



SDI Review Form 1.6

PART 1:

Journal Name:	<u>American Chemical Science Journal</u>
Manuscript Number:	2013 ACSj 4299
Title of the Manuscript:	Equilibria and kinetic studies on the adsorption of Cadmium onto Cameroonian wetland clays
Type of the Article	Research paper

General guideline for Peer Review process is available in this link:

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

- This form has total 7 parts. Kindly note that you should use all the parts of this review form.



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PART 2: 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)
<u>Compulsory</u> REVISION comments	1.- Kinetic and equilibrium studied must be described in materials chapter. All the operational conditions (pH, adsorbent dosage, particle size, temperature...) must be reported. 2.- The effect of pH on sorption is very important. Authors should carry out assays to study the effect of pH on sorption. 3.- In abstract section, authors indicate that equilibrium data was examined using a comparison of linear and non-linear isotherm models. This comparison is not observed in the paper. Authors indicate that isotherm and kinetic parameters were obtained by non-linear regression. However, equations in materials and Figures in Results correspond to linear regression. 4.- Authors should obtain more experimental points at times lower than 15 minutes. Almost all experimental data in kinetic assays were obtained when equilibrium was reached. 5.- Isotherm assays were carried out at low initial concentrations of cadmium and, probably, in order to obtain a more reliable maximum sorption capacity, assays with higher initial concentrations of cadmium must be done. Isotherm (q_e versus C_e) has not been represented. 6.- Discussion in point 3.6 must be revised. There is no experimental data at times lower than 15 minutes and so, it is not possible to do the affirmation: "In the first 15 min, the first linear portion passed through	Done Done In the abstract section, I have changed : "linear and non-linear by " linear " Done Done



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	the origin...". Kw values must be wrong. According to Fig. 9, it seems that higher values of Kw should be obtained at higher initial concentrations of cadmium.	<i>Done</i>
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Minor REVISION comments	1.- Page 3. "2.3.3. Characterization of the materials" must be changed by "2.3. Characterization of the materials". 2.- Page 10. Weight % in Table 1 must be wrong. There are weight percentages higher than 100 %. 3.- Page 11, last line: "The equilibrium experiment was studied room temperature" must be changed by "The equilibrium experiment was studied at room temperature". 4.- Page 12, last line: "the goodness-of-fit of models is Freundlich" must be changed by: "the goodness-of-fit of models is Langmuir". 5.- Page 14, last line: "the kinetics of adsorption of Cd²⁺ on the activated carbon" must be changed by "the kinetics of adsorption of Cd²⁺ on clay". 6.- Page 15: " The maximum sorption capacity for initial Cd²⁺ conc. (60 ppm) was..." must be changed by " The maximum sorption capacity was...". 7.- Page 15: "From an analytical point of vue" must be changed by "From an analytical point of view". 8.- In chapter materials remove the references to figures (page 4, 6 and 7). 9.- Equation 4 and equation 7 must be revised.	Done Done Done As can be seen from isotherms and regression coefficients, the fit is better with Langmuir model than with Freundlich model In order to investigate the kinetics of adsorption of Cd²⁺, Done Done
Optional/General comments	1.- Experimental work is very poor. Authors only provide one equilibrium study with five experimental data and four kinetic assays with only five experimental data, each one. 2.- Maximum sorption capacity is very low compared with other data reported in literature. This limits the application of the studied solid to removal cadmium from aqueous solutions.	