

الإستهلال

قال الله تعالى :

مَشْرِقٍ وَالْمَغْرِبِ لَا إِلَهَ إِلَّا هُوَ فَاتَّخِذْهُ وَكِيلًا)

الآيه (9)

سورة المزمل

Dedication

To my parents Eng. Khalifa and Eng. Bakhita

To my sisters and my brother

To all my friends

Acknowledgement

All thank to Allah

And a lots of thank to Sudan University of science and technology the place where we gain knowledge.

I would like to acknowledge the assistance of many people, who provided help, support, encouragement, and enabled me to complete my master dissertation.

In Particular, I would like to acknowledge the contribution of my principle supervisor, Dr. Elfatih Ahmed Hassan who guided and encouraged me, as well as audited my questionnaire besides giving me more advice.

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Finally, I wish to express my gratitude and love to my parents my sisters and my brother for their unreserved Love, support and encouragement. The courage and determination they taught me have made my life so wonderful.

Abstract

The aim of this research is to know the impact of implementing ISO/IEC17025-2005 standards and its role in improving the performance of the laboratories of Sudanese Standards and Metrology Organization.

The study population consisted of the personal from all department of SSMO. The researcher used descriptive approach and system of statistical analysis and Chi-square to calculate the assumptions of statistical significance in the analysis of the questionnaire, which was distributed to a random sample of members of the laboratories of Sudanese Standards and Metrology organization (SSMO).

The analysis of the results showed that there are statistical significance indicators for implementation of ISO 17025-2005 in the laboratories Sudanese Standards and Metrology organization.

Also the implementation of ISO/IEC 17025-2005 in the laboratories of Sudanese Standards and Metrology organization led to the optimal use of resources and the awareness of senior management of the ISO system helped them in the process of evaluation and measurement the system, this leads to achievement of intended results, improve the performance of the laboratories of Sudanese Standards and Metrology organization and education the staff at the SSMO at all level on ISO/IEC 17025-2005.

According to Chi-square test result in the analysis which gave

Significant Value < 0.05 for all hypotheses and which reject the null hypotheses and accept the researcher hypotheses:-

- The awareness and perception of top managers of ISO will helped them in the process of evaluation and measuring the system as well achieving intended result.
- Work environment inside the lab is suitable and helps in correct testing results and provide reliable and high quality output of services.
- Implementing ISO system enhances the performance and the quality of the laboratory.
- There is a system to identify training needs and staff training in SSMO.

مستخلص البحث

الهدف من هذا البحث هو معرفة أثر تطبيق نظام الأيزو 17025-2005 ودوره في تحسين أداء المعامل بالهيئة السودانية للمواصفات والمقاييس .

تألفت عينة الدراسة من كل الأشخاص في جميع الأقسام في الهيئة السودانية للمواصفات والمقاييس . إستخدم الباحث المنهج الوصفي ونظام التحليل الإحصائي ومربع كاي لحساب الفرضيات ذات الدلالة الإحصائية في تحليل الإستبيان الذي تم توزيعه على عينه عشوائيه من أفراد معامل الهيئة السودانية للمواصفات والمقاييس .

أظهر تحليل النتائج وجود مؤشرات ذات دلالة إحصائية لتنفيذ نظام الأيزو 17025-2005 في معامل الهيئة السودانية للمواصفات والمقاييس .

كما أن تنفيذ نظام الأيزو 17025-2005 في معامل الهيئة السودانية للمواصفات والمقاييس أدى إلى الإستخدام الأمثل للموارد، والمعرفة والإدراك من الإدارة العليا لنظام الأيزو ساعدهم في عملية التقييم والقياس للنظام وهذا أدى إلى تحقيق النتائج المرجوه وتحسين أداء معامل الهيئة السودانية للمواصفات والمقاييس وتعليم العاملين بالهيئة السودانية للمواصفات والمقاييس على جميع المستويات على نظام الأيزو 17025-2005 .

وفقاً لتحليل مربع كاي وجد أن هناك دلالة إحصائية لكل الفرضيات حيث يتم رفض فرضيات العدم وقبول فرضيات البحث التي تنص على الآتي:

1. الوعي والإدراك من الإدارة العليا ساعدهم في عملية تقييم وقياس النظام وكذلك تحقيق النتائج المرجوه.

2. بيئة العمل داخل المختبر مناسبة وتساعد في إعطاء نتائج صحيحة للإختبارات وتوفر نتائج موثوقه وعالية الجودة.

3. تنفيذ نظام الأيزو يعزز أداء وجودة المعامل.

4. يوجد نظام لتحديد الإحتياجات التدريبية وتدريب العاملين.

