	1:2	1073.8	124.8	1.5	11.6	0.29
Custom (BDH)		908	90	3.2	0.8	0.325



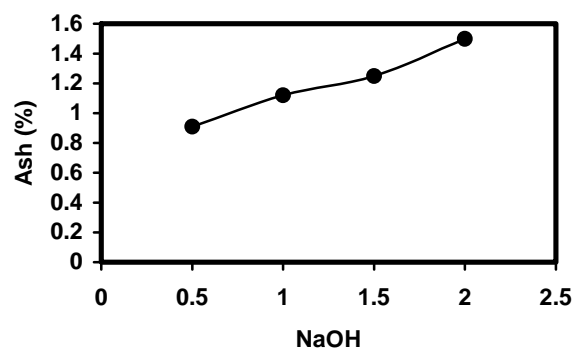
:(1)



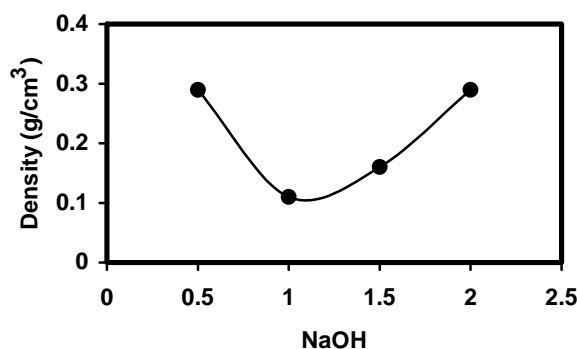
:(2)



:(3)



:(4)



:(5)

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