



SDI Review Form 1.6

PART 1:

Journal Name:	<u>British Journal of Applied Science & Technology</u>
Manuscript Number:	2013_BJAST_3695
Title of the Manuscript:	Kinetic, Isothermal, and Thermodynamic Studies of the Biosorption of Methylene Blue from Synthetic Wastewater using Cow Hooves

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>)

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



SDI Review Form 1.6

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)
Compulsory REVISION comments	[1] In FTIR analysis, vibrations of SH and NH were mentioned. I suggest the common elemental analysis can be performed (C, H, N, S). [2] From figure 2, there is not significantly difference about removal efficiency at pH 6-11. The reason is due to the initial MB concentration lower. So pH 11 is best favour of MB adsorption is not appropriate. In fact, at pH 8-11, the percent removal efficiency or adsorption quantity is near same. [3] Figure 5, effect of temperature at 308 and 318 K is little. So relative explain in section 3.5 should be re-organized. [4] From figur3 5, Henry Law maybe best to fit the result. [5] Table 1, why parameters at 318 k were not shown? To avoid it? [6] Table 1, values of qm were 54.05 mg/g at 298 K and 13.7 mg/g at 308K. This is opposite to the trend of figure 5. Also, this result is also opposite to the expression in text (line 308-309, The maximum adsorption of MB took place at 308 K). [7] Equation 7, which point of Ce was selected? About table 3, values of standard enthalpy change at various temperatures suggested that adsorption quantity at 318 K be better. This is also opposite to the expression in section 3.5.	This statement has been corrected It has been reorganized as suggested The parameters have been included Corrected as appropriate K_L from Langmuir isotherm model has been used in place of K_e as suggested by Reviewer
Minor REVISION comments	[1] In abstract, "Our results indicated that a time of 1hour 30 minutes was required for equilibrium to be attained." Equilibrium time is often dependent of MB concentration. The experimental condition should be mentioned at this expression. [2] Line 17-18, "But burning itself generates gases which contribute	The suggested corrections have been made accordingly



SDI Review Form 1.6

	to the depletion of the ozone layer.” This expression is not appropriate as burning can pollute air. If it results in depletion of the ozone layer, please give relative references. [3] FTIR analysis, references should be shown. [4] Figure 5, units of concentration (x-axis) and q_e (y-axis) should be shown. [5] Line 196-198, It can be observed from the figure that the equilibrium uptake of MB adsorption increased rapidly when the temperature was increased from 298 to 308 K. But from figure 5, equilibrium uptake only increased, not rapidly. Please check.	The suggested corrections have been made accordingly The suggested corrections have been made accordingly The suggested corrections have been made accordingly
<u>Optional/General</u> comments	In this manuscript, Cow Hooves was used as adsorbent to remove MB from solution. FTIR of CH and MB-loaded CH was analyzed. Several factors, such as pH, dosage, contact time and MB concentration, were selected to study the effects on adsorption quantity or percent removal efficiency. Adsorption kinetic model and isotherm model were fitted to experimental data respectively. Furthermore, thermodynamic parameters were obtained. Although similar researches have been published, there is still some value for low-cost adsorbent application. But there are serious questions which affect its quality.	