List of contents

Content	Page
الاستهلال	
Dedication	I
Acknowledgement	II
Abstract	III
Abstract Arabic version	I V
List of Contents	V
List of Tables	VIII
List of Figures	X
List of Abbreviations	XV
CHAPTER ONE : Introduction	
Introduction	2
Statement of the problem	3
Importance of the research	3
Research Objective	4
Hypotheses	4
Methodology of the study	4
data collection	5

CHAPTER TWO : Previous studies and Literature review	
previous studies	7
Literature review Background	8
ISO 17025 accreditation	8
ISO/IEC 17025:2005 General Requirements	9
History and status of ISO/ IEC 17025:2005	9
Content of MS ISO/IEC 17025	10
Overview of the Content of MS ISO/IEC 17025:2005	10
Relationship between ISO 17025 and ISO 9001	15
The Advantages of Being an Accredited Laboratory	17
CHAPTER 3: materials & method	
materials	20
study design	20
study area	20
Study population	20
Sampling	20
Inclusion criteria	20
Exclusion criteria	20
Ethical consideration	20
Data analysis	21
Method	21

CHAPTER FOUR : analysis	
Reliability test	23
Frequency Test	24
Chi-square Test (test of hypothesis)	38
CHAPTER FIVE: Discussion, Conclusion, and Recommendations	
Discussion	44
Conclusion	45
Recommendations	45
References	46
Appendix	

List of Tables

No.	particulars	Page No
Table (4-1)	Work	21
Table (4-2)	Education	22
Table (4-3)	year of Experience	23
Table (4-4)	Administer has a mechanism to determine the quality of the potential problems and take action to prevent them	24
Table (4-5)	There are a mechanism for identifying opportunities to improve the effectiveness of quality system.	25
Table (4-6)	Implementation of international standards like ISO 17025 contributed in facilitate trade and economic growth.	26
Table (4-7)	There is an increase in the volume of business due to the high level of customer confidence and appease them.	27
Table (4-8)	There are access controls to areas which may influence the quality of tests.	28
Table (4-9)	When incompatible activities are carried out in different areas of the laboratory, there is an effective separation which avoids cross contamination.	29
Table (4-10)	Increase confidence in the test data and in the performance of staff and continuing improvement in the quality of the data and the effectiveness of the laboratory	30
Table (4-11)	No need for re-testing, leading to save time and money.	31
Table (4-12)	Wherever quality problems occur administration has a mechanism for taking corrective action which seeks to develop and improve the quality system so that a recurrence of the problem is unlikely.	32

Table (4-13)	There are mechanisms to monitor trends in quality performance so that failures can be anticipated and dealt with before they become critical.	33
Table (4-14)	There are a review on the performance of quality system to determine whether it is deliver the objectives which have identified.	34
Table (4-15)	The system been established to identify training requirements and to train staff.	35
Table (4-16)	There are a documented procedure for conducting evaluation of the competence of staff after training and before authorizing them for the procedure in which they were trained.	36
Table (4-17)	There is a mechanism for identifying which staff conducted each procedure or test.	37
Table (4-18)	Management system	38
Table (4-19)	Work environment	39
Table (4-20)	Quality of the service	40
Table (4-21)	Personal	41

List of figures

No.	particulars	Page No
Figure (1-1)	Interaction between ISO 9001 and ISO 17025 standards ISO 17025 ISO 9001	14
Figure (4-1)	Administration has a mechanism to determine the quality of the potential problems and take action to prevent them	24
Figure (4-2)	There are a mechanism for identifying opportunities to improve the effectiveness of quality system.	25
Figure (4-3)	Implementation of international standards like ISO 17025 contributed in facilitate trade and economic growth.	26
Figure (4-4)	There is an increase in the volume of business due to the high level of customer confidence and appease them.	27
Figure (4-5)	There are access controls to areas which may influence the quality of tests.	28
Figure (4-6)	When incompatible activities are carried out in different areas of the laboratory, there is an effective separation which avoids cross contamination.	29
Figure (4-7)	Increase confidence in the test data and in the performance of staff and continuing improvement in the quality of the data and the effectiveness of the laboratory	30
Figure (4-8)	No need for re-testing, leading to save time and money.	31
Table (4-12)	Wherever quality problems occur administration has a mechanism for taking corrective action which seeks to develop and improve the quality system so that a recurrence of the problem is unlikely.	32
Figure (4-10)	There is mechanisms to monitor trends in quality performance so that failures can be anticipated and dealt with before they become critical.	33
Figure (4-11)	There are a review on the performance of quality system to determine whether it is deliver the objectives which have identified.	34
Table (4-15)	The system been established to identify training requirements and to train staff.	35

Figure (4-13)	There are a documented procedure for conducting evaluation of the competence of staff after training and before authorizing them for the procedure in which they were trained.	36
Figure (4-14)	There are a mechanism for identifying which staff conducted each procedure or test.	37

List of Abbreviation

Abbreviation	Definition
ISO	International organization for standardization
IEC	International Electro technical Commission
ILAC	International Laboratory Accreditation Corporation
SSMO	Sudanese Standards and Metrology Organization