



UNIVERSITI  
TEKNOLOGI  
MARA

**Strallex**  
S T R A L L E X

## **INDUSTRIAL TRAINING FINAL REPORT**

**SESSION : FEB 2022 - AUG 2022**

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INDUSTRIAL TRAINING FIELD REPORT  
COLLEGE OF ENGINEERING (CHEMICAL),  
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## ACKNOWLEDGEMENT

First of all, I would praise to Allah SWT, with the blessing I have completed reports and my journey as a trainee at the industrial training for one semester (6 months) and that means I have also fulfilled my responsibilities as a Diploma in Chemical Engineering student. Thus, I would express my gratitude towards the organization who have accepted me in to undergo the practical training which is Strallex Group Sdn Bhd. During the internship, I worked as a chemical engineer (intern) under business and technical support which I have gained a lot of experiences and knowledge.

I also want to express my appreciation to the people who have helped me accomplished the tasks. My thankful gratitude goes to my supervisor, Miss Glenda Chang who is also the founder and Chief Executive Officer (CEO) of Strallex Group Sdn Bhd. For giving me the opportunity to obtain my first experience working in an industry that is related to my fields of study. I was able to perform tasks similar to an actual employee. I also had a chance to work in various engineering fields such as oil and gas industry, technology industry and medical device industry.

Moreover, I would also like to thank Madam Karen for her contribution in teaching me everything and her monitoring during my internship period in the company. Not to be forget, her contribution as a mother in the company that guide me to achieve the necessary skill in a working life condition such as time management, teamwork and all the documentation control skill.

Furthermore, I would like to express my appreciation to my colleagues in Strallex Group Sdn Bhd for assisting me and providing me crucial information and a support in some of my responsibilities. Aside from that, throughout my student industrial training at Strallex Group Sdn Bhd, I have been bless to meet and work with my internship colleagues, who have been extremely helpful in supporting me with tasks, offering advice and providing moral support. Being together, we were able to face a lot of obstacles.

Last but not least, a big thank to my family and my best friend for giving me the time, space and trust on my passion. Thank you towards my family's support and their unceasing prayers for my success. Within this 6 months period of time, practical training had really gave me a big impact in finding my own true self and my future path career.



## ABSTRACT/EXECUTIVE SUMMARY

This industrial training report belongs to Nur Ain binti Idrus, who has undergone industrial training for a period of 6 months, which is 24 weeks from 20 February to 4 August at Strallex Group Sdn Bhd under the supervision of Ms Glenda. In relation with the completion of this industrial training, hence the academic requirements of the chemical engineering diploma are hereby completed.

The purpose of industrial training is to provide students the chance to experience what it's like to work in a real workplace environment. Aside from that, industrial training provides students the chance to apply the information they learned in university to their work rather than learning ideas and the theoretical without applying them in the real world.

Through my internship, I have gained a lot of knowledge and abilities, particularly in regards to managing a business, a company's product, and other technical tasks. I was exposed to and involved in a variety of circumstances in the job that was allocated to me throughout the period of the last 24 weeks of training, which was not just restricted to the field of chemical engineering.

My industrial report consists of 5 chapters where as an assessment to test how all the information and skills from this program have given impact and changes along with the marketability and applications that have been put into practice. In the first chapter I will explain the overview and objective of industrial training. Then the second chapter is related to the company profile. In this part is briefed regarding the company background, history and also the company's product.

Then in chapter 3 and 4, it will tell a summary of my experience as a trainee at Strallex Group Sdn Bhd. As an intern, I was exposed to various nature scope of work and also being guided and assisted to do various tasks. Besides that, ethics and attitudes as well as health and environmental issues are very much emphasized by the company's managers. Finally, this report ends with a conclusion to the internship program and recommendations that can be applied to the new batch of internship students.





## LIST OF TABLES

- Table 1.1: Strallex Group working hour
- Table 2.1: High Management List of Strallex Group Sdn Bhd
- Table 3.1: Types of tender
- Table 3.2: Process of preparing invoices, purchase order, delivery order
- Table 4.1: Comparison of disinfectant technology
- Table 4.2: Atomizing test for MD1 & MD2
- Table 4.3: Comparison between conventional separation and tube separator technology
- Table 4.4: Basic requirement and design of proposed TST
- Table 4.5: Problem encountered and approached solution
- Table 4.6: Core Values of Strallex Group Sdn Bhd
- Table 4.7: Procedure of Shipping Parcel

## LIST OF FIGURES

- Figure 1.1: Google map of Strallex Group Sdn Bhd  
Figure 1.2: Picture of Miss Glenda Chang  
Figure 2.1: Flowchart company history of Strallex Group Sdn Bhd  
Figure 2.2: Logo of Strallex Group Sdn Bhd  
Figure 2.3: Logo of Strallex Resources Sdn Bhd  
Figure 2.4: Logo of Strallex Technology Sdn Bhd  
Figure 2.5: Logo of Strallex Impian Sdn Bhd  
Figure 2.6: Strallex Group Sdn Bhd organization chart  
Figure 2.7: Logo of Kouvext  
Figure 2.7: Poster of Kouvext Covid-19 neutralizing antibody rapid test  
Figure 2.8: Poster of Kouvext Sars-Co-2 neutralizing antibody test  
Figure 2.9: Poster of Kouvext ELISA  
Figure 2.10: Logo of DisMac  
Figure 2.11: DisMac Ultrasonic Atomization Disinfection Machines 1 & 2  
Figure 2.12: Mini DisMac Portable Disinfection Spray Set 1 & 2  
Figure 2.13: DisMac Home with the chlorine disinfectant set  
Figure 2.14: DisMac Mobile with the chlorine disinfectant set  
Figure 2.15: DisMac Portable with the chlorine disinfectant set  
Figure 2.15 : Dismac Disinfectant Chlorine Dioxide  
Figure 2.16 : Logo of iLaundrix  
Figure 2.17: iLaundrix Washing Machines and Dryer  
Figure 2.18: Logo of iVender  
Figure 2.19 : iVender Machine  
Figure 2.20 : Logo of iCHEST  
Figure 2.21 : Logo of Laundremart  
Figure 2.22 : Picture of Laundremart showroom  
Figure 2.23: DK76 Residence, Strata Development, at Jalan Keramat Hujung  
Figure 3.1: Letterhead of Strallex Group Sdn. Bhd.  
Figure 3.2: Advertisement poster of DisMac Desk  
Figure 4.1: The spray atomization process  
Figure 4.2: Atomization test of Mini Dismac 2  
Figure 4.3: Chemical reaction of sodium chlorite and citric acid  
Figure 4.4: Flow process of Kouvext medical device registration  
Figure 4.5: GDPMD training certification  
Figure 4.6: Medical Device Centralised Online Application System (Medcast) for medical device registration  
Figure 4.7: Medical Device Registration status  
Figure 4.8: Example of oil rig platform  
Figure 4.9: Physical photo of oil-water static separation tank  
Figure 4.10: Diagram of concept gravity separation process  
Figure 4.11: 3D side view of the proposed tube separator technology (TST)  
Figure 4.12: Process flow diagram (PFD) of TST system



Figure 4.13: Piping and Instrumentation Diagram (P&ID) of the TST system

Figure 4.14: Strallex Resources Sdn. Bhd. Policy Statement

Figure 4.15: MSDS of chlorine dioxide disinfectant

Figure 4.16: MSDS of disinfectant citric acid



## CHAPTER 1 INTRODUCTION OF INDUSTRIAL TRAINING

### 1.1 Overview

Industrial training (IT) is a compulsory requirement for student in certain programs at all levels of higher education in Institutions of Higher Learning (IHL). To increase the level of graduates able to work, industrial training program was introduced to strengthen the competencies required. Industrial training course give student learning opportunities in the world of work to received practical experience in order to improve the reliability of the market.

Industrial training (IT) refers to expose students to the real-life experiences of the engineering works and to get them involved in Chemical Engineering projects before graduation. It is one of the requirements for the award of Diploma in Chemical Engineering is that the students MUST completed at least twenty-four (24) weeks with 12 credit hours of Industrial Training within semester six (6) after pass all the courses taken from semester 1 to semester 5. The technical and non-technical outcomes of the course may be assessed and evaluated through this industrial training.

### 1.2 Objective of industrial training

The main objective of Industrial Training (IT) is to give students learning opportunities in the world of work to receive practical experience in order to improve reliability of the market.in preparing the students as an engineering technician, the industrial training helps to produce chemical engineering technician graduates with excellent technical skill and soft skill competency. The other objectives are:

- To identify the types of work that chemical engineers do in real engineering world and appreciate the theoretical knowledge learned
- To perform basic engineering practices, including technical writing report, communication with colleagues, handling project and generating proposal for betterment of the industries.
- To have higher level of integrity, ethical and accountability in practicing engineering.

### 1.3 Industrial training placement

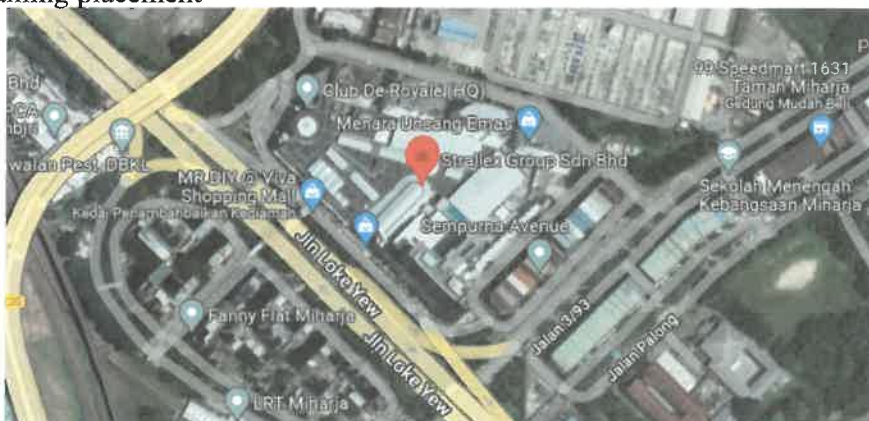


Figure 1.1: Google map of Strallex Group Sdn Bhd



### 1.3.1 Industrial schedule

Industrial training been carrying out within duration of 20 February 2022 - 4 August 2022 (24 weeks).

