**A REPORT ON MY INDUSTRIAL TRAINING AT NATIONAL AGENCY FOR FOOD AND DRUG**

 **ADMINISTRATION AND CONTROL AT RIVERS STATE PORT-HARCOURT**

 **BY**

 **UWAKWE TOCHUKWU ANSELM**

 **DERPARTMENT OF PHARMACOLOGY**

 **COLLEGE OF MEDICINE AND HEALTH SCIENCE**

 **AFE BABALOLA UNIVERSITY, ADO EKITI, EKITI STATE**

 **MAY 1**

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 DEDICATION

This report is dedicated to God in heaven, who take of me these three months of my SIWES program. I also dedicate to my parents Mr. & Mrs. Uwakwe for being my rock. I also dedicate it to my lecturers for always helping me academically. As well as the staffs of NAFDAC who I was privileged to work with.

 ACKNOWLEDGEMENT

 I give all thanks to God for his protection and guidance that he continuously shows me and my family. I also have to say a big thank you to my parents for their support. I needed to show them it was not all in vain.

 I will also use this opportunity to say a big thank you to my lecturers, without their input and hard work this work would be incomplete especially concerning corrections.

 ABSTRACT

This report contains extensive information of the industrial training which is the knowledge gained and the scope of work involved at the National Agency For Food and Drug Administration and Control. The training is aimed at exposing students to the practical aspect of their course of study and also to prepare for future advances. This report also contains the work done and tests carried out at NAFDAC. The training I experienced at NAFDAC has helped me to experience to an extent the practical aspect of my course.

 **CHAPTER ONE**

 **INTRODUCTION**

Background of study

SIWES allows students to be exposed to practical work of their various course of study and helps them prepare for job opportunities, SIWES is the accepted skill training program which forms part of the approved academic standard in the various degree programs for all Nigerian Universities. It is an effort to the bridge the gap existing between practice of science and technology, agriculture, medical management in Nigerian Universities.

Student industrial work experience scheme helps to expose students to practical aspect of their course. Indeed, the three months spent at the National Agency for Food and Drug Administration and Control has aided me to be more familiar with the practical aspect of Pharmacology. It is practically aimed at exposing students to machines and equipment, professional work methods and safe guarding the work areas in the industries. This report contains the activities carried out at the National Agency For Food and Drug Administration and Control in Rivers State, Port Harcourt.

Objectives of Study

1. The basic aim of NAFDAC is to make sure the foods made by industries and food companies are safe for consumption.
2. Another aim of NAFDAC is to make sure goods manufactured abroad and want to used here by consumers are safe for consumption.

Significance of Study

1. To increase familiarity between the students and the equipment in the labs.
2. To apply skills acquired in the academic setting to practical demand of the employing organization.
3. Employers are able to educate the students so as to produce graduates with knowledge and skills which are valuable to the employer.

MY SIWES PROGRAM

I started my SIWES on the 16th of July 2019 and ended on the 9th of September 2019. During this program, I enrolled at the National Agency For Food and Drug Administration, where I was introduced to the Head of the branch, the other staffs and fellow colleagues. NAFDAC is divided into 5 labs where tests are carried out on the samples. They are divided into the;

1. Water Lab
2. Food Registration
3. Sample Reception
4. Food Compliance
5. Microbiology Lab

I went through all the labs to grasp a full understanding of how food and other consumable samples is being tested here at NAFDAC. I started in the Water Lab where I was taught how to analyze water and to make sure the acidic levels of the water is balanced, that it is safe for drinking. There are various tests that can be carried out on water, the pH, its Hardness, its appearance and its Net Weight. These are the basics tests that can be carried out on water. Some apparatus used to carry out water analysis are; Spectrophotometer, the pH meter. An appearance test is firstly carried on the sample to make sure it is particle free. The level of chloride can also be tested in the water sample by preparing silver nitrate used in titration. The test for hardness is carried out using the spectrophotometer and checking its calcium and magnesium hardness.

