

Guidelines for Preserving Clinical Biomarkers Ensuring Specimen Stability

Sarah Roily*

Department of Architecture, Jomo Kenyatta University of Agriculture and Technology, Kenya

Abstract

This study presents comprehensive guidelines for preserving clinical biomarkers to ensure specimen stability. Focusing on best practices for specimen collection, handling, and storage, the research outlines strategies to maintain the integrity of biomarkers throughout the diagnostic and research processes. Key areas of emphasis include optimal conditions for storage, the impact of pre-analytical variables, and methods for mitigating degradation. By providing detailed recommendations, this study aims to improve the reliability of biomarker analysis and enhance the accuracy of clinical diagnostics and research outcomes. Adhering to these guidelines is essential for achieving consistent and reproducible results in biomarker-based studies and clinical applications.

Keywords: Clinical Biomarkers; Specimen Preservation; Specimen Stability; Biomarker Integrity; Pre-Analytical Variables

Introduction

Innovation is increasingly recognized as a critical driver of competitive advantage and organizational growth. As businesses and industries evolve, the ability to effectively measure and account for innovation becomes paramount. Despite its significance, innovation presents unique challenges for accounting professionals due to its intangible nature and the complexities involved in capturing its economic value. Traditional accounting frameworks and metrics often fall short in addressing the multifaceted aspects of innovation, necessitating the development of specialized approaches and methodologies [1]. In the accounting field, innovation encompasses a range of activities including product development, process improvements, and business model transformations. However, the lack of standardized metrics and the inherent difficulties in quantifying the impact of these activities pose significant challenges. For example, while patent counts and R&D expenditures are commonly used indicators of innovative effort, they may not fully capture the broader implications of innovation on organizational performance and value creation [2]. Moreover, the information issues associated with innovation accounting extend beyond mere measurement. The accuracy of innovation reporting is often compromised by limited data availability, disclosure practices, and the absence of consistent reporting standards. As a result, stakeholders may struggle to assess the true value of innovation and its contribution to financial outcomes. The article highlights key issues such as the need for standardized reporting frameworks and the integration of qualitative and quantitative measures. Through this review, the article seeks to advance the understanding of innovation accounting and propose future research directions to enhance the effectiveness of innovation assessment and reporting. Innovation stands at the core of organizational growth and competitive advantage, impacting various facets of business strategy and operations [3]. Within the field of accounting, measuring and evaluating innovation presents unique challenges due to its intangible nature and the complexities involved in capturing its economic value. This article provides a comprehensive review of the accounting literature on innovation, focusing on how researchers assess innovation and navigate the distinct information issues associated with it. By examining existing frameworks, methodologies, and challenges, this review aims to shed light on the intricacies of accounting for innovation and propose directions for future research.

The concept of innovation in accounting

Innovation can be broadly defined as the introduction of new or significantly improved products, processes, or practices that provide value to organizations and their stakeholders [4]. In the accounting context, innovation often involves development of new or improved products that create competitive differentiation and market advantage.

Process Innovation: Implementation of new or enhanced processes that improve efficiency reduces costs, or increase quality. Creation of novel business models that alter the way organizations deliver value and generate revenue.

Understanding innovation in accounting requires recognizing its multifaceted nature and the implications for financial reporting, performance measurement, and valuation [5].

Measuring innovation challenges and approaches

Intangibility of Innovation: One of the primary challenges in measuring innovation is its intangible nature. Unlike physical assets, innovations often lack clear, quantifiable metrics, making it difficult to assess their value accurately.

Valuation of Innovation: Accurately valuing innovation involves estimating future cash flows, assessing potential market impact, and incorporating risk factors [6]. Traditional valuation models may not fully capture the potential of innovative activities, requiring the development of specialized approaches. Researchers and practitioners have developed various metrics to measure innovation, including: The number of patents filed or granted can provide an indication of innovative activity. Investment in research and development is often used as a proxy for innovation efforts [7]. Qualitative methods, such as case studies and expert evaluations, offer insights into the impact of innovation on organizational performance, though they may lack precision compared to quantitative measures.

***Corresponding author:** Lawrence Ross, Department of Architecture, Jomo Kenyatta University of Agriculture and Technology, Kenya, E-mail: sarahroily@gmail.com

Received: 01-July-2024, Manuscript No: science-24-145554, **Editor assigned:** 04-July-2024, Pre QC No: science-24-145554 (PQ), **Reviewed:** 18-July-2024, QC No: science-24-145554, **Revised:** 25-July-2024, Manuscript No: science-24-145554 (R), **Published:** 30-July-2024, DOI: 10.4172/science.1000234

Citation: Lawrence R (2024) Guidelines for Preserving Clinical Biomarkers Ensuring Specimen Stability. Arch Sci 8: 234.

