



SDI Review Form 1.6

Journal Name:	International Journal of Biochemistry Research & Review
Manuscript Number:	2013_IJBcRR_6341
Title of the Manuscript:	Effect of Subchronic Exposure of Heavy metal Pollution on Soil Physicochemical Properties, Catalase and Dehydrogenase Activities.
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>)



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)
<u>Compulsory</u> REVISION comments	Line 4-5: What is “subchronic exposure”? Should the title not rather read “ Effect of sublethal concentration of heavy metals on”----- Maintain sentence case in writing the title. Abstract Line 11: As above; “remove pollution” and “insert such as” If the concentration of metals added is ‘sublethal’, it does not amount to ‘pollution’ .You might say ‘contamination’ Line 11-15: The sentence is too long. Recaste. Break into 2 or 3 sentences. Start with a short introduction e.g. “The effect of sublethal concentrations of heavy metals such as mercury, lead and cadmium on the soil enzyme activities and physicochemical properties was investigated.” Line 17: Remove the word ‘pollution’	Corrected according to the reviewer's comment. Corrected according to the reviewer's suggestions. Recasted according to the reviewer's recommendation.



SDI Review Form 1.6

	Line 18: If the data is not significant, then $p > 0.05$ Line 19-20: Remove 'physicochemical' and all the bracheted items. They've been listed before. Avoid unnecessary repetitions. Line 20-24: Very poorly arranged. Break into separate sentences to adequately highlight your findings. Introduction Line 31-32: Delete "through the food chain" in line 32 and incorporate it after the word "organism" in line 31. Line 36: Insert "who" before the word "implicated" Line 38: "Functions of" not "functions for" Line 39-40: Delete 'in which they constitute essential part of the metabolizing and / or detoxifying enzymes' to make a straight sentence or recast. Line 42-45: Exclude Line 47-48: Delete "lead that precipitates" and	Corrected according to the reviewer's suggestions. Corrected according to the reviewer's suggestions. Corrected according to the reviewer's suggestions. Corrected according to the reviewer's comments. Corrected according to the reviewer's suggestions.
--	--	---



SDI Review Form 1.6

	substitute “cadmium affects the” with “and collapse of the “. Add appropriate reference. Line 51-55: Paraphrase Line 58: Change ‘resistant’ to ‘resistance’ Line 59: What do you mean by “fluorescence processes”? Line 77: As above. What informed the choice of 100µg/dm³ concentration of the metals as sublethal. Mercury can be toxic even at lower concentration? Materials and Methods Line 87: Give all the details of the sources of the chemicals used in the study. Line 91: What is the meaning of “0-2s0”. “Garden Farm”? what type of soil i.e loamy, clayey etc., Line 92: Inset “initially” between ‘was’ and ‘analyzed’	Corrected according to the reviewer’s comments. Corrected according to the reviewer’s suggestion. My previous work. Given according to reviewer’s suggestion. Corrected according to reviewer’s suggestion. Corrected according to reviewer’s suggestion.
--	---	---



SDI Review Form 1.6

	Line 93: Delete “before use” Line 95: Delete “that passed through the 2mm sieve was the fine soil” Line 97: Delete “each heavy metal” and insert “nitrate salts of” Line 98: Delete “as nitrates of pentahydrates” Line 100: Replace ‘these’ with ‘they’ Line 106-107: Delete “and” and “stored in different labeled plastic containers and “ Line 108: Remove ‘as’ Line 109: Change “these” to “the” Line 111: pH meter. Remove the “–” State the make and model? Line 113: Do you really mean “will be” Line 120: Should “selective” not be “selected” Line 129-131: What do you mean? Line 134: Put full stop after KMnO_4 then start with Capital letter.	Corrected according to reviewer’s suggestion. Corrected according to reviewer’s suggestion. Corrected according to reviewer’s suggestion. Corrected according to reviewer’s comment. No, but were According to reviewer’s comment Yes, According to reviewer’s comment
--	--	--

	Results Line 145: Delete “the results of” Line 160-166: What was the reason for the choice of Hg, Pb and Cd. Line 168-169: Any reason for selecting only the two enzymes? What about urease etc., Discussion Line 183: Then $p > 0.05$ Line 185: Put full stop after control. Start with “This indicates that the soil----- Line 186-187: How?????? Line 188-189: Avoid unnecessary repetition. Remove “from heavy metal-polluted soil samples” Line 215: What is the unit of measurement of the metal? Line 275: Should read: Fig. 2: Effect of the heavy metals on the soil catalase activity Line 280-282: Zinc Yes. Others No!!! The	See corrections My previous work See correction See correction See correction See correction Microgramme per gram See correction See correction
--	--	---



SDI Review Form 1.6

	statement is contradictory. If the metal concentrations are appreciable, then they must be significant. Line 285: What is the meaning of ‘on on ‘ Line 288-289: Watch the terms ‘‘subchronic exposure’’ and ‘‘pollution’’!!!! Line 290-291: Why was the test results taken after 96h as against 120 days stated in the Materials and methods. What is the significance of 96 h and why did the authors not show a graded response over the 4-day period. Line 291-294: Doubtful! The metals are toxic. At sublethal concentrations, they should retard not increase microbial activity and respiration rates. Infact these features are common indices of metal contaminated sites. Only input of organic materials can achieve the author’s claim. Line 295: Microbial metabolism of metals can be either through active or passive mechanisms. In the former, microbes practically accumulate metals <i>in vivo</i> through channels by bioaccumulation or converted through redox activity to more harmless states depending of	See correction See correction It was the period of incubation of dehydrogenase activity and not period of the study.
--	--	--

	course on the metal and the ionization states. In the latter, microbes adsorb metals on their surfaces (Biosorption) thereby reducing their environmental concentration. Exactly what do you mean by the term ‘‘metabolism’’ here? Line 298: If it is significant, then it must be $p < 0.05$ Line 311-313: Statement not supported by data. Check comments on Line 291-294. Also, in Fig 1, the author showed that dehydrogenase activity increased. References Author provided adequate and relevant references.	See correction See correction
Minor REVISION comments		
Optional/General comments		