



SDI Review Form 1.6

PART 1:

Journal Name:	<u>British Journal of Applied Science & Technology</u>
Manuscript Number:	2013_BJAST_4563
Title of the Manuscript:	Antioxidant Activity and Preservative Effect of Thyme (Thymus Schimperi R.)
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>)

- 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	Correct the name: <i>Thymus Schimper</i> The thymol and carvacrol, present in thyme essence, as well as the flavonoids and other polyphenols are 50 considered to be involved in the antioxidant activity. Rosmarinic acid, hydroxycinnamic 51 derivatives and flavonoid compounds showed important <i>in vitro</i> antioxidant activity by inhibiting iron-induced superoxide anion formation and lipid peroxidation in microsomal and mitochondrial systems. andThe phenolic monoterpenes in thyme, thymol and carvacrol, are the primary compounds which contribute to the characteristic aroma of its essential oil. They are also known to inhibit lipid peroxidation. There is repetition. As well as in Aneta <i>et al.</i> (2007) reported that the major phenolic components in thyme extracts, especially thymol and carvacrol, present higher antioxidant activity than the well-known BHT and α-tocopherol And The major phenolic components in thyme extracts, especially thymol and carvacrol, present higher antioxidant activity than the well-known BHT (butylated hydroxytoluene) and α-tocopherol antioxidants (Kwang-geun and Shibamoto, 2002). In these two cases there is for the same sentence different references.	The comment is accepted and the corrections made accordingly. Deleted: Aneta <i>et al.</i> (2007) from the Introduction and Reference list (Line 91-94). The sentence below remains as it is: The major phenolic components in thyme extracts, especially thymol and carvacrol, present higher antioxidant activity than the well-known BHT (butylated hydroxytoluene) and α-tocopherol antioxidants (Kwang-geun and Shibamoto, 2002).



SDI Review Form 1.6

	In the introduction, there are also other repetitions and there is not an adequate sequence, therefore such must be reformulated. In Material and Methods, the authors said: Samples of about 10g of dried, milled, powdered and sieved thyme were extracted with 100mL 119 of solvent. The extraction process was performed using a magnetic stirrer with hot plate. Only those heated at 40°C, I think, because the others were extracted at 20°C, according to the authors. The solvent etanol (only etanol? Because the authors said previously different solvents. In Results and Discussion and in Table 1, the authors said that ethanol was used at 97% and 0%, in this way, which solvent was used? Such must be clarified in Table 1, as well as in Material and Methods. Assefe Berhane reported that 290 the antioxidant and preservative effect of thyme can be improved through animal feed ration 291 preparation. How can the authors attribute the antioxidante activity to thyme eaten by cows? Such conclusion should be proved with the detection of some components of thyme plants in cheeses. Without this study, the authors cannot attribute the antioxidant activity to thyme plants. Therefore, the authors should reformulate this chapter or remove it.	The introduction is revised accordingly. The hot plate was used to extract thyme and adjusted the extraction temperature (20-40 °C) while stirring. The comment accepted and revised accordingly. Only ethanol was used at different concentration (97%, 48.5% and 0%). In this case 0% ethanol means distilled water alone. Assefe Berhane Utilization of thyme leaves in animal feed ration preparation. Annual research report on animal feed and nutrition. Ethiopian Agricultural Research Institute, essential oils research center. Addis Ababa, Ethiopia, 2009. In this case thyme antioxidant activity was determined indirectly taking butter of thyme-feed cow and non-thyme-feed cow. Induction time two butters was measured and converted to protection factor.
--	---	---



SDI Review Form 1.6

	The authors should cite the following references: Identification and characterisation of human pathogenic filamentous fungi and susceptibility to <i>Thymus schimperi</i> essential oil in MYCOSES Volume: 54 Issue: 5 Pages: E364-E376 DOI: 10.1111/j.1439-0507.2010.01926.x Published: SEP 2011 Potential genotoxicity of plant extracts used in Ethiopian traditional medicine in JOURNAL OF ETHNOPHARMACOLOGY Volume: 122 Issue: 1 Pages: 136-142 DOI: 10.1016/j.jep.2008.12.013 Published: FEB 25 2009 Constituents of the essential oil of <i>Thymus schimperi</i> in BULLETIN OF THE CHEMICAL SOCIETY OF ETHIOPIA Volume: 12 Issue: 1 Pages: 79-82 Published: JUN 1998	The authors found that the suggested reference seems not important and is not included in the Reference list . The authors found that the suggested reference is not vital and isn't included in the Reference list. The reference is already included in the Reference list. Ermias Dagne, Solomon Hailu, Daniel Bisrat, Tadel Worku. (1998). Constituents of the essential oil of <i>Thymus schimperi</i>. Bulletin of the Chemical Society of Ethiopia, 12, 79-82.
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		