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REVIEWER'S REPORT

Manuscript No.: IJAR-56004

Title: PRACTICAL APPROACH TO CALCULATING PROBABILITY OF FALSE ACCEPT FOR DECISION RULES IN CONFORMITY ASSESSMENT.

Recommendation:
Accept as it is .....
Accept after minor revision.....
Accept after major revision .....
Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality	✓			
Clarity		✓		
Significance		✓		

Reviewer Name: Abdul Hameed Shah

Reviewer's Comment for Publication.

The manuscript titled *"Practical Approach to Calculating Probability of False Accept for Decision Rules in Conformity Assessment"* presents a detailed and technically sound discussion of decision rules and risk evaluation within conformity assessment, in alignment with ISO/IEC 17025 and related international guidance documents. The topic is highly relevant for calibration laboratories, testing facilities, and quality assurance professionals involved in risk-based conformity decisions.

Strengths of the Manuscript

1. The paper addresses an important practical problem in conformity assessment, namely the calculation and interpretation of the Probability of False Accept (PFA).
2. The theoretical background is well-grounded in international standards and authoritative guidance documents (ISO/IEC 17025, ILAC-G8, BIPM GUM, UKAS LAB 48, EURAMET).
3. The explanation of statistical concepts such as normal distribution, z-score, t-distribution, coverage factors, and guard bands is clear and appropriate for the target audience.
4. The worked numerical example based on thermometer calibration effectively demonstrates the application of the binary decision rule.

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5. Tables and figures support the methodology and help clarify the relationship between tolerance limits, acceptance limits, and risk levels.
6. The manuscript provides direct practical value for laboratories implementing decision rules and documenting conformity assessment decisions.

Areas for Improvement (Minor Revisions Suggested)

1. Language polishing is recommended to improve grammatical consistency, readability, and flow, particularly in longer explanatory sections.
2. The abstract could be slightly refined to more clearly emphasize the main methodological contribution and practical outcomes of the study.
3. Some figures and tables may benefit from clearer captions and explicit references within the text to improve navigation.
4. The discussion section could be strengthened by briefly comparing the proposed approach with alternative decision-rule strategies (e.g., non-binary statements).
5. Minor formatting inconsistencies (spacing, numbering, and symbols) should be corrected to meet journal style requirements.

Overall Evaluation

This manuscript provides a clear, practical, and standards-aligned approach to calculating and managing the Probability of False Accept in conformity assessment using binary decision rules. The combination of theoretical explanation and applied examples makes the paper particularly valuable for practitioners in metrology and calibration laboratories. With minor revisions focused on language refinement and presentation clarity, the manuscript is suitable for publication.