

بيان تأثير إضافة مادة البوليمر الكتروليت مع الشب على كفاءة تصفية مياه الشرب

(30 -80 NTU)

(pilot plant)

(Cationic polymer)

Abstract

Aimed of research for studying influence of adding coagulant aids with alum on the performance of rapid sand filter, through experimented process by using pilot plant for variable operation condition of turbidity between (30-80 NTU) and used different dose from alum with coagulant aid (cationic polymer) and alum alone .

Has been measurement influent and effluent turbidity from filter by using turbidity meters in order to determine efficiency of removal turbidity for all test and compared between the test for using alum alone and using alum with cationic polymer for explain influence on the filter rate and filter run time.

(: (porous media)
(detachment) .Transport and attachment)
(Ives 1975a; Al-layla et al

.,1980; Tien 1989)

. (Amirtharajah,1988 ; Mohammed, 1989)

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(1.7 -1.2)(, - ,)

.(Cheremisionof *et al*,1976)

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(Chemical destabilization) (Coarl *et al* ,1977)

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(Amal Al- Mamouri ,2001)

(Floc

filtration test apparatus)

(Camp Number) (15 -25 min) (40 -50 sec⁻¹)

. (36000 – 75000)

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(pilot plant)

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(Cationic polymer)

() (1.36 , 0.88)

() . (pilot plant)

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(independent variables)

(dependent variables)

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(77 – 91.43 %)

(Cationic polymer

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(deeper penetration)

(78.4 – 78.8 %)

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. (5 NTU)

(0.065 , 0.11 , 0.14 m / min)

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(critical variable)

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(stick)

(Al-Ithari, 2001)

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. (Kawamura, 1995)

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(independent variable)

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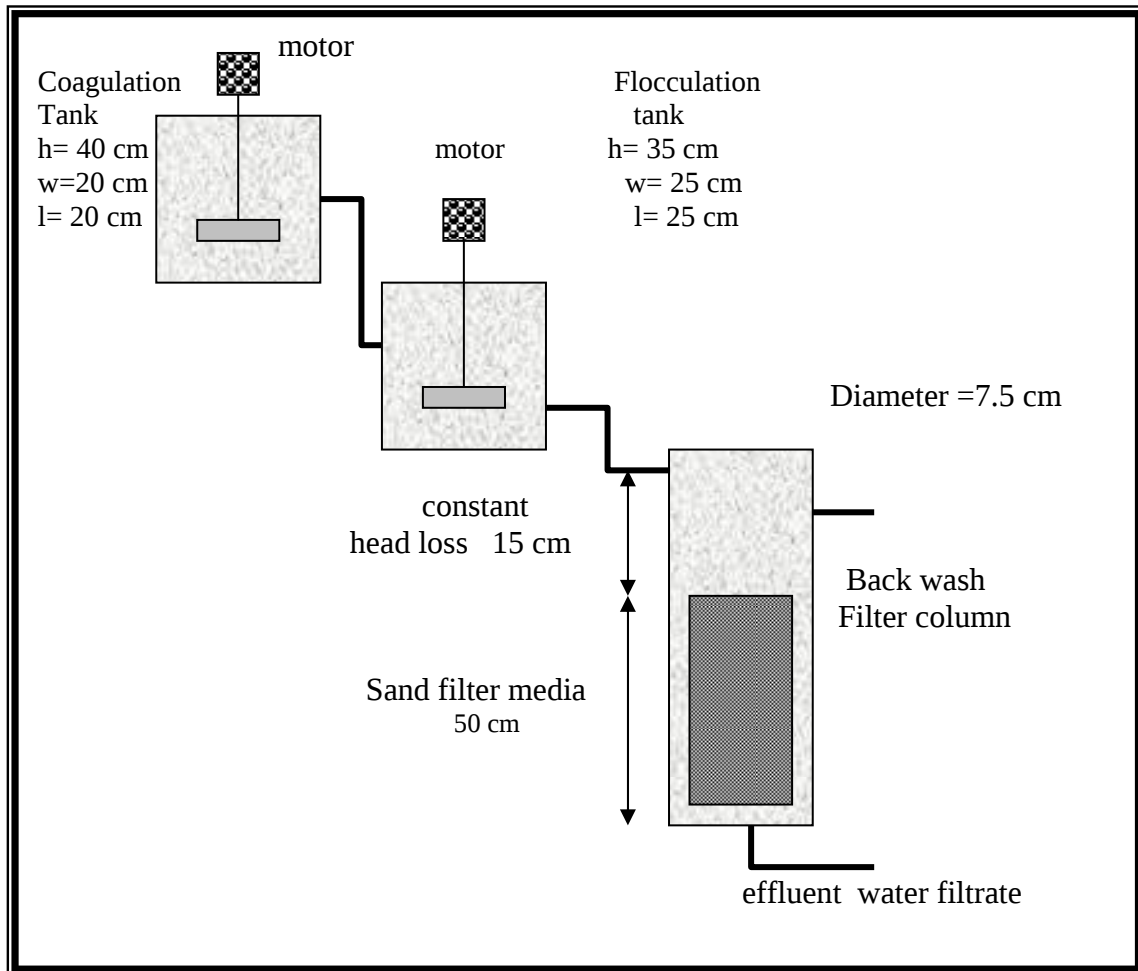
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(30 -80 NTU)	
° (15 -20)	
/ (25 -52)	()
/ (18 – 41)	
/ (0.2 – 0.9)	
G=450 sec ⁻¹ (energy input) (4 min) G=35 sec ⁻¹ (energy input) (20 min)	
(U.C =1.36) (d ₁₀ =0.88 mm)	
(0.065, 0.11 ,0.14 m/min)	
(7.51 – 7.92)	pH
(1, 1.1, 3 ,3.1,5,5.1)	
(2 , 4 ,6)	

