



SDI Review Form 1.6

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	2013_IRJPAC_5772
Title of the Manuscript:	Removal of Colour from textile effluent by adsorption using low cost adsorbents
Type of the Article	Research Paper

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>)



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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	The manuscript describes the treatment of single dye solutions by means of biosorption with two different biomasses. Many works have been published on biosorption of pollutants using different biosorbents, and it is well know that biosorption is affects by both biotic and abiotic parameters such as initial dye concentration, biosorbent amount, pH, etc. Despite the big number of publications on this topic, the actual manuscript is quite interesting and well organized. However, some critical points should be addressed before its publication may be considered. Please, see my hints in the General comment section.	
Minor REVISION comments	- Please, delete the comma after "universe" at line 16. This actually separates the subject and the verb. - At line 19, it should be better to gradually introduce the issue of dyes pollution whit a brief sentence sounding like: "Among the most worrying water pollutants there are dyes". The jump from the universe to dyes production is, in fact, too big. - Please, add a space between numbers and measure units. - The first sentence at line 46 can be deleted, since it is only a repetition of what said before. - At line 48, please change "particle size of 1.18 mm was" in "particles of 1.18 mm size were". - At line 54, please change "experiment was" in "experiments were" - Please, specify which pH values at line 59. - At line 65 Please correct the expression "studies was".	-Comma after "universe" at line 16 is removed. -Space between numbers and measure units is added. -Particle size of 1.18 mm was" changed as "particles of 1.18 mm size were". - "experiment was" Changed to experiments were -pH values are specified as 4, 6 and 8. -Studies was changed to studies were.



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Optional/General comments	Introduction After the sentence that ends at line 35, the Authors should introduce the goal that aimed their study. Actually, the Authors explained the advantages of biosorption over other techniques and reported an example of effective biosorbent currently used in wastewater treatment plants, but this does not explain the need for further research in this field. For instance, the drawbacks of traditional biosorbents could be listed here. In the same context, the Author should explain the choice of coconut shell and coal ash as biosorbents: are there promising data about these biosorbents? Have the Authors performed similar experiments on different pollutants? Some interesting reviews (as "Coconut-based biosorbents for water treatment - A review of the recent literature" by Bhatnagar et al., 2010) could provide some hints. Materials and Methods Can the Author better explain how they sieved the biomass? Generally, in the literature the sieved biomasses have been use in a range of sizes (i.e. between x and y, or under z size, and so on), not in a single measure. Why Authors monitored only 490 nm wavelength? Is this the pick of absorbance of orange 7? Have the Authors verified the linearity of change in absorbance and dye concentration? I did not understand if the samples pH were adjusted before of also during the experiments. Please, explain it. Eventually, it is not clear if Authors used also a real wastewater sample for their experiments: if so, please specify which kind of wastewater, which was its composition (if known). Has this wastewater the same single pick of absorbance?	Aim of developing economically feasible and environment friendly water treatment process has been introduced. Drawbacks of traditional biosorbents is mentioned. Plant biomass has emerged as an option for developing economically feasible and environment friendly water treatment process. Coconut-based agricultural wastes have gained wide attention as effective biosorbents due to low-cost and significant adsorption potential for the removal of various aquatic pollutants. The GAC was sieved and Particles passing sieve size 1.18mm were used in the study. The coal-ash was sieved and the particles of size 2.36 mm were used as an adsorbent for removal of colour as the lowest size of GAC and coal-ash available were of size 1.18mm and 2.36 mm respectively. At 490mm wave length the peak absorbance is below 1.0 for higher dye concentration. Samples pH were adjusted during experiments. Real wastewater sample ws also used in the experiment. As textile industrial waste water has high concentration of dye it was diluted to get 100ppm of initial concentration for further column studies.
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	Were the experiments performed in replicates? If so, please specify and add the error bars in the charts. Results and Discussion In general, the results are too little discussed. A serious work should be done in this sense. Figures 1-4: I suggest to change the kind of chart in histograms, according to the nature of the data: generally, lines are exploited to represent dependent data (i.e. a certain parameter that varies over time). In this case, instead, the data are independent and the charts can be misleading. Moreover, if clarity is not compromised, the data can be joined in a single chart with 3D histograms for each biosorbents. This allows to reduce the number of figures. Eventually the name of abscissas axis can be deleted, since it is only a repetition. There is a similar problem for figures 5-8: I suggest to maintain linear charts, but linking the data referred to the same adsorbent dosage and reporting the time in the abscissas axis. Contrarily to the previous part, 3.2 section has no figure at all. Please add some chart of the results, in particular that of the real sample.	No Bar charts are included. Name of the abscissas deleted Break through curves obtained for real sample is included.
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