The next lab I went to was called the Food Registration Lab. I was introduced to the staffs of this lab and to my fellow colleagues already in the lab. The aim of the work of this lab is that the products coming in are analyzed for them to be certified and given a certified NAFDAC number. Different tests are carried out in this lab on different samples like bread samples or honey. Some apparatus used in this lab are; Analytical Weighing balance, Soxhlet apparatus, Desiccator and Oven. Some tests carried out on samples like bread samples are the Moisture test to determine the moisture content of the sample also Spot test to test for bromate (also known as bromate test) i.e using potassium iodine and HCL + H2O as the re agent, a shredded piece of the sample is put in a petri dish and re agents are added. Spots on the sample indicate there is bromate present. Other tests carried out are Total Sugar test and FIEHE test carried out on honey.

The third lab I went to was the Sample reception, this is where different samples come in from companies that want their goods and product to be tested. Using job orders, samples are sent to the different labs for testing like water samples, bread samples, wine samples e.t.c

The fourth lab I went to was the Food Compliance lab. I was introduced to the staffs and my new colleagues. I was taught how to properly handle the equipment in the lab. As other labs, different samples are brought here and different tests according to the sample. Samples like salt, cheese, milk e.t.c Tests like Determination of Acidity in Crude Salt by using 2g of the sample and dissolving it into 5mls of distilled water. Then, Silver nitrate is titrated into the dissolved salt and potassium dichromate is the indicator used to initiate color change. Titre for result. Or the Using the Soxhlet to extract cheese or Lipid extraction from liquid samples(milk). Some apparatus used in the lab were; Moisture Analyzer, Weighing balance and Soxhlet Apparatus.

The fifth and final lab I went to was the Microbiology Lab. I was introduced to the staffs of this lab and my colleagues of that lab. Different media is prepared to determine the various organisms on these samples like Potato Dextrose Agar, Plate Count Agar, Cetrimide Agar. Usually, fish samples are received in this lab where the analyzed properly through are a number of procedures. The first step is;

1. The inoculation and isolation of micro organisms in the food sample.
2. After the inoculation and isolation, the fish samples are also incubation.

MAINTENANCE AND SAFETY

Safety measures carried out at the National Agency For Food and Drug Administration and Control. These measures are aimed at the protection of the department personnel m equipment safety, protection of the samples and the workers and unnecessary exposure to contaminations, which include;

1. Wear personal protective equipment like face masks, gloves, laboratory coats.
2. Follow safe practices when operating the apparatus that use electricity and heat.
3. Do not use phones in the lab.
4. Do not eat drink or smoke in the lab.
5. Clean contaminated equipment.
6. Do not put anything into the mouth

 **CHAPTER TWO**

EXPERIENCE GAINED AND CHALLENGES ENCOUNTERED

Experience Gained

The following experience were gained during the Students Work Experience Program which are:

1. A good understanding of the daily routine and work to be carried out.
2. A good understanding of the apparatus around the five labs. Being able to use and control them anywhere at will.
3. Ability to identify when a product is not ok for consumption by running different tests.
4. Experience gained can be used to work at any NAFDAC branch due to the knowledge gained.

Challenges Encountered

The following challenges were encountered during my Student Work Experience Program which are:

1. The closing time was very late.
2. The distance from the work place to home.

 **CHAPTER THREE**

SUMMARY AND CONCLUSION

Summary

The SIWES at NAFDAC helped me in different ways. It has helped me in my academics. Morally and other ways. Academically, the training has improved my understanding the practical aspects of not necessarily all of pharmacology but some of it. I have learnt how to adapt to the right attitude to work, great character, diligent and hard working. It as also improved interaction to the outside world.

Conclusion

In conclusion. I would like to say the SIWES program has given me a great opportunity not only in my field but has also exposed me to challenges which I can be assured I will face after graduation.

It was a great experience and worthwhile study at NAFDAC and I’m pleased to ITF and Afe Babalola University for making 3 months Industrial Training and exposure to real life situations possible

After a successful completion of the SIWES program, the following conclusions were drawn:

I was excited to have been able to take part in the services of NQAFDAC. I have not been not able to take part in the services of NAFDAC. I have not only been exposed to what life has to offer but also participate in giving back to society.

**RECOMMENDATIONS**

My recommendations are that;

1. Students should be actually integrated into the works rather than run errands
2. ITF should regularly try and visits students more often.
3. This experience should be taken very serious by students as there is vital information to be gathered.

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SIWES Manual

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