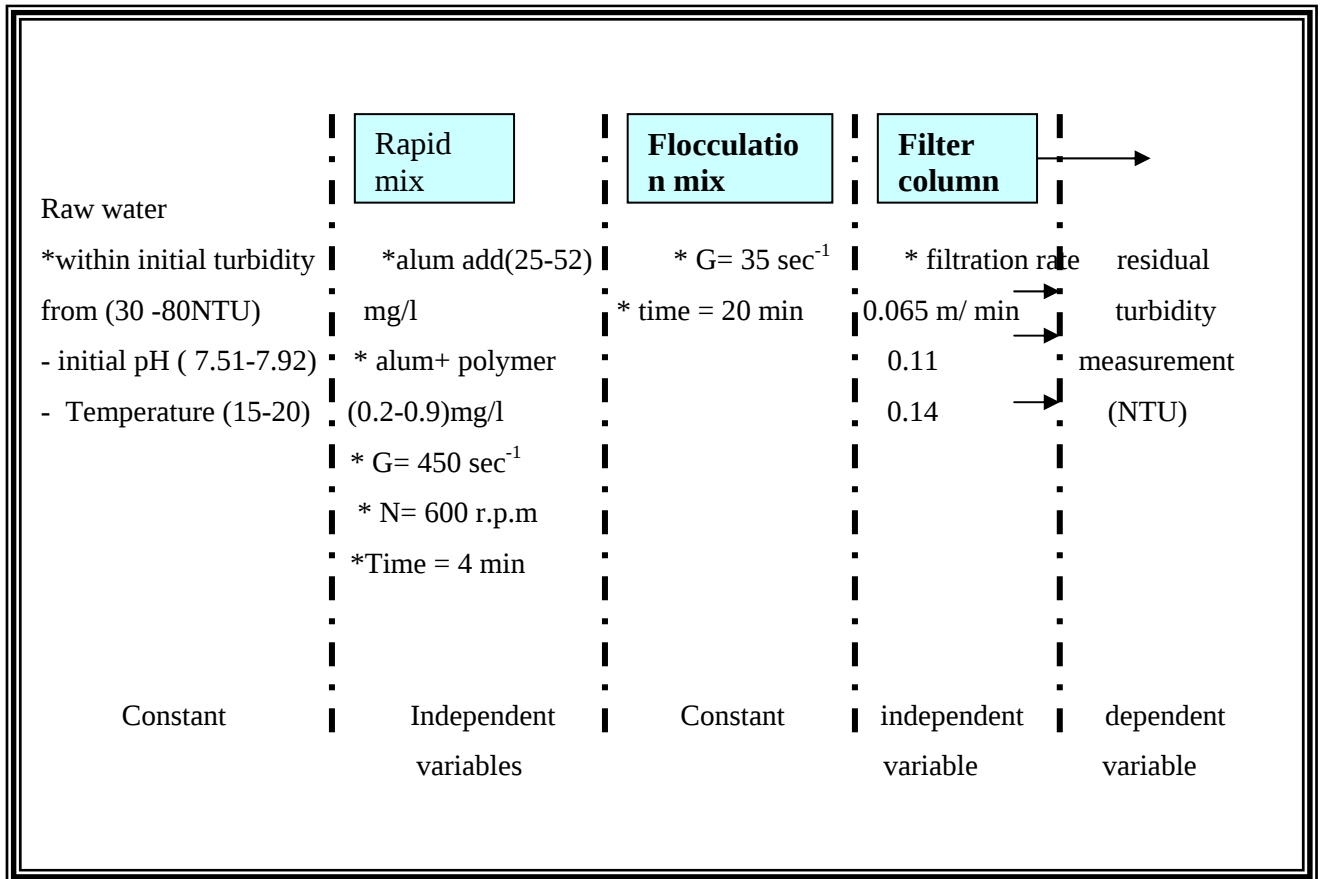
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Run	Filtration rate (m/min)	Initial turbidity NTU	Final turbidity in filtrate NTU	Efficiency (%)
1	0.065	,	,	,
1.1		,	,	,
				,
	,	,	,	,
3.1		,	,	,
			,	,
	,	,	,	
5.1		,	,	,
				,

