

Rosella Label: The Freshness Checker

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