



SDI Review Form 1.6

Journal Name:	Current Journal of Applied Science and Technology
Manuscript Number:	Ms_CJAST_38533
Title of the Manuscript:	Research on Preparation of flocculants for Sugar Factory Wastewater Treatment
Type of the Article	

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



SDI Review Form 1.6

PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	I hardly follow the manuscript. It is lack of technical quality. The objective of the study need to be stated. The results need to be more comprehensive. Results need to be discussed. Plagiarism issue: Manuscripts's iThendicate score is 22%. I am not aware of your limit for plagiarism. Introduction section's first paragraph need to be re-written. Key Words flocculant, polyacrylamide, carbamide, guanidine carbonate, wastewater INTRODUCTION Sugarcane grows mainly in south and southwest of China, specially in Guangxi, Yunnan, Fujian, and Guangdong, among which Guangxi province is the largest producer of cane sugar in China and there are 96 sugar factories in the province. Sugar industries play an important role in economic development of country, but effluents released produce a high degree of organic pollution in both aquatic and terrestrial ecosystems and cause health hazards. There are two major wastewater sources: one is from sugar mills, and the other is from the cane molasses distilleries. The sugar factories in Guangxi are the biggest water consumers and effluent generators. On averages, 20-30 tones of water are needed for one ton of sugar^[1]. With the growth in sugar production, the environmental problems associated with sugar factories are also increased. 1 Crossref 169 words Jin, Chang Yi, Zu Yu Liu, Kun Hu, and Wei Xing Huang. "Research on Enzymatic Reaction Kinetics for Sugar Facto... 9%	The objective of the study need to be stated. Its solid content reaches10%~12%. Therefore, it is necessary to carry out sugar wastewater flocculation treatment before aerobic treatment, in order to reduce the concentration of COD, the solid content, and the load of aerobic treatment. The results need to be more comprehensive. Results need to be discussed. Through repeated experiments under the optimum conditions, the rate of turbidity removal could reach 90% or greater than 90%, when the dosage of flocculants (solid content) was 10mg/L, which shows that the synthesized flocculants was high flocculation efficiency. In the real wasterwater treatment of sugar mills with the prepared products under optimum conditions,the experimental results are shown in Figure 1(the wasterwater from Naning sugar mill: dark color; turbid; COD 562.85mg/L). It indicates that the turbidity removal rates of products are greater than ones of PAM(300W)(blank experiments). When the dosage is 15 mg/L, the turbidity removal rates of blank experiments, products from urea or guanidine carbonate are 77.14%, 94.95% or 92.93% respectively, which shows flocculation effectiveness better. In the same dosage of flocculants, consumption of polyacrylamide in the products was smaller than (or equal to) 1/10 of polyacrylamide (blank experiments), reducing flocculation cost greatly. When the dosage of PAM(300W)(blank experiments) is 10mg/L, the consumption of polyacrylamide(the product from urea) is 1mg(the reaction mixture(g): 2g polyacrylamide+60g H₂O +27g formaldehyde(solution)+9g urea =98g; the ratio of polyacrylamide: 2/98=0.02; solid content of the products: about 20%; the additive amount of the product for flocculation: 10/0.2=50mg; the consumption of polyacrylamide: 50*0.02=1mg). Through analysis, it is known that the synthetic products have high efficiency, less consumption of polyacrylamide and low cost of administration, which can save the cost of water treatment. Introduction Sugarcane grows mainly in south and southwest of China, specially in Guangxi, Yunnan, Fujian, and Guangdong. Guangxi province is the largest producer of cane sugar in China. With more than 2.6 million farmers in Guangxi for sugar cane plantation, the planted areas and sugar yields take up over 50% nationwide, and its quantities of cane sugar production and marketing account for 70% through the whole country. Sugar industries play an important role in economic development of country, but effluents released produce a high degree of organic pollution in both aquatic and terrestrial ecosystems and cause health hazards. There are two major wastewater sources: one is from sugar mills, and the other is from the cane molasses distilleries. The sugar factories in Guangxi are the biggest water consumers and effluent generators. With the growth in sugar production, the environmental problems associated with sug
Minor REVISION comments		



SDI Review Form 1.6

Optional/General comments	English of manuscript need to be checked. Wastewater is frequently written as “waster- water” Deep color? Meaning	The words “waster- water” were corrected Deep color means that the color of the wastewater was gray to dark brown , or dark color
----------------------------------	--	--