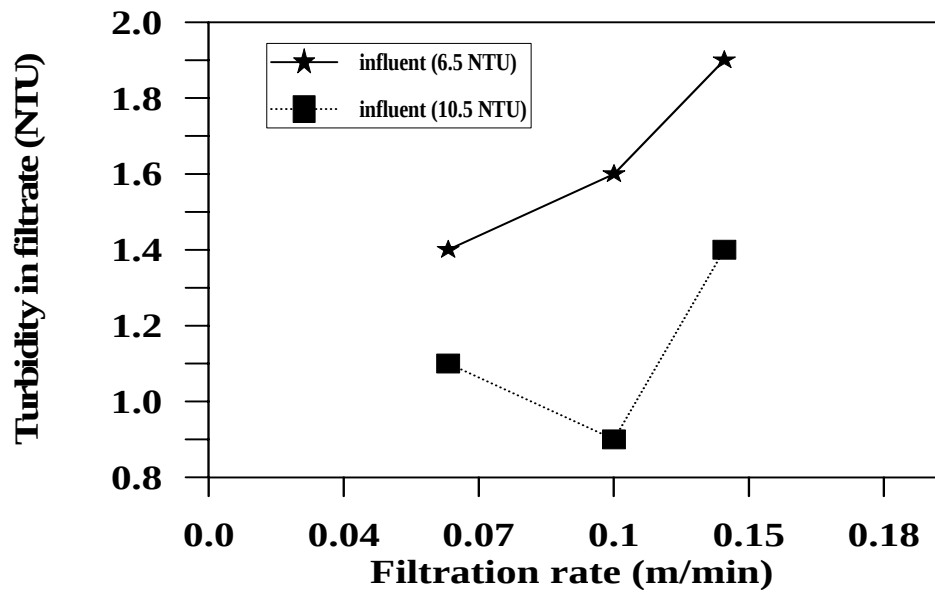


(pilot plant)

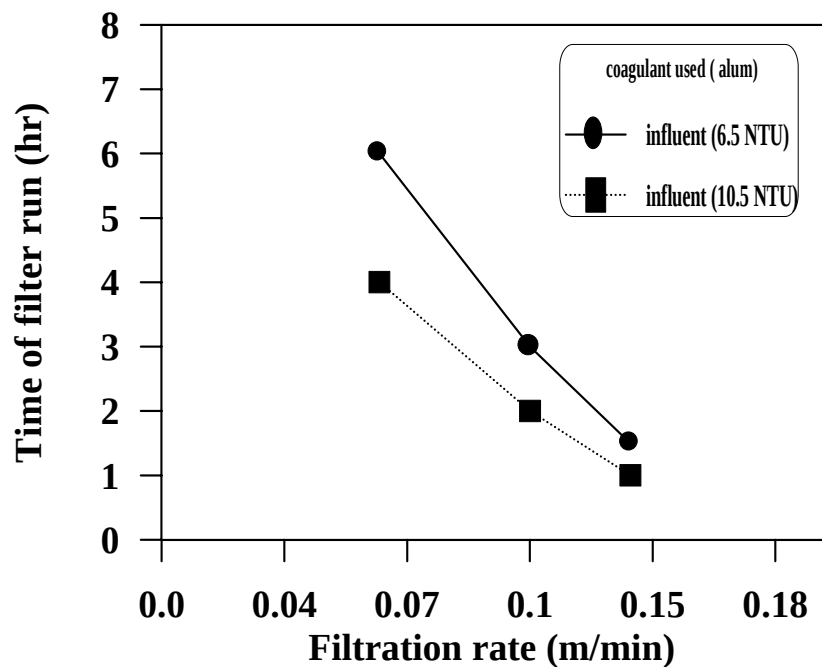
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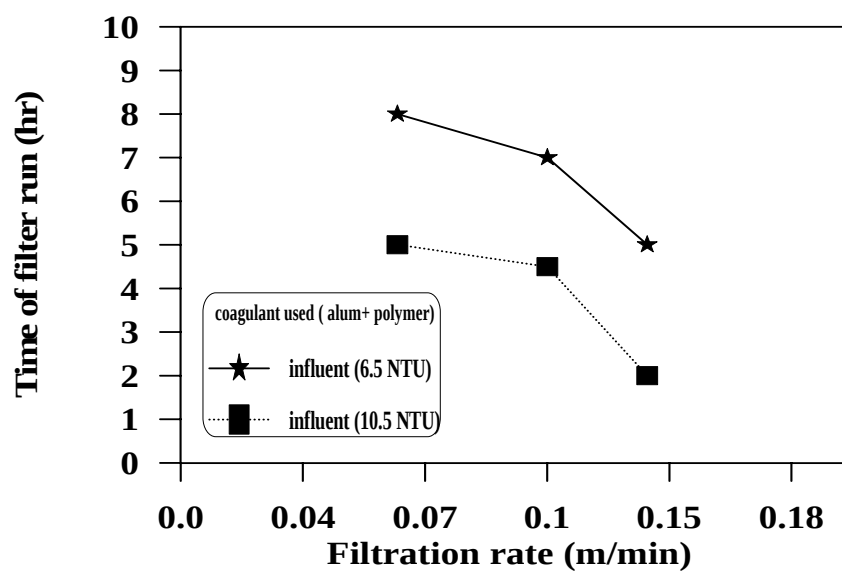
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