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**REINASSANCE SDN. BHD**

**LUCY GLUCOSE DRINK**

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**1.0 EXECUTIVE SUMMARY**

We are from Renaissance Sdn. Bhd. proudly presents our newest product from our company which is LUCY. It is a supplement drink that were made out of pure glucose. What makes our product differs from others is that our raw materials comes from the durian and pineapple peels which basically is just a waste product from the fruit.

Our target customers focuses mostly on daily consumers who usually doing vigorously activities and heavy workers. This drink will provide them enough energy for all day long and also control their sugar intake for the diabetics which makes them healthier and energize.

Some of the existing energy or supplement drinks in the market right now does not highlight where do they get the raw materials from and mostly the raw materials such as sugar were come from their main source such as sugar cane. However, with our technology we can get sugar from an alternate source and maximize its usage and also minimize the waste product as possibly as we can.

We are fully confident that our product can generate enough profit to our company and make our business feasible. This is due to introduction of our new intakes on supplement and energy drinks and make it to whole new level. Also, we were determined that our product will give a whole new idea on how waste products can be manipulated to be as a good resources and thus bring a whole new green technology to this industry.

## **2.0 PRODUCT OR SERVICE**

The aim of the company is to produce glucose which is commercially known as simple sugar from the extract of Durian and Pineapple peels through various treatments. Mainly, glucose can be a suitable substitute for commercial sugar used in a daily basis intake. Glucose can also be used in the sweetened ingredient for energy drinks. Glucose production might as well become supplier for lot of drinks industries. The main uniqueness of this product is that this glucose is extracted from raw materials of waste product (durian and pineapple peels) which make the difference between the common sugar cube production. Moreover this waste material of durian and pineapple peels relatively very cheap and abundant which the production cost can be reduced. Furthermore by extracting durian peel means that this company can help save the earth indirectly in which these durian peels if not treated properly or left alone it will polluted the environment and help for the company image from the marketing view.

The development of the product were describes as follows; firstly, the stacked of the durian and pineapple peels will be cut into smaller pieces in which the pieces of the peels will be clean washed and later dried using oven with 50° Celsius temperature. The collected dry and clean peels will be blended using blender until it became powder-like size. This durian and pineapple peels powder will then undergo alkaline treatment by mixing with sodium hydroxide solution and the powder residue will be filtered away from the solution. Then the solid residue will be heat for one hour in oven under temperature of 380° Celsius. The pre-heated residue will then cooled down using chill plate before passing to the next stage. As the residue already cooled down, it will then be squeezed to remove any moisture from the cooling process. Later, the solid residue of the durian and pineapple peels powder will be clean using distilled water and dry to obtain the peels dregs. The pineapple and durian dregs will then undergoes acid treatment with sulphuric acid and stirred under water bath for 2 hours with 80° Celsius and upon finishing the stirring it will let to be cooled down using chill plate. The collected dregs will undergoes microwave assisted treatment under temperature of 95° Celsius. This peels dregs will be squeezed again and this time only the liquid will be collected which is the monosaccharide will be the glucose from the durian and pineapple peels. Overall, this process will cover around 7 to 8 hour of the work day to complete the production and ideally this product will be able to be used commercially. This also include the

packaging process and to be more precise, this product will be packaged into a small packet and each packet weighing 10 gram will be commercially sell at price of RM1.

For the expansion of the product line of this glucose production, the other by product which is xylose and arabinose can be used for other purpose. Firstly xylose can be harnessed into xylitol which is a healthy sugar alternative and perfect for person with diabetic complications. Next, arabinose can be used as a culture medium for certain bacteria.

### 3.0 TECNOLOGY DESCRIPTION

First of all, we can say that our generation now is more exposed on new technology that helps people in their daily life. New technology it not only covers on product, it also cover on system and service. With technology, people now can do anything in their work for example use of computer. From the desktop computer that only can use at certain place only, but nowadays, with adding of news technology, it do some innovation from desktop computer to laptop that can easily to move and bring to anywhere. Even though the size is smaller than desktop computer, but the performances of the laptop still same.

Research have been made by previous researches that a skin of durian and pineapple can produce a significant amount of glucose. From this research we found out that this will be a very good opportunity to commercialize the product and thus create a new profound alternate resources which mainly known that glucose mostly come from sugar cane and the waste product that came from the sugar cane are enormous. By initiate this research into a business opportunity, the waste product which are the durian and pineapple peels can be minimalized and thus create a green technology for the industry itself.

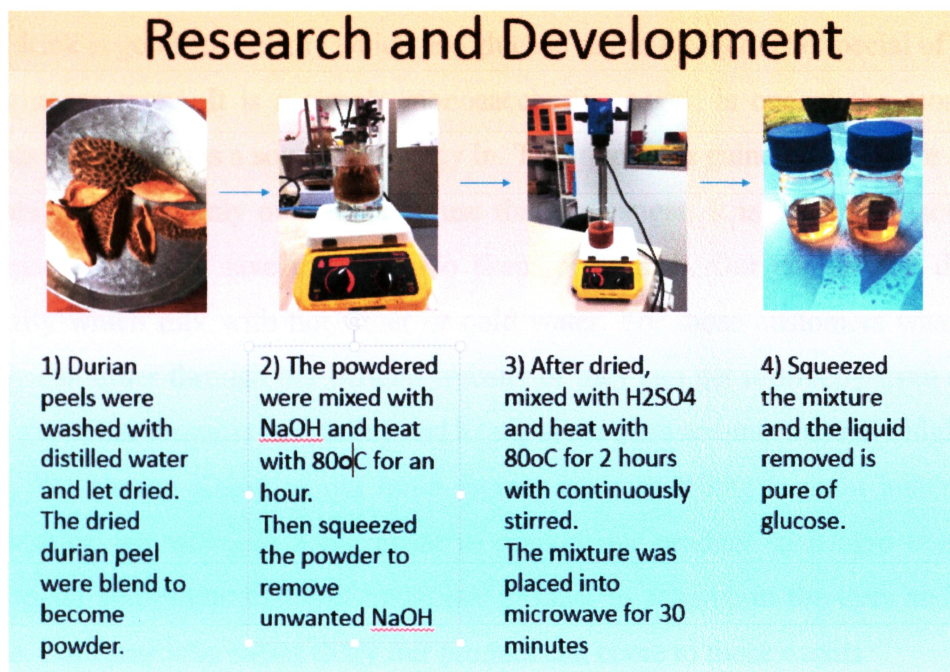


Figure 1: Research and Development of LUCY Glucose Drink