

## Documents

Ibrahim, M.Z.<sup>a</sup>, Samah, M.A.A.<sup>b</sup>, Zulkifly, A.H.<sup>a</sup>, Mohd Jan, N.H.<sup>a</sup>

**Development of OSH risk assessment in IIUM orthopaedics research laboratory according to ISO/IEC 17025:2017 accreditation**

(2019) *International Journal of Recent Technology and Engineering*, 8 (1C2), pp. 260-265.

<sup>a</sup> Department of Orthopedics, Traumatology and Rehabilitation, Kulliyyah of Medicine, IIUM Kuantan, Campus, Malaysia

<sup>b</sup> Kulliyyah of Sciences, IIUM Kuantan Campus, Malaysia

**Abstract**

Orthopaedics Research Laboratory accommodate with biocompatibility testing to meet the requirements of ISO/IEC 17025 for medical device. Towards the implementation of the guideline, laboratory safety is the main issue encountered to reduce the risk of hazardous among the laboratory personal This study aimed to ensure the good practices in safety, health and environment are implemented in ORL according to ISO/IEC 17025: 2017 standard guidelines. The hazard identification at ORL starts from the receiving of laboratory animal, New Zealand White Rabbit (NZWR), animal surgery, radiology assessment and euthanasia. There are many dangers found in all these procedures. In this study, only four safety hazards, two health hazards and one environmental hazard was taken and discussed therein by taking risk assessment rating in ORL. Next, the risk control for each danger was identified and recorded. Only four risk controls were highlighted for each hazard encountered by each procedure. The amounts that the average risk level in the procedures studied in ORL are 2.46 which is in tolerate level. However, since the value is close to 3.0, the level of risk is relatively low and is approaching to moderate. The various risk levels for this study are 2.0. The difference between the highest (operating procedures) and the lowest (euthanasia) which showed the difference of non-essential data. There was no significant difference between the hazards found in ORL with all the procedures studied in one-way ANOVA analysis ( $F:(3,20) = 0.649$ ,  $p = 0.592$ ,  $n_2p = 0.09$ ). However, risk assessment may change from time to time depending on the hazard detection and it is strongly recommended that some of the stated control measures be taken to reduce future risk levels that could harm to individuals, organizations and countries. © BEIESP.

**Author Keywords**

HIRARC; ISO/IEC 17025; Orthopedic Research Laboratory; Risk Assessment

**Publisher:** Blue Eyes Intelligence Engineering and Sciences Publication

**ISSN:** 22773878

**Language of Original Document:** English

**Abbreviated Source Title:** Int. J. Recent Technol. Eng.

2-s2.0-85073784423

**Document Type:** Article

**Publication Stage:** Final

**Source:** Scopus