Table 1.1. Strallex Group working hour

Strallex Group Sdn Bhd	
Normal working hours	8 hours
Day of working	5 days a week
Operation hour	8.30 am - 5.30 pm
Rest hour	Monday - Thursday <ul style="list-style-type: none"> <li>• 12 pm - 2 pm</li> </ul> Friday <ul style="list-style-type: none"> <li>• 12.30 pm - 2.30 pm</li> </ul>

### 1.3.2 Company supervisor information

Chang Tong Ku, also known as Glenda Chang, is a woman engineer and consultant in the energy and property industries. She is the founder and chief executive officer (CEO) of Strallex Group, a startup company that focuses on providing innovative solutions in the oil and gas industry. She has over 15 years of experience in the oil and energy industry, including experience in product optimization, reservoir engineering, and production engineering. With a passion for technology, she is currently working on expanding the company's offerings into automation and real estate.



Figure 1.2: Picture of Miss Glenda Chang

- Name                      Glenda Chang
- Position                 Founder and CEO
- Experience              **Founder**



Strallex

## CHAPTER 2 COMPANY PROFILE

### 2.1 Company background

A bumiputera-owned corporation, Strallex Group Sdn Bhd, focuses on the business sectors of real estate development and management, real estate investment, oil and gas, technology and services, and medical devices. In business for approximately 5 years, Kuala Lumpur, Malaysia, is headquarters to Strallex Group Sdn Bhd. Strallex Group, which has three subsidiary businesses, has the slogan "strategic, alliance, and excellence" as its main business guiding philosophy.

### 2.2 Company history

Started in 2016 with specialty focusing in oil and gas industry known by the company name which is PetroNRG then changed to Strallex Group Sdn Bhd. In 2020 Strallex Group began to expand its business scope by establishing three (3) subsidiary companies in line with the development of country and economic demands.

## STRALLEX GROUP SDN BHD COMPANY HISTORY

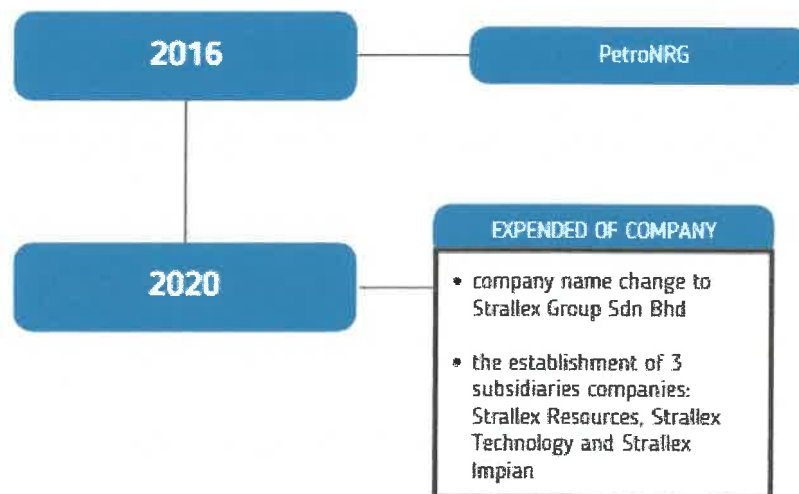


Figure 2.1: Flowchart company history of Strallex Group Sdn Bhd

#### 2.1.1 Strallex Group Sdn Bhd



Figure 2.2: Logo of Strallex Group Sdn Bhd

Strallex Group Sdn Bhd (1195097-U) is a multi-field corporation that began as a successful oil and gas service provider and has recently expended its reach to several business fields. With an abundance of skills both internally and internationally, this diverse organization has the potential to excel and thrive in all of these many business sectors.

Strallex Group aspires to be one of the leading firms in strategic work and sectors, working with partners both domestically and globally, to contribute to the nation's development. Strallex Group Sdn Bhd is made up of highly-skilled, passionate and devoted people working toward the same goal. These professionals come from a variety of professions and possess a wide range of skills, knowledge and competence.

Under the guidance of its founder, the Strallex Group was founded in 2016 and has since diversified into multiple major strategic industries, including property development and management, property investment, oil and gas, technology and services and medical devices. This results in the rise into four other subsidiaries which are Strallex Resources Sdn Bhd for oil and gas business, Strallex Technology Sdn Bhd for the technology and services and Strallex Impian Sdn Bhd in property management.

#### 2.1.2 Strallex Resources Sdn Bhd



Figure 2.3: Logo of Strallex Resources Sdn Bhd

Strallex Resources Sdn Bhd is established in 2016 with a goal of offering an innovative oil and gas solutions for upstream industry. This branch's strength and skills stem from its affiliation with highly resourceful and knowledgeable worldwide affiliates and partners. Strallex Group Resources aims to become a go-to firm for oilfield services, offering a comprehensive range of oil and gas services in collaboration with its partners.

Strallex Resources Sdn Bhd brings together a multidisciplinary team with extensive experience and expertise across a variety of basins in South East Asia, as well as a track record of performing challenging projects safely while producing good outcomes for customers and creating significant value for its corporate partners. Strallex Resources Sdn Bhd demonstrates its dedication to helping customers accomplish projects safely, on time and on budget by utilizing an integrated strategy across disciplines for cost control, process optimization and logistics management. These efforts to bring together



professional from various locations and fields of expertise resulted in the creation and dissemination of major values within the organizations as well as with our corporate partners.

Internally, Strallex Resources Sdn Bhd can provide well engineering consulting, feasibility studies, reservoir engineering, field development plans, due diligence and valuation and IT consultation. The firm also supplies maintenance services, decommissioning services, rigs, downhole imaging tools and services, and separation process solutions, equipment, and services in collaboration with external and affiliates.

#### 2.1.4 Strallex Technology Sdn Bhd



Figure 2.4: Logo of Strallex Technology Sdn Bhd

Strallex Technology is a division of the Strallex Group that specializes in technology-based services. It not only supplies the greatest available technologies, but also innovates, develops, and enhances existing ones. The major goal of this area is to transform everyday technologies into automated operations.

Aside from that, the branch serves as a technology-based solution provider to the other branches, which are focused on oil and gas and real estate. It offering cutting-edge solutions and technology to Strallex Group clients, allowing them to handle challenges more effectively while also improving their everyday operations and safety measures.

Strallex Technology currently owns four distinct brands that produce great innovations. The primary goal of these ideas is to integrate autonomous technology into society by making everyday duties possible with a single-button push on a smart panel. DisMac Machine & Chlorine Disinfectant, iLaundrix, iKeeper and iVender machine are examples of current and on going technology.

#### 2.1.5 Strallex Impian Sdn Bhd



Figure 2.5: Logo of Strallex Impian Sdn Bhd

Strallex Impian Sdn Bhd was founded in 2018 and its primary operations include property investment, development, and management. Strallex Impian Sdn Bhd’s mission is to build Malaysia project strategic locations that are ethically and responsibly designed and built to the greatest standards of services, plan, design and development with an a dedication to the creating exceptional amazing initiatives in the future.

Strallex Impian Sdn Bhd is currently working on a project entitled DK76 Residence. This project is located on Jalan Keramat in Kuala Lumpur and is a Strata Development with a High Return on Investment (ROI).

## 2.3 Vision and mission

### 2.3.1 Vission

To develop quality product and service that exceeds investor’s expectation

### 2.3.2 Mission

- Commitment to develop quality and value added product
- Commitment to create high return on investment
- Commitment to improve and continuously create innovative products

## 2.4 Organization chart

Organization chart is established to indicate the responsibility, authority and interrelationship of all key personnel. The CEO has defined the responsibilities, authorities and interrelationship for all levels of staff and documented them in the Job Description (JD) and the JD is communicate to all employees upon employment and as when there are changes or updates.

