



An Investigation of Shubiri Seeds

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Introduction

Some people suffer from poor eating habits. For example excessive feeding may lead to impartial digestion. When this happen the stomach develop excess acidic solution. If such situation exists for long time, some amount of acids leak slowly to oesophagus. This condition is felt as irritating or burning inside of the upper part of stomach. It is heart burn. This project is intending to investigate if local herb called "shubiri" can be used to control heart burn in human being.

Method

This project was carried out in school laboratory to investigate whether local plant materials may be suitable for controlling heart burn in human being or not. Titration technique was applied to test if neutralization occurs when a person suffering from heart burn takes local herb called "SHUBIRI SOLUTION". Mbilimbi was used as source of acidic solution.

Materials:

Shubiri seeds, Mbilimbi fruits, water, motor and pestle, beakers, conical flask, burette, pipette, retort stand, white paper, methyl orange indicator (methyl Orange)

Procedure

SHUBIRI SOLUTION: The seeds are collected from its dried fruit then added into a container half filled with water. Leave the contents in water for about 10 minutes. Then, Filter to get clean solution. This basic in nature as it turns methyl orange from colourless to yellow.

MBILIMBI SOLUTION: The fresh mbilimbi fruits are cut into small pieces and then grind in motor using pestle. Then, filtered by means of filter paper to get clean solution. It is acidic as it turns methyl Orange from colourless to red.

Titration procedures were done between Shubiri solution (BASE) against Mbilimbi solution (ACID) to investigate whether there is any sort of neutralization

Results

Titration Results were recorded as follows:

EXPERIMENT	PILOT	1	2	3	EXPERIMENT	PILOT	1	2	3
FINAL VOLUME	0.10	0.30	0.50	0.70	FINALVOLUME	0.40	0.80	0.10	0.12
INITIAL VOLUME	0.00	0.10	0.30	0.50	INITIALVOLUME	0.00	0.40	0.80	0.10
VOLUME USED	0.10	0.20	0.20	0.20	VOLUME USED	0.04	0.40	0.20	0.20

Table 1: Titration of shubiri against HCl.

Table 2: Titration of shubiri against Mbilimbi

- When few drops of methyl Orange indicator were added into shubiri solution it turns yellow .And when titrated against mbilimbi solution it turns to orange. If in excess, it turns to red. This is means that, there is neutralization reaction. The results were the same when shubiri were titrated against hydrochloric acid which normally is found in stomach
- From biological point of view, in stomach there is secretion of hydrochloric acid .This is the one which when in excess, leaks out back to oesophagus. Therefore, neutralization was tested using local herb so called SHUBIRI SOLUTION, Its colour changed from yellow to orange.
- During titration, the titer value was observed to be roughly 0.20cm². This means that, shubiri solution is very strong base that is why although it local solution, but is efficient for neutralization of acidic contents.

Conclusions

As observed from the above experimental test, Shubiri solution which is a local herb can neutralize acidic conditions. So, when taken by human being having heart burn pain, it efficiently neutralize acid (hydrochloric acid) and hence bring relief to the patients. What happen in the body is not narrative believes but natural events that can be scientifically proved .As it was done in this project.

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Fig: Shubiri Seeds (Basic)



Fig: Mbilimbi fruits (acidic)



Fig: Shubiri solution before titration



Fig: Shubiri solution after titration with mbilimbi solution (Acidic). It gave same results with Hydrochloric Acid |