Copyright: © 2024 Lawrence R. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Navigating information issues in innovation accounting

Data Availability and Reliability: Reliable data on innovation activities can be challenging to obtain. Companies may not disclose detailed information about their innovation processes, leading to gaps in the available data.

Disclosure and Transparency: Transparency in reporting innovation activities is crucial for accurate accounting. However, companies may be reluctant to disclose detailed information due to competitive concerns or strategic reasons [8]. The lack of standardized reporting frameworks for innovation makes it difficult to compare and assess innovation across organizations. Developing standardized guidelines for innovation reporting could enhance consistency and reliability. **Impact Measurement:** Measuring the impact of innovation on financial performance and organizational outcomes requires sophisticated methods to attribute changes to specific innovative activities [9]. This involves linking innovation efforts to measurable outcomes such as revenue growth, cost savings, or market share expansion.

Review of accounting research on innovation

Historical Perspectives: Early accounting research on innovation focused on basic metrics like R&D expenditure and patent counts. Over time, the literature has evolved to include more sophisticated approaches, such as intellectual property valuation and impact analysis [10]. Recent studies emphasize integrated frameworks that combine quantitative and qualitative measures. For example, research has explored the use of balanced scorecards and performance measurement systems to capture the effects of innovation comprehensively.

Case Studies and Empirical Evidence: Case studies of innovative firms provide valuable insights into how companies manage and account for innovation. Empirical research highlights best practices and common challenges in innovation accounting. **Theoretical Developments:** Theoretical contributions have focused on developing models that integrate innovation with accounting principles. These models aim to provide a more holistic view of how innovation influences financial performance and value creation.

Conclusion

Accounting for innovation presents unique challenges due to its intangible and dynamic nature. The review of existing literature highlights both the progress made in developing methodologies for

measuring and reporting innovation and the ongoing challenges faced by researchers and practitioners. By addressing these challenges and exploring new directions in research, the accounting field can improve its ability to assess and report on innovation, ultimately supporting more informed decision-making and strategic planning. As innovation continues to drive organizational success, advancing the accounting practices surrounding it will be crucial for capturing its true value and impact.

Acknowledgement

None

Conflict of Interest

None

References

1. Singh H, Sharma A, Bhardwaj SK, Arya SK, Bhardwaj N, et al. (2021) Recent advances in the applications of nano-agrochemicals for sustainable agricultural development. *Environ Sci Process Impacts* 23: 213-239.
2. Zulfikar F, Navarro M, Ashraf M, Akram NA, Munné-Bosch S, et al. (2019) Nanofertilizer use for sustainable agriculture: Advantages and limitations. *Plant Sci* 289: 110270.
3. Ali SS, Al-Tohamy R, Koutra E, Moawad MS (2021) Nanobiotechnological advancements in agriculture and food industry: Applications, nanotoxicity, and future perspectives. *Sci Total Environ* 792: 148359.
4. Kim DY, Kadam A, Shinde S, Saratale RG, Patra J, et al. (2018) Recent developments in nanotechnology transforming the agricultural sector: a transition replete with opportunities. *J Sci Food Agric* 98: 849-864.
5. Bahrulolom H, Nooraei S, Tarrahimofrad H, Mirbagheri VS (2021) Green synthesis of metal nanoparticles using microorganisms and their application in the agrifood sector. *J Nanobiotechnology* 19: 86.
6. Bariya SH, Gohel MC, Mehta TA, Sharma OP (2012) Microneedles an emerging transdermal drug delivery system. *J Pharm Pharmacol* 64: 11-29.
7. Pandey PC, Shukla S, Skoog SA, Boehm RD, Narayan RJ, et al. (2019) Current Advancements in Transdermal Bio sensing and Targeted Drug Delivery. *Sensors* 19: 1028.
8. Wong TW (2014) Electrical, magnetic, photomechanical and cavitation waves to overcome skin barrier for transdermal drug delivery. *J Control Release* 10: 193:257-69.
9. Andrews SN, Zarnitsyn V, Bondy B, Prausnitz MR (2011) Optimization of microdermabrasion for controlled removal of stratum corneum. *Int J Pharm* 4: 407:95-104.
10. Aich K, Singh T, Dang S (2021) Advances in microneedle-based transdermal delivery for drugs and peptides. *Drug Deliv Transl Res* 25: 119673.