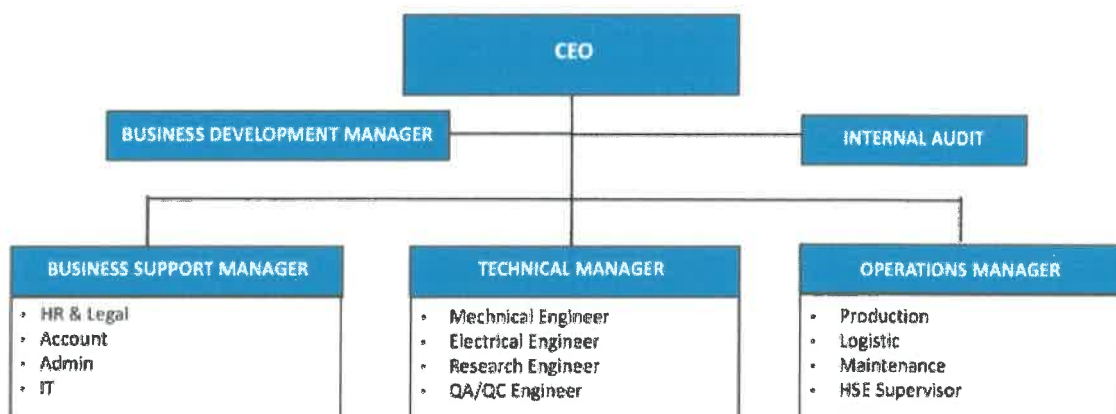


Figure 2.6: Strallex Group Sdn Bhd organization chart

Table 2.1: High Management List of Strallex Group Sdn Bhd

NO	NAME	DESIGNATION
1	Glenda Chang	Chief Executive Officer (CEO)
2	Dominique Chang	Chief Finance Officer (CFO)



3	Karen Khooi	Business Support Manager (BSM)
4	Fernando Tan	Operation Manager
5	Hassanul Aliff Bin Mohd Nazrin	Operation Engineer
6	Nur Edleen Fatma Binti Che Azahri	Business Support (IT Executive)
7	Anil Nair	Business Development Executive (BDE)
8	Willyna Lamban Donny	Internal Auditor

## 2.5 Main product/service provided to client

### 2.5.1 Strallex Group Sdn Bhd

- Kouvext

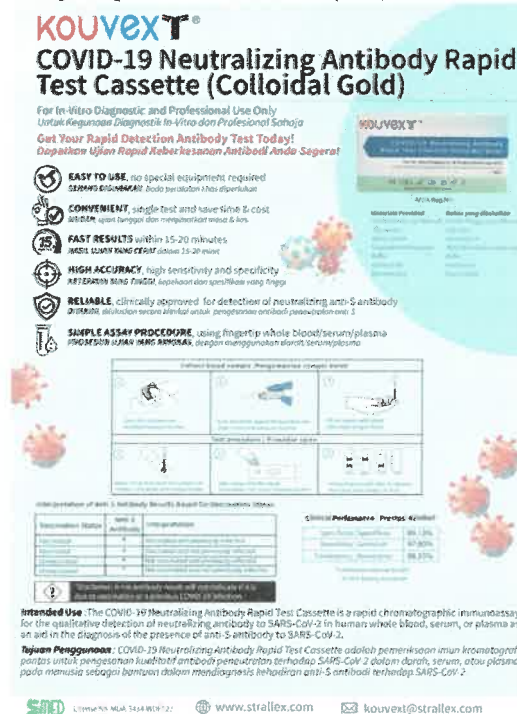
Strallex Group is appointed as exclusive partner to be the authorized representative, importer and the sole distributor of the Covid-19 antibody test in Malaysia. It will be rebranded and packaged in Malaysia under the brand of Kouvext. Then distribute in Malaysia and also export to South East Asia.



Figure 2.7: Logo of Kouvext

The medical devices brought by strallex group sdn bhd are;

- Covid-19 Neutralizing Antibody Rapid Test Cassette (Colloidal Gold)



**KOUVEXT®**  
**COVID-19 Neutralizing Antibody Rapid Test Cassette (Colloidal Gold)**

For In-Vitro Diagnostic and Professional Use Only  
Untuk Kegunaan Diagnostik In-Vitro dan Profesional Sahaja

**Get Your Rapid Detection Antibody Test Today!**  
**Dapatkan Ujian Rapid Hebat kesanan Antibodi Anda Segera!**

- EASY TO USE**, no special equipments required  
**CAMPAH PAKETAN**! Tidak perlukan alat dipernakuri
- CONVENIENT**, single test and low time & cost  
**LEBIH MUDAH**! Hanya satu ujian dan masa & kos 6 min
- FAST RESULTS** within 15-20 minutes  
**HEBAT KESANAN**! Hasil dalam masa 15-20 minit
- HIGH ACCURACY**, high sensitivity and specificity  
**HEBAT BANG PINDA!** kepekaan dan spesifitas yang tinggi
- RELIABLE**, clinically approved for detection of neutralizing anti-S antibody  
**DIAMATI!** melalui ujian secara klinikal untuk pengesanan antibodi penetranan virus S
- SAMPLE ASSAY PROCEDURE** using fingerprick whole blood/serum/plasma  
**PROSEDUR UJIAN MUDAH BERSUKSES** dengan menggunakan darah/serum/plasma

**Intended Use** - The COVID-19 Neutralizing Antibody Rapid Test Cassette is a rapid chromatographic immunoassay for the qualitative detection of neutralizing antibody to SARS-CoV-2 in human whole blood, serum, or plasma as an aid in the diagnosis of the presence of anti-S antibody to SARS-CoV-2.

**Tujuan Penggunaan** - COVID-19 Neutralizing Antibody Rapid Test Cassette adalah pemeriksaan imunokromatografi pantas untuk pengesanan kualitatif antibodi penetranan terhadap SARS-CoV-2 dalam darah, serum, atau plasma pada manusia sebagai bantuan dalam mendiagnosis kehadiran anti-S antibodi terhadap SARS-CoV-2.

**Strallex Group Sdn Bhd**  
L107/11A, NEAR 1048, BUKIT 12  
www.strallex.com | kouvext@strallex.com



Figure 2.9: Poster of Kouvert Covid-19 neutralizing antibody rapid test

ii. Sars-CoV-2 Nutralizing Antibody Test Kit (Colloidal Gold)



**KOUVERT<sup>®</sup>**  
**SARS-CoV-2 Neutralizing Antibody Rapid Test Kit (Colloidal Gold)**

For In-Vitro Diagnostic and Professional Use Only  
Untuk Kegunaan Diagnostik In-Vitro dan Kegunaan Profesional Sahaja

**Rapid Detection of Antibody - Available Now**  
**Ujian Rapid Keberkesanan Antibodi - Dapat Didapati Sekarang**

This product utilizes the chromatographic immunoassay to qualitatively detect the neutralizing anti-S antibody in human whole blood, serum, and plasma to SARS-CoV-2. Produk ini menggunakan immunoassay kromatografi untuk mengesan kehadiran peranti dalam anti-S secara kualitatif terhadap jangkitan SARS-CoV-2 dalam darah, serum, dan plasma.

- HIGH ACCURACY**, high sensitivity and specificity  
**KETEPATAN YANG TINGGI**, kepekaan dan spesifisiti yang tinggi
- FAST RESULTS** within 20 minutes  
**HASIL UJIAN YANG CEPAT** dalam 20 minit
- RELIABLE**, clinically approved for detection of neutralizing anti-S antibody  
**DIPAKAI**, disahkan secara klinikal untuk pengesanan antibodi perantiikat anti-S
- SIMPLE ASSAY PROCEDURE**, using finger tip whole blood serum/plasma  
**PROSEDUR UJIAN YANG RINGKAS**, dengan menggunakan darah/jamurum/plasma

20 cassettes per kit | 20 kaset setiap kit

Materiale Provided Bahan yang disediakan

1 x Sample Holder  
1 x Cassette  
1 x Control Pad  
1 x Instruction Card

1 x Sampel Holder  
1 x Kaset  
1 x Pad Kawalan  
1 x Kad Panduan

With Kit: 1 x Sample Holder, 1 x Cassette, 1 x Control Pad, 1 x Instruction Card

**Clinical Performance - Prestasi Klinikal**

Spec. Poly. Specificity 97.0%  
Sensitivity Sensitivity 98.1%  
Consistency Consistency 97.6%

\*Calibration interval 16, 50%  
\*Interval kalibrasi 16, 50%

**Interpretation of Anti-S Antibody Results Based On Vaccination Status**

Vaccination Status	Anti-S Antibody	Interpretation
vaccinated	+	Anti-neutralizing antibody detected
vaccinated	-	Anti-Neutral and not seroconverted
not vaccinated	+	Anti-neutralizing antibody detected
not vaccinated	-	Not seroconverted to anti-neutralizing antibody

www.strallex.com | kouvert@strallex.com

Figure 2.8: Poster of Kouvert Sars-CoV-2 neutralizing antibody test

iii. Anti-Sars-CoV-2 Neutralizing Antibody Test Kit (ELISA)

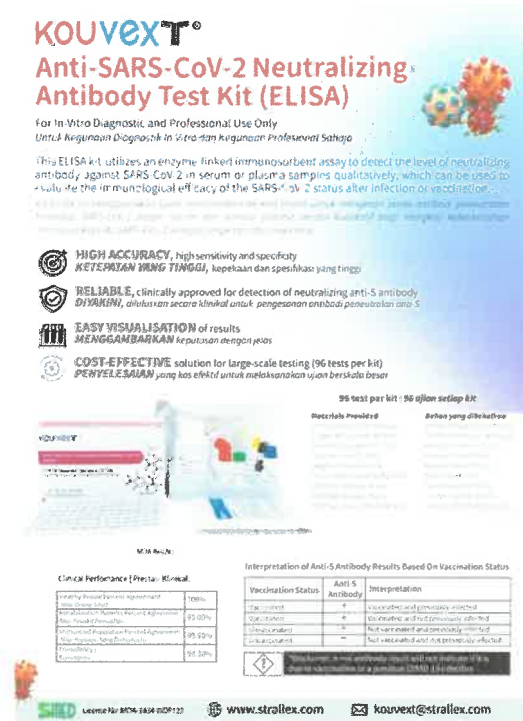


Figure 2.9: Poster of Kouvex ELISA

### 2.5.2 Strallex Resources Sdn Bhd

Strallex Resources is focus on providing innovative oil & gas solutions to the upstream industry where together with their partners and affiliates, Strallex Resources aim to be the partner of choice for oilfield services, providing the full suite of oil and gas services.

- Downhole Imaging Tool Technology
- Katwell Tube Separator Technology

### 2.5.3 Strallex Technology Sdn Bhd

- DisMac



Figure 2.10: Logo of DisMac

Under the brand name DisMac, a lot of research and comparative study has been done to develop an innovative automated disinfection machine necessary specification for the industry under the company of Strallex Technology Sdn Bhd. The purpose for this brand new kind of technology is to create a machine that does not depend too much on labor energy, can be operated with ease, can finish the job in a minimal time but can still get the job done perfectly. Currently, there are six products under the brand name DisMac which are :

- a) DisMac Ultrasonic Atomization Disinfection Machines



Figure 2.11: DisMac Ultrasonic Atomization Disinfection Machines 1 & 2

The DisMac Ultrasonic Atomization Disinfection Machines (UADM) use the mechanism called as ultrasonic vibration to atomize the disinfectant solution inside the machine that has been added into a very fine mist of 1 micrometer to 5 micrometer. The fans inside the machine then will blow the fine mist up to the area desired. This machine uses the pressure concept so all of the room can be disinfected. The concept works as the fine mist is being blown by the fan, the pressure around the UADM will increase thus the pressure away from it is lower. This creates a difference in pressure, so the fine mist with higher pressure will move to the lower pressure, thus covering the whole region of the room.

The smaller model which is the UADM 1 can cover an area around of 1200 sqft in 15 minutes while UADM 2 can cover for 2500 sqft in 15 minutes when stationary. When carrying out the operation by pushing it, the amount of area covered will increase in a very significant amount with UADM 1 for 6000 sqft whereas UADM 2 at 12500 sqft with both taking the same amount of time that is just under 15 minutes.

#### b) Mini DisMac Portable Disinfection Spray



Figure 2.12: Mini DisMac Portable Disinfection Spray Set 1 & 2

Mini DisMac Portable Disinfection Spray is convenient, can be used with ease and can be used on the go. This product is appropriate for the disinfection of household appliances, daily use items and safe for children. This product comes with Mini DisMac nano spray, stabilized chlorine dioxide, an activating agent, and a storage bag.

- This disinfectant is proved to successfully kill 99.99% of bacteria, germs, and fungi effectively
- Does not irritate skin
- No color and odor free
- Safe on food and non-toxic

#### c) DisMac Home



Figure 2.13: DisMac Home with the chlorine disinfectant set

DisMac Home is planned for 3 in 1 purpose that is to vacuum, wipe, room and any hard floor surfaces such as tile, cement, wood and carpet disinfection. When vacuuming, DisMac Home's top nozzle may produce mist to simultaneously clean the floor and the room.

d) DisMac Mobile



Figure 2.14: DisMac Mobile with the chlorine disinfectant set

Contrary to other DisMac products, this DisMac Mobile has additional function which is UV sterilization thus it can eliminate viruses, bacteria and germs more effectively. DisMac Mobile can be used to preserve the cleanliness in homes, clinics, small offices and kindergarten.

e) DisMac Portable



Figure 2.15: DisMac Portable with the chlorine disinfectant set

DisMac Portable is an atomizer disinfectant spray gun that can disinfect within a 2-meter distance with a large capacity tank, it can disinfect a larger area at one time. The disinfection atomizer has three levels in spray gear design, where it can be adjusted according to the needs and situations.

f) DisMac Chlorine Dioxide Disinfectant



Figure 2.15 : Dismac Disinfectant Chlorine Dioxide

The Chlorine Dioxide Disinfectant is the main ingredient that act as the disinfectant for all of the DisMac product. It consist of Stabilized Chlorine Dioxide which is Sodium Chlorite and Activating Agent that is Citric Acid. The Sodium Chlorite must be added with Citric Acid in 10:1 ratio to produce a 2% concentration of Chlorine Dioxide. Chorine Dioxide must be produced in a low concentration because a high concentration of Chlorine Dioxide can be harmful to humans.

- iLaundrix



Figure 2.16 : Logo of iLaundrix

iLaundrix are the latest innnovation for laundry machines with the compact washers and dryers, using coinless and cashless payment approach. The highlight of the washing machines are the availaibility to carry out Quick Wash and Double Wash options which cannot be find on other common laundry machines. iLaundrix also offer business opportunities to start up a self-services laundry for other business owner or investor that want to generate a new income with the advanced technology produced by iLaundrix.



Figure 2.17: iLaundrix Washing Machines and Dryer

- iVender



Figure 2.18: Logo of iVender

The automated, cashless iVender vending machine offers a wide variety of goods and accepts prepaid cards and electronic payments. iVender also offer a chance for business to maximize profits with minimal overhead in a quickly growing trend. The goods can be purchased by customers whenever it is convenient for them. Additionally, iLaundrix and iVender machine can be integrated as a single system for it operation.



Figure 2.19 :iVender Machine

- iCHEST





Figure 2.20 : Logo of iCHEST

iCHEST is a smart laundry locker that offers 24-hour access and a quick way to drop off and pick up laundry. The keyless lock and cashless payment system are included into the fire-resistant lockers. Customers can have their garments cleaned and save time by having it done in just two steps (drop off and pick up).

- LaundreMart



Figure 2.21 : Logo of Laundremart

One of Malaysia's inventions in coin-free laundries is LaundreMart. LaundreMart has implemented Intelligent Vending Machines (iVender) and Intelligent Laundry (iLaundrix) as part of its innovation . It is, in essence, a self-service laundry that is open every day of the week, all day long.



Figure 2.22 : Picture of Laundremart showroom

The Laundremart is located at C-1-13, Block C, Southgate Commercial Centre, Jalan Dua, Off Jalan Chan Sow Lin, 55200 KL.

#### 2.5.4 Strallex Impian Sdn Bhd

- DK76





Figure 2.23:DK76 Residence, Strata Development, at Jalan Keramat Hujung

DK76 residence, Strata Development, located on Jalan Keramat Hujung, Bandar Hulu Kelang, Daerah Gombak, Selangor

- Location: Kuala Lumpur (54000)
- Land Size:~14,500 sqft @ 1340 sqm
- Title: FREEHOLD
- Size of Units: 22.4 sqm- 1,106.1 sqm
- Property Density: 20 units
- No of level: 20 Levels



- **Logistic Management**

Strallex Technology had a lot of activity throughout my IT period because of its nature as a service and technology supplier that is currently serving the need for disinfection machines both inside the country and internationally. As a result, logistic management is focused mainly on the DisMac disinfection equipment and disinfectant. I was assigned with checking the inventory, preparing and packaging order and delivery order to the customer. Every come and out product will be document and always checking the quality of product to ensure that any shortages or damages are noted in the database and notified.

- **Designing and editing**

Aside from that, as an intern in the business and technical support department, we were introduced to skills outside of engineering, such as design and editing. We were tasked with designing advertisement posters, brochures, manuals, and videos. I am in charge of the new product of DisMac, and Ms. Glenda has assigned me to designing advertisement poster, brochures, and manual of it. A good marketing poster and brochure should have a distinct layout and concept that makes the poster visually appealing and easy to understand. The content contained inside the poster and brochure must be correctly organized following the layout so that the information may be grasped by the readers without additional explanation. This assignment taught me how to think creatively and innovatively to grasp the fundamentals of poster design. Aside from that, I learn to use Adobe Illustration to perform this tasks.

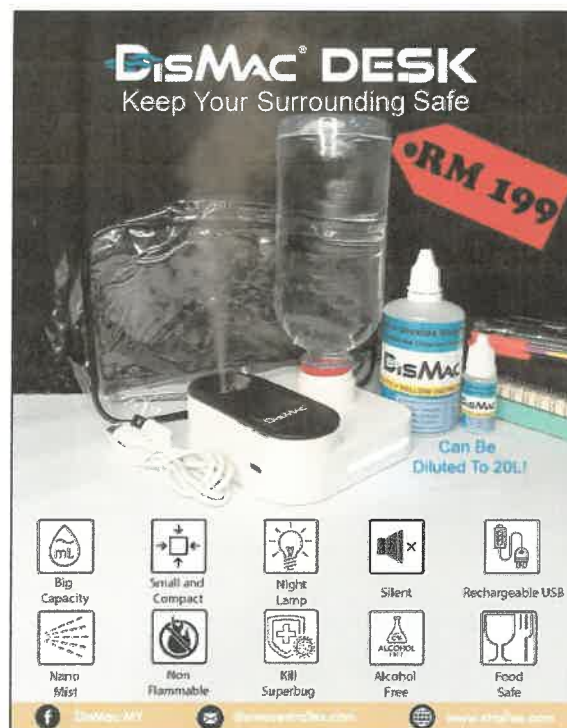


Figure 3.2: Advertisement poster of DisMac Desk

- **Adaptability**

As our company is a multiple-business company, which have branches that not only focus on the oil and gas industry but also give services for property management and development, technology and services and also medical device, I am not only assigned with task related to my profession. During my IT period, an intern, I was given an assignment which is related to the logistic activities of Strallex Technology branch to deal with collect stock, inventory, packaging and delivering the DisMac product. This experience gives me the drive to venture out of my existing knowledge as I am exposed to other industry environment.

- **Time Management**

Strallex Group Sdn Bhd trains their staff to be good at time management. Working life is extremely different from student life in that everyone has to stick to a schedule, whereas students can do work at the last minute. When duties are assigned, complete dedication and accountability are necessary to accomplish the assignments by the deadline. From here, I learned how to properly manage my time so that I did not exceed the deadline and completed my responsibilities in the order of priority.

### 3.2.2 Knowledge gained

- **Tender information**

There are several forms of tender that were assigned to the petroleum engineer, and all of intern student in this company should have a basic knowledge about it. Every tender has a different goal based on what the buyer seeks to achieve.

Table 3.1: Types of tender

Types of tender	Explanation
Pre-qualification	<ul style="list-style-type: none"> <li>• Approach company to know their interest in participation</li> <li>• If interested, a list of questionnaire will need to be filled in and reply to the company within the due date</li> </ul>
Screening Exercise	
Market Survey	
Request for quotation	Tender company will send the template for quotation of the items
Invitation to bid	<ul style="list-style-type: none"> <li>• Interested company to submit technical and commercial proposal to tender company within bidding period</li> </ul>

- **Preparing invoice, purchase order, delivery order**

Documentation and filling forms are the company's most common tasks and each intership student must familiar with them. Every forms that was filled will need the approval from supervisor which is Ms Glenda before the forms are sent out it to customer.

Table of 3.2: Process of preparing invoices, purchase order, delivery order

Step	Explanation
------	-------------

1	Filling and changing the data in the template accordingly
2	Double check all the information are filled out correctly and correct format are used
3	Send drafted to supervisor
4	Amend according to the comment by supervisor and send it to the company if get approval

- Medical device information

Aside from the chemical engineering work scope, I have also been exposed to pharmaceutical knowledge. During my IT period, I was given opportunity as a leader in a management team that required me to know every agency and medical device authority in Malaysia. Moreover, I also need to know and familiarize myself with the regulations that involved in medical device, its registration procedure into the country as an importer, authorities representative and distributor and also the document needed.

I was given tasks to prepare the records or forms and documentation of the procedures. This experience improves my documentation, teamwork, and time management skills. I learned how to professionally document and present my works to others. Furthermore, I also develop teamwork skills, where we as a team need to communicate to ensure the efficiency of works and clear messages delivered. Before submitting any documents, we usually asked the other team member to proofread to minimize careless mistakes for grammar, layout, and formatting

## CHAPTER 4 DETAILS OF EXPERIENCES

### 4.1 Introduction

As a trainee at Strallex Group Sdn Bhd, I feel extremely lucky since we were able to perform all staff duties and assist other colleagues in completing their tasks. I am grateful because everyone around me helps me with handling company product, documentation, and other tasks. During the first three months of my industrial training, I was given tasks that would help me develop my technical and soft skills in order to increase market reliability, and during the second three months, I was given tasks that were related to the field of chemical engineering, where I was exposed to an actual project based on industry demands. In this chapter, it will brief about aspect of task and project during industrial training with photo evidences.

### 4.2 Details of the training and experience gained

#### 4.2.1 Atomization test of DisMac disinfectant

During my IT period program in this company, I was assigned to study on the stability and efficiency of the Dismac Disinfectant about the chemical properties of the disinfectant substance and the principles used on this technology. Dismac disinfectant is an innovative automated disinfectant that uses a chemical disinfectant that is Chlorine dioxide as a material or disinfectant solvent that uses the application of atomization technology to make the disinfection process in a place more effective and efficient.

#### Atomization Test

Atomization is which the action of separating something into fine particles. It is a process of breaking bulk liquids into small droplets. Atomization produces in a wide variety of powder particle sizes form  $1\mu\text{m}$  to a few millimeters. Furthermore, atomization is one of nanotechnology that is being used in developing countries to help treat disease and prevent health issues for the application to variety of industrial and purification or disinfection process.

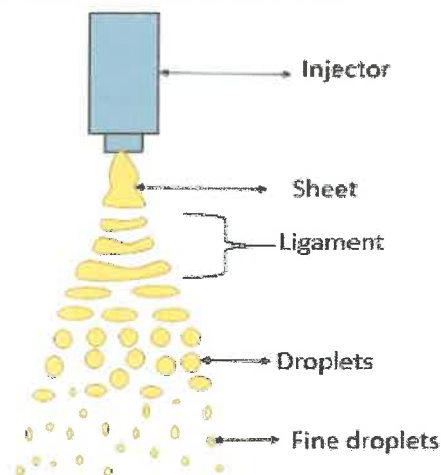


Figure 4.1: The spray atomization process



Table 4.1: Comparison of disinfectant technology

Comparison of 4 main types of disinfection technology				
Specifications	Atomization	Thermal	Sanitizer	UV Lights
General Size	Could either come in medium or small portable sizes.	Generally comes in large sizes or as big as a normal leaf blower.	Comes in various portable sizes.	Comes in various sizes that could either be easily portable or even 1 metre big.
Liquid Contained	Chlorine Dioxide or Hydrogen Peroxide	Propane or Fuel (other than propane). Disinfectant, Agricultural Chemicals. Water	Isopropyl alcohol, Ethanol (ethyl alcohol), or n-propanol	Uses Mercury-based lamps operating at low vapor pressure emit UV light at the 253.7 nm line.
Size of Particle Produced	1 - 5 $\mu\text{m}$ (mist)	$\approx$ 20 $\mu\text{m}$ to several mm (mist)	10 – 1000 microns (mist)	Ultraviolet light-emitting diode (UVC LED) lamps emit UV light at selectable wavelengths between 255 and 280 nm.
Installation	Disinfection could be done manually or the machine could be left and the timer is set for it to start misting when everyone has left the area.	The machine could be use on a Truck Mounted or on a Tricycle (or with 4 Wheels) or manually used as a blower.	The sanitizer could be use to manually spray on the disinfected area or apply the disinfection liquid onto the disinfected area.	Normally installed in a central point of an area for an even disinfection and with further small UV units to ensure continued disinfection at the point of use.

Atomizing of Mini DisMac 1 and Mini Dismac 2 are conducted two time to get the average time with the same volume of 20 mL water to be convert into gas phase. Then the volume of the used for both device been divided with average time to get the atomizing rate.



Figure 4.2: Atomization test of Mini Dismac 2

Table 4.2: Atomizing test for MD1 & MD2



	Mini DisMac 1 (20 mL)		Mini DisMac 2 (20mL)	
<b>Run 1 time</b>	22.47 min	137 s	27.55 min	1653 s
<b>Run 2 time</b>	30.00 min	1800 s	25.30 min	1518 s
<b>Average time</b>	26.235 min	1574.1 s	26.425 min	1585.5 s
<b>Atomizing rate</b>	0.76 mL/min	0.013 mL/s	0.76 mL/min	0.013 mL/s

As conclusion Mini DisMac 1 and Mini DisMac 2 are both have same atomizing rate of 0.76 mL per min and 0.013 mL per second for it atomizing 20 mL volume of water.

#### Chlorine Dioxide as disinfectant solution

Chlorine dioxide (ClO<sub>2</sub>) has been classified by WHO, EPA & FAO as the A1 grade safe and high efficiency green disinfectant. ClO<sub>2</sub> is the product of reaction between sodium chlorite (NaClO<sub>2</sub>) and citric acid (C<sub>6</sub>H<sub>8</sub>O<sub>7</sub>) which can kills lethal microorganism rapidly but also has an outstanding sterilizing and suppression effect against bacteria and does not create biocompatibility problems.

Substances of organic nature in bacterial cell when react with chlorine dioxide, will causing of several cellular processes to be interrupted where ClO<sub>2</sub> reacts directly with amino acids and the RNA in the cell preventing the production of proteins cell which then contribute to it death. Aside from that, ClO<sub>2</sub> is more effective against viruses than chlorine or ozone due to chlorine dioxide kills viruses by prevention of protein formation. Chemical reaction of sodium chlorite and citric acid;

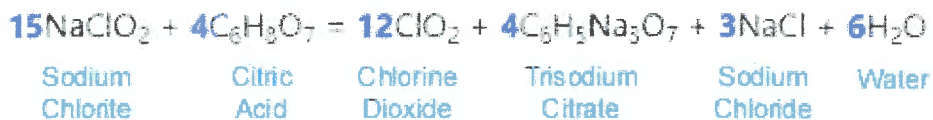


Figure 4.3: Chemical reaction of sodium chlorite and citric acid

#### Conclusion

In the lack of effective and specific medication on treating the coronaviruses also known as Covid-19 virus has caused the development of the innovative solution in order to prevent the spread of the virus. The use of atomization process and also chlorine dioxide as a means of disinfection has become a development to the technology and services provided by Strallex Technology Sdn Bhd which focuses to sterilize medical and laboratory equipment, surfaces, room and tools.

Moreover, the use of chlorine dioxide as a liquid disinfectant is approved by the U.S. food and drug administration (FDA) and the U.S. Environmental Protection Agency (EPA), it is powerful as peracetic acid and more economical, yet it has far less of an impact on the environment than quaternary ammonium salts, chlorine and bromine, making it an excellent choice for food processing plants. Besides, the reaction of the sodium chlorite and citric acid produce food safe by-product.

Aside from that, the used of nanotechnology in this product makes chlorine dioxide's free-particles float in the air and move to every place due to it differential pressure in the confined space. By the continuous process of atomization of the particles, this in turn causes an exchange of pressure where

the free-particles molecule with high pressure will move to low pressure place and then the whole room will be filled up. As a sum up, the disinfection process can be done more effectively than using the traditional disinfectant spray.

#### 4.2.2 KOUVEXT medical device registration

During my IT period under Strallex Group Sdn Bhd, I was given opportunity to participate and being a leader in the project management of medical device team. As a leader it is my responsibility where I need to have well-known understanding of every our medical devices product and regulations and procedures needed to registered them with Malaysia regulations as this company as importer.

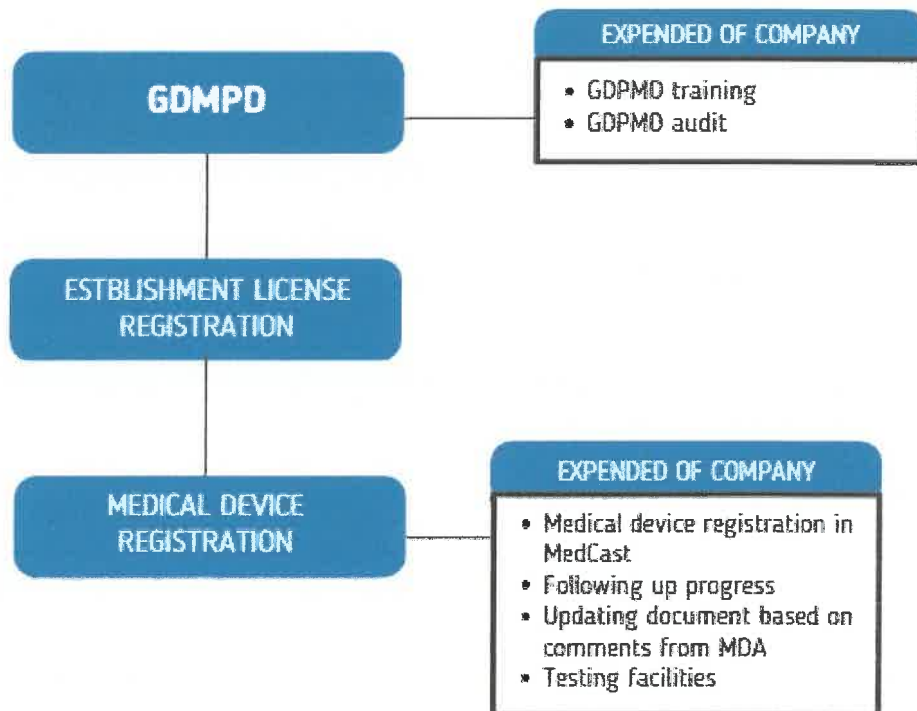


Figure 4.4: Flow process of Kouvext medical device registration

#### GDMPD certification

From the training, we were preparing all the documents needed for the Stage 1 audit. My team and I were involved in preparing the documents under the supervision of Mdm. Karen and Ms. Glenda. I was given tasks to prepare the records or forms and documentation of the procedures. This experience improves my documentation, teamwork, and time management skills. I learned how to professionally document and present my works to others. Furthermore, I also develop teamwork skills, where we as a team need to communicate to ensure the efficiency of works and clear messages delivered.



Figure 4.5: GDPMD training certification

#### Medical device registration

I was assigned to carry out some documentation for the medical device registration on the Medcast portal. The medical devices involved are COVID-19 Neutralizing Antibody Rapid Test Cassette (Colloidal Gold), Anti-SARS-CoV-2 Neutralizing Antibody Test Kit (ELISA) and SARS-CoV-2 Neutralizing Antibody Rapid Test Kit (Colloidal Gold).



Figure 4.6: Medical Device Centralised Online Application System (Medcast) for medical device registration

I helped in extracting the data from the file sent by manufacturer to make it into separate file like Pre-Clinical Studies, Clinical Evidence and Common Submission Dossier Template (CSDT) based on the Medical Device Authority (MDA) requirements. After finishing and making sure that documents are correct, the document is then submitted in MedCast portal. After receiving, comment from the MDA staff, the documents is then updated accordingly. Although it still under evaluation from the MDA, I am positive that the medical device registration submitted will be accepted by the MDA.

Date Of Submission	Role Of Establishment	Device Name	Device Class	Device Risk Type	Form Status
28-06-2022	AUTHORISED REPRESENTATIVE	SARS-COV-2 NEUTRALIZING ANTIBODY RAPID TEST KIT (COLLOIDAL GOLD)	C	IN-VITRO DIAGNOSTIC MEDICAL DEVICE (IVD)	EVALUATION
16-06-2022	AUTHORISED REPRESENTATIVE	COVID-19 NEUTRALIZING ANTIBODY RAPID TEST CASSETTE (COLLOIDAL GOLD)	C	IN-VITRO DIAGNOSTIC MEDICAL DEVICE (IVD)	EVALUATION
14-04-2022	AUTHORISED REPRESENTATIVE	ANTI-SARS-COV-2 NEUTRALIZING ANTIBODY TEST KIT (ELISA)	C	IN-VITRO DIAGNOSTIC MEDICAL DEVICE (IVD)	EVALUATION

Figure 4.7: Medical Device Registration status

#### 4.2.3 Innovation of tube separator technology in offshore oil and gas industry (real-case project)

##### Introduction

Over millions of years ago, the organic material such as algae and plants that coexist in shallow seas will decayed and sank to the sea floor where then mixed with other sediments. Under a high-pressure and high-temperature, the remnants of these species has been transforming into what we now refer as fossil fuels.

Petroleum also as crude oil is now being discovered in huge underground reservoirs that were previously seas. Crude oil deposits can be found under the land or the ocean floor. Crude oil is used as a raw material to make gasoline, an important product in our daily lives. Additionally, it is processed and also included in many other products, such as tyres, refrigerators, life jackets, and anaesthetics. As the chemical properties of it, crude oil is made up of hydrocarbon which are primarily hydrogen (about 13% by weight) and carbon (about 85%). Other components, including nitrogen (0.5%), sulfur (0.5%), oxygen (1%) and metal such as iron, nickel and copper which were mixed in small amounts.

Oil-in-place refers to the total quantity of petroleum in a reservoir, and oil reserves are the portion of a reservoir's oil-in-place that can be extracted and processed. Crude oil extraction is a method used in the oil and gas sector which a device known as an oil rig or drilling rig can be used to drill for oil on land. Instead of for the offshore where oil located in the ocean floor, oil is extracted from an oil platform using air rotary drilling rigs, which are able to work around-the-clock. Some of the oil spontaneously rises from the earth when the drill strikes it, and moving from a high-pressure region to a low-pressure one. Drilling offshore is far more costly than drilling on land. Moreover, some of the largest man-made buildings in the world are offshore drilling platforms.

When crude oil is extracted from the ground with impurities where combination of gases, liquid and solid which is sand must firstly be separated. In some cases and due to geological factors of oil well some separation process was occurs at the offshore oil platforms. Separation is a method that converts a mixture or solution of chemical substance in two or more distinct product mixture. It is also a scientific process of distinguishing to two or more substance in order to obtain purity. Some of method of separation process are;

- i. Evaporation
- ii. Drying
- iii. Distillation
- iv. Adsorption and absorption
- v. Membrane separation
- vi. Liquid-liquid extraction
- vii. Crystallization
- viii. Mechanical-physical separation (filtration, settling, centrifugation)

#### Problem statement

- Conventional separation tank at oil rig platform is huge and contribute to more footprint
- The production performance and separation process of conventional separation tank is low while the construction cost is high.

#### Objective

- To apply innovative technology to meet increasingly challenging separation oil-water separation equipment in oil and gas industry especially offshore with limited space and weight
- To provide a new solution which optimize production, improve efficiency with the energy saving emission reduction

#### Methodology

##### A. Project background of study

The XXX complex is located offshore with the development project consist of wellhead platforms, central Processing Platform (CKP), Living Accommodation Platform, Riser Platform (CKR) and a 550,000 barrel capacity of Floating Storage and Offloading Vessel (FSO) where it is designed to produce 1000 MMscfd of sales gas.





Figure 4.8: Example of oil rig platform

The conventional oil-water separation is uses the concept of gravity separation which it required a large static separation tank with the high pressure inside the tank. Gravity separation is based on the differing specific gravity of minerals and their relative mobility under gravity and drag forces. By allowing the wastewater to stay undisturbed or very slightly disturbed for varying lengths of time in various tanks, sedimentation and gravity separation remove silts and suspended particles. The length of time needed to settle these solids varies on their size, density, and the speed of moving water. Inside the oil-water separation tank using the pressurized tank where the process which the solid material will settling under the equipment floor while oil will float above the water.



Figure 4.9: Physical photo of oil-water static separation tank

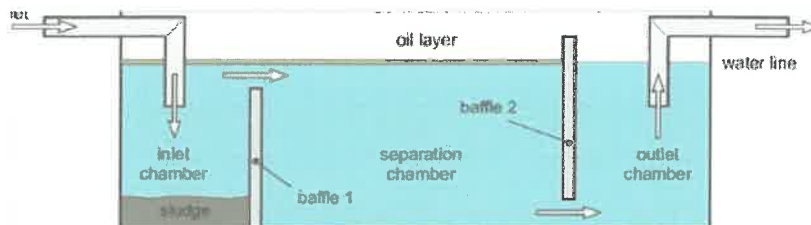


Figure 4.10: Diagram of concept gravity separation process

### B. Process selection

There, Strallex hereby, want to propose and brings a innovative technology for oil-water separation especially in offshore oil and gas industry in Malaysia which using a separation method of mechanical-physical separation by developing a new tube dynamic separator technology (TST) to replacing the convention separation tank.

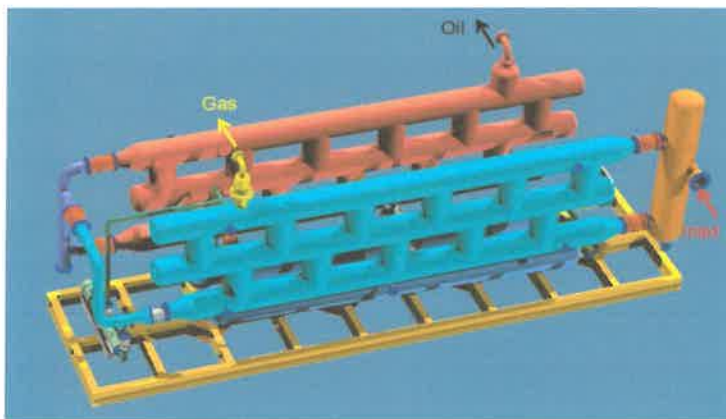


Figure 4.11: 3D side view of the proposed tube separator technology (TST)

This tube separator is a proprietary system that is owned by Institute of Mechanics Chinese Academy of Sciences (IMCAS) and exclusively marketed in South Asia by Strallex. The characteristic of this invention is it have a small, basic and light-weight to minimize the construction area and cost. In addition, this tube separator technology has a compact shape, high separation efficiency and ease to maintenance where the proposed technology are relies on different forces as the conventional oil-water separation tank.

### Discussion

Extracted crude oil which contains the oil-water-gas from the wellhead are separated on the processing platform using the proposed technology before it being purified in the next separation process of crude oil separation.

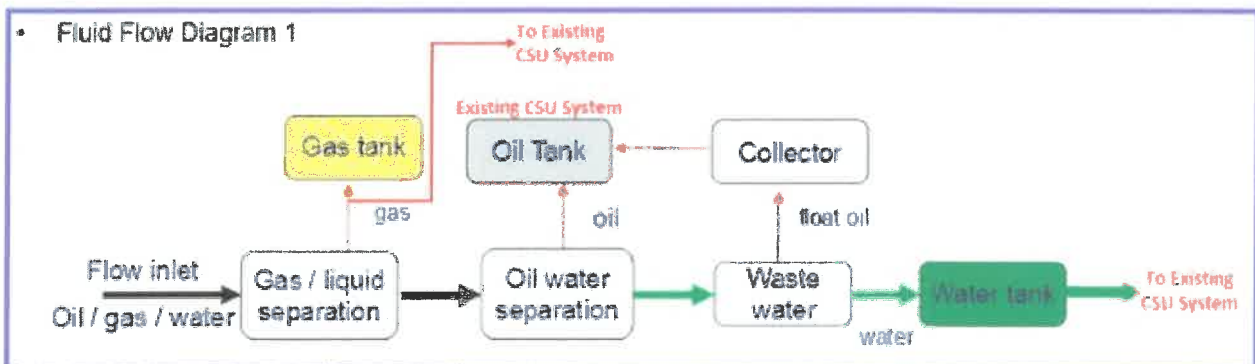


Figure 4.12: Process flow diagram (PFD) of TST system



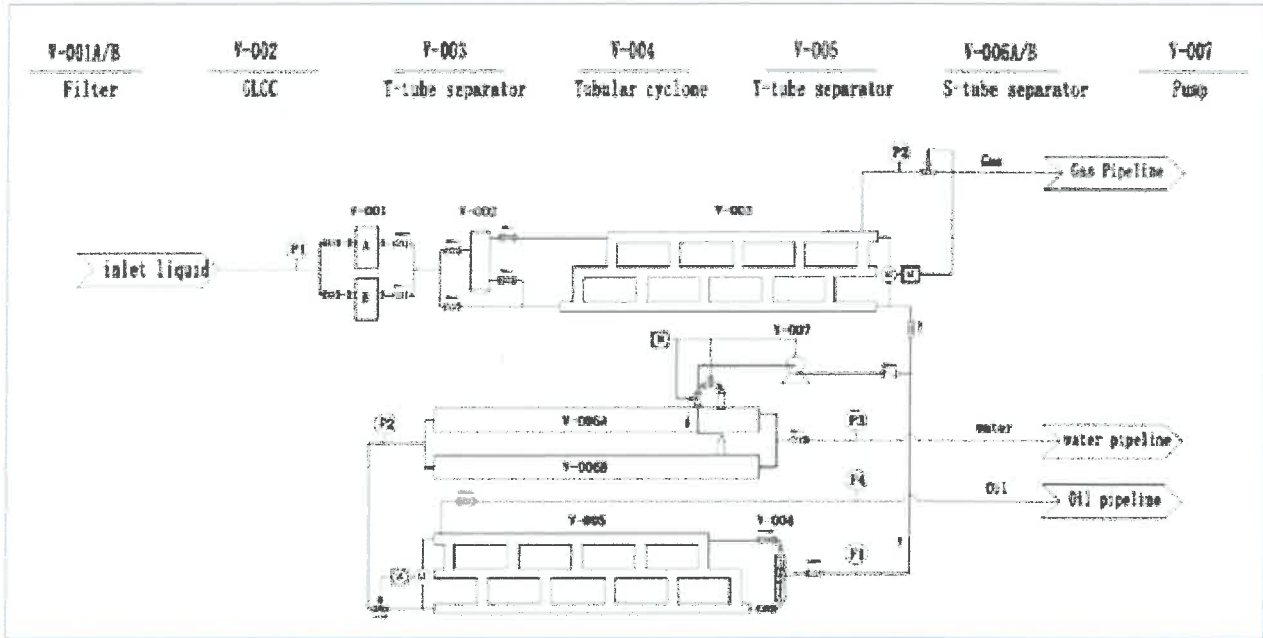


Figure 4.13: Piping and Instrumentation Diagram (P&ID) of the TST system

Extracted crude oil will flow into the tube separator technology and produce three product which is gases, oil and water. The produced gases will discharge and distribute to onshore or the chemical plant to be as a power supply to the plant while the oil will be stored in the floating storage and offloading vessel (FSO). Aside from that, the produced water will be treated and discharged overboard.

Table 4.3: Comparison between conventional separation and tube separator technology

Items	Traditional Separation Technique	Tube Separation Technology
Principle of separation	Gravity static settlement	Coupling of multiple forces, complete dynamic separation during flow
Main device	Pressurized tank or large container at atmospheric pressure	Composite tubular
Equipment weight	3 phase separator: two 100 cubic meter tank, about 46 MT	12-15 MT
Footprint	120 cubic meter	36 cubic meter
Site layout and installation	Huge and cumbersome, long time	Convenience and efficient
Separation processing time	20-60 min	2-5 min
Operational convenience	Requires pressurized container operation qualification	Easy to operate, low requirements
Safety	Pressurized container, gas-liquid accumulation	Belongs to conventional pipes with high safety factor

Oil and gas water separation index	Mature technology, depending on the situation of the liquid production	According to the actual situation. Not suitable for high oil and water emulsification case
Project cost	Stable and reasonable	Flexible adjustment according to specific needs

Table 4.4: Basic requirement and design of proposed TST

	Item Description	Numerical range
Inputs	Fluid temperature, °C	80 – 90
	Fluid pressure, P <sub>sia</sub>	265
	Oil density in fluid, API gravity	55
	Oil viscosity in fluid, MPa.s	N/A
	Water salinity in the fluid, ppm	6000 - 8000
	Gas-oil ratio Condensate Gas Ratio bbl/mmscf	7 – 9
	Water content % Liquid Production (estimated, liquid measurement not available by WHP)	Water: est. 16000 bbl/d Condensate: 70 – 2000 bbl/d
	Sediment particle (mud, sand, etc.) size distribution range (µm) and mass percentage (%)	Core based PSD D50 ranges from 10 – 200 micron depending on facies type.  Historical gravity based sand Catchpot D50 ~100 micron

#### 4.3 Problem encountered and approached adopted for solving problem

While undergoing industrial training in this company, high-level thinking skills and critical thinking are very necessary and have become one of the core values of every worker and trainee as an employee of Strallex Group. I have faced several issues that require me to act quickly and creatively. In addition to not violating company policy and also not causing environmental effects.

Table 4.5: Problem encountered and approached solution

Issues Faced	Solution
Some of the 5L chlorine dioxide disinfectant bottle are broke	Transferring the chlorine dioxide disinfectant solution to new bottle and having QA/QC checking for every bottles in store
The registering process of medical devices by Medical Device Authorities Malaysia (MDA) takes longer than the evaluation period set in their guidelines	<ul style="list-style-type: none"> <li>• Everyday calling for following up progress with the MDA officers</li> <li>• Having communication via email to inform the updated and changes made in the document submitted</li> <li>• Make a expedite letter to their head officer</li> </ul>
Lack of approach tube separator technology information available on the	<ul style="list-style-type: none"> <li>• Always communicate and discuss with the supervisor</li> <li>• Brainstorming the ideas with the project team</li> </ul>

internet

#### 4.4 Professional and ethical issues

There are actually no issues when it come to the professional and ethical in this company since this company places great emphasis on the character and behavior of each of its employees. The application of core values and marketability values make the work environment here very pleasant and mutually supportive of each other. In fact, the rank gap between high management and ordinary workers is almost non-existent.

Table 4.6: Core Values of Strallex Group Sdn Bhd

<p style="text-align: center;"><b>Innovation</b></p> <p>Innovation and creativity in applying new ideas help us to thrive both in good times and in bad. A culture of cross-disciplinary collaborations forms the seeds for creative problem-solving.</p>	<p style="text-align: center;"><b>People</b></p> <p>Our people are our most valuable asset, and we aim to continue investing in them. We believe continuous learning is key to developing their capabilities to the fullest potential.</p>
<p style="text-align: center;"><b>Partnership</b></p> <p>Our value drive is predicated on building longterm, sustainable partnership with our clients to promote mutual trust, understanding and respect.</p>	<p style="text-align: center;"><b>Integrity</b></p> <p>We conduct ourselves with the highest ethical and professional standards. We strive to always be honest, trustworthy, and fair in all our dealings.</p>

#### 4.5 Health, environmental and sustainable aspects

##### Health, safety and environmental (HSE)

Strallex Resources considers and requires all employees to follow the company's Health, Safety, and Environment regulations. These rules are designed primarily to safeguard highly sensitive personnel inside the company, particularly those working in high-risk areas. The HSE requirements are stated clearly and are taught to all employees. There are three HSE documents: the HSE Policy Statement, MS Manual, and the Manual.

## RESOURCES

### Health, Safety, and Environment Policy Statement

Strallex Resources has long recognized our obligation to all our stakeholders to safeguard the safety of our employees and contractors, to protect the environment, and the communities that are impacted by, or are affected by, our activities. We aim to meet this obligation through the following commitments:

- Ensuring the strict adherence to all legal and regulatory guidelines on Health, Safety and the Environment
- Integration of Health, Safety, and Environment as a critical component in all business planning and activities
- Conduct rigorous Health, Safety and Environment risk identification, assessment and management
- Ensuring that appropriate controls, contingency plans, and crisis management processes are in place to respond to unforeseen emergencies
- Set measurable Health, Safety and Environment performance goals for continual improvement
- Provision of appropriate resources for the training of employees to ensure that they have a safety-first mindset when performing their duties
- Continually assess our impact on the environment and seek to minimize this through the reduction of natural resource consumption and the recycling of waste

Strallex Resources is committed to the above and will regularly review and update these policies to ensure we maintain the highest Health, Safety and Environment standards.

This Policy is made available to all our stakeholders including employees, customers, contractors and all interested parties.



Shohaimi Bin Ahmad  
President

8 September 2019

Figure 4.14: Strallex Resources Sdn. Bhd. Policy Statement

Strallex HSE Management System is comprised of six components: policies, management review, performance monitoring, standards and procedures, change and organizational management, responsibility, and resources. These are the most important features to ensure that this HSE Management System is as effective as it should be.

Strallex Resources Sdn. Bhd. HSE Manual consists of 7 contents which are HSE Policies, Implementation and Operation, Hazard Communication, Fire Hazard, Electric Hazard, Travel and Training Requirements. Every employee is required to follow the established policies, and those who fail to do so will face severe consequences. These policies are designed so that all employees can avoid any injuries or accidents that may occur throughout the course of their employment.

### Standard Operating Procedure (SOP)

#### • Covid-19 SOP

There are some precautions need to be follow to ensure the safety of every workers while in this currently Covid-19 pandemic situation. Some action that been applied in our company are screening of all employees entering the workplace and require sanitization at every places which always needed to maintaining frequent cleaning and disinfection of the workplace and equipment. Furthermore, Personal hygiene should be practised at all times such as the hand hygiene as a regular basis habit either washing with soap and water or by using a hand sanitizer. Aside from that, the workers that been affected with covid-19 will given off day for a week and need to be quarantine until they are fully recover and having negative result.

- Parcel shipping SOP

Standard Operating Procedures for shipping of parcel is established in order to ensure smooth delivery of the parcel to the customers. This is also to avoid any mistakes occur such as delivered defect items or missing items.

Table 4.7: Procedure of Shipping Parcel

Procedure	Explanation
Preparation of documents	<ul style="list-style-type: none"> <li>Ensure all of the informations filled in the Delivery Order (DO) or Purchase Order (PO) is accurate.</li> <li>Prepare all of the necessary documentation for the items, such as the certificate, dilution chart, and so on.</li> <li>Make the consignment notes (Air Way Bill).</li> <li>Prepare any cargo markings for packing based on the items/products</li> <li>Prepare any papers or information in accordance with the company's Delivery Instructions (if any).</li> </ul>
Preparation of parcel(s)	<ul style="list-style-type: none"> <li>Prepare the items / products in accordance with the DO or PO.</li> <li>Check that all items/products are in excellent shape</li> <li>Check that all electronic gadgets are turned off</li> <li>Handle the items/products with care</li> </ul>
Internal packaging	<ul style="list-style-type: none"> <li>Wrap the things / products in protective material, such as bubble wrap</li> <li>Check for damage when wrapping the items / products</li> <li>Select an appropriate box and carefully place the items / products within the box</li> <li>Fill up the empty area inside the box with filler materials</li> </ul>
External packaging	<ul style="list-style-type: none"> <li>Use suitable cargo markings, such as delicate logos, to label the package.</li> <li>Place the information on the box in a prominent location depending on the Delivery Instruction (if applicable)</li> <li>Place the consignment note (Air Way Bill)</li> <li>Ensure the box is sealed with a waterproof seal</li> </ul>
Packaging tracking	<ul style="list-style-type: none"> <li>Contact the shipping provider to arrange for a pickup</li> <li>Request a receipt or documentation (if applicable)</li> <li>Track the delivery until it reaches the customers</li> <li>Contact the clients to ensure that the items/products received are in excellent shape.</li> </ul>




- Disinfectant SOP

The purpose of SOP for disinfectants is to ensure the disinfectants does not cause any harm to the consumers. Hence, Material Safety Data Sheet (MSDS) is crucial as it provides the employers and workers with the knowledge they need to protect themselves from hazardous chemical exposures and operate safely with chemical goods. The MSDS specifies the hazardous elements of a product, its physical and chemical qualities (e.g., flammability, explosive properties), its effect on human health, the chemicals with which it can react adversely, handling precautions, the sorts of measures that can be employed to control exposure, emergency, and first aid protocols, and spill containment strategies. As a consequence, there will be fewer chemical-related illnesses and njuries in the workplace. Both our chemicals - Stabilized Chlorine Dioxide and Citric Acid are MSDS certified.

There are some precautions need to be follow to ensure the safety of consumers such as wear glove, eye and face protection when handling with the disinfectants and wash hands and face thoroughly after handling. This is because the chemicals may cause allergic skin reaction or eye irritation.

Page 1 of 1



Chlorine Dioxide Disinfectant

**1 Identification**

GHS Product Identifier  
Chlorine Dioxide Disinfectant Stabilized Chlorine Dioxide

Other means of identification  
Disinfectant and sterilization

Recommended use of the chemical and restriction on use  
Disinfectant and sterilization for all types of environment and surfaces

Supplier's details  
STRALLEX TECHNOLOGY SDN. BHD.

Emergency phone number  
+6016-6435565 Claudia Chang  
Email: dsr@mac@strallex.com





**2 Hazard(s) Identification**

Classification of the substance or mixture

Physical Hazards:  
Oxidizing liquids Category 2

Health Hazards:  
Acute toxicity oral Category 4  
Acute toxicity inhalation Category 4  
Acute toxicity dermal Category 4  
Serious eye damage Category 1  
Specific target organ toxicity - repeated exposure Category 2

GHS label elements  
Danger

May intensely fire, oxidizer  
Harmful if swallowed  
Harmful if inhaled  
Harmful in contact with skin  
Causes serious eye damage  
May cause damage to organs through prolonged or repeated exposure

In case of fire: Use water to extinguish.

IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Wear protective gloves/protective clothing/eye protection/face protection.

Use only outdoors or in a well-ventilated area.

Wash hands and face thoroughly after handling.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Other hazards which do not result in classification  
Not applicable

Figure 4.15: MSDS of chlorine dioxide disinfectant





Disinfectant Activator

**1 Identification**

**GHS Product Identifier**

Liquid Activator for Chlorine Dioxide Disinfectant

Other means of identification

Acidic based liquid activator

**Recommended use of the chemical and restriction on use**

Chlorine Dioxide Disinfectant Matching Reagent

Supplier's details

STRALLEX TECHNOLOGY SDN. BHD.

Emergency phone number

+6016-6435685 Gladys Chang

Email: dsma@strallex.com

**2 Hazard(s) identification**

Classification of the substance or mixture

H317 May cause an allergic skin reaction

H319 Causes serious eye irritation

**GHS label elements**

Danger



May cause an allergic skin reaction

Causes serious eye irritation

Avoid breathing dust/fumes/gas/mist/vapour/spray.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash hands thoroughly after handling.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

Other hazards which do not result in classification

Not applicable.

Figure 4.16: MSDS of disinfectant citric acid

## CHAPTER 5 CONCLUSIONS

### 5.1 Conclusions

Finally, I consider myself lucky to had the opportunity to spend my industrial training with Strallex Group. This organization provided me with a wealth of knowledge and skills that I believe will help me in my future as a chemical engineer. I consider myself extremely fortunate to be able to work for a firm that is dedicated to giving industrial training to students like myself. I learned not just skills and information relating to my chemical engineering diploma, but also marketing skills, communication skills, documentation skills, and time management at Strallex Group. I believe that these abilities will help me develop into a better and more well-rounded student and engineer in the future. I am able to develop my soft skills, acquire new skill sets, and apply what I learned throughout the training to what I studied at UiTM. The projects and duties assigned to me during my internship allow me to utilize my previous expertise in engineering field, particularly in completing the Field Development Project. As the organization considers interns to be workers, I am able to experience the actual persona of a workplace. The responsibility and confidence bestowed upon me resulted in considerable improvements, particularly in how I approach my tasks and assignments.

### 5.2 Suggestions and recommendations

Students are highly encouraged to undergo their industrial training at companies that have been in the industry for a long time with small organizations such as Strallex Group Sdn Bhd. This is because this organization's operations also include the scientific field. Students can be exposed to and explore various engineering fields of assignment scope and management knowledge that can only be obtained outside the lecture room. In addition, I highly recommend for the future student who will go through industrial training to choose a company that has a good, efficient and practical environment of workplace. This is because in this time of period, it is the best time to stand out while to improving the abilities of yourself.



## **References**

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### Book

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Company slide