Review Form 1.7

Journal Name:	**Asian Journal of Applied Chemistry Research**
Manuscript Number:	**Ms_AJACR_110210**
Title of the Manuscript:	**Detection of PDE-5 inhibitors added to dietary supplements with ultra-performance liquid chromatography coupled to tandem mass spectrometry**
Type of the Article	**Original Research Article**

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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 1. **Is the manuscript important for scientific community?** (Please write few sentences on this manuscript) 2. **Is the title of the article suitable?** (If not please suggest an alternative title) 3. **Is the abstract of the article comprehensive?** 4. **Are subsections and structure of the manuscript appropriate?** 5. **Do you think the manuscript is scientifically correct?** 6. **Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	1. **Yes** 2. **No, Alternative title : Development of a Robust Method for Screening PDE-5 Inhibitor Additives in Dietary Supplements using UPLC-MS/MS,** 3. **Yes** 4. **Yes** 5. **Yes** 6. **Yes** **additional suggestions:** **Introduction: Provide more context and background information on the prevalence and risks associated with the illegal addition of PDE-5 inhibitors to dietary supplements. Explain why it is important to develop a reliable detection method.** **Abstract: Make the abstract more concise and highlight the key findings of the study, including the novelty of the method, the specific PDE-5 inhibitors analyzed, and the potential implications for routine screening and determination.** **Keywords: Consider adding a few more relevant keywords that accurately represent the content of the manuscript.** **Methods: Provide more details and clarity in the methodology section. Include information such as the specific UPLC-MS/MS instrument model used, the chromatographic conditions (e.g., gradient program, column temperature), and the specific steps involved in sample preparation.** **Results: Present the results in a clear and organized manner. Include tables or figures to visually represent the data and make it easier for readers to interpret. Provide statistical analysis if applicable.** **Discussion: Discuss the significance of the findings in the context of previous research. Compare and contrast the proposed method with existing detection techniques. Address the limitations of the study and suggest areas for further research.** **Conclusion: Summarize the main findings and emphasize the practical implications of the study. Discuss the potential impact of the developed method on the detection and regulation of illegal PDE-5 inhibitors in dietary supplements.** **References: Ensure that all references are accurately cited and listed in the appropriate format. Consider including more recent and relevant references to strengthen the literature review.** **Language and Clarity: Review the manuscript for clarity, grammar, and overall coherence. Ensure that the writing style is consistent throughout the document and use appropriate scientific terminology.** **Ethical Considerations: Consider adding a section on ethical considerations, such as the approval of the study by an ethics committee or any relevant legal or**	

	regulatory aspects. **Acknowledgments: If applicable, acknowledge any funding sources, collaborations, or individuals who contributed to the research.** **By implementing these suggestions, the manuscript will become more comprehensive, clear, and impactful, thereby enhancing its overall quality.**	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	Yes, the language and writing style of the article appear to be suitable for scholarly communications. The content is written in a formal and technical manner, using appropriate scientific terminology and referencing relevant research.	
Optional/General comments	While the article presents a novel method for detecting illegal additives of PDE-5 inhibitors in dietary supplements, there are some potential limitations and negative aspects that should be considered: Limited scope: The study primarily focuses on the detection of three specific PDE-5 inhibitors (vardenafil, sildenafil, and tadalafil) and does not cover a broader range of potential adulterants. This may limit its applicability in identifying other types of illegal additives in dietary supplements. Sample size: The study only reports the detection of sildenafil in one dietary supplement. The limited sample size raises questions about the representativeness of the findings and the prevalence of PDE-5 inhibitor adulteration in the broader market. Lack of comprehensive analysis: While the UPLC-MS/MS method is sensitive and selective, it may not provide a comprehensive analysis of all potential PDE-5 inhibitor analogues or other adulterants. Other analytical techniques, such as GC-MS or NMR, may be required for a more thorough characterization of adulterated products. Lack of discussion on regulatory implications: The article does not extensively discuss the regulatory implications of detecting illegal PDE-5 inhibitors in dietary supplements. Further exploration of the regulatory framework, enforcement measures, and potential consequences for non-compliant manufacturers would provide a more comprehensive perspective. Limited information on validation: The article briefly mentions the correlation coefficients and relative standard deviation values as measures of method validation. However, detailed information on validation parameters such as accuracy, precision, sensitivity, and specificity is not provided. Without comprehensive validation data, it is difficult to assess the robustness and reliability of the proposed method. Absence of long-term stability assessment: The study does not address the long-term stability of the detected PDE-5 inhibitors in dietary supplements. Stability over time is important to determine the shelf life of products and the potential degradation or loss of active ingredients. It is important to consider these limitations and further investigate the potential drawbacks and challenges associated with the proposed method before drawing definitive conclusions about its effectiveness in detecting illegal additives in dietary supplements.	

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PART 2:

	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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

Name:	**Bydaa Atron**
Department, University & Country	**Sivas Cumhuriyet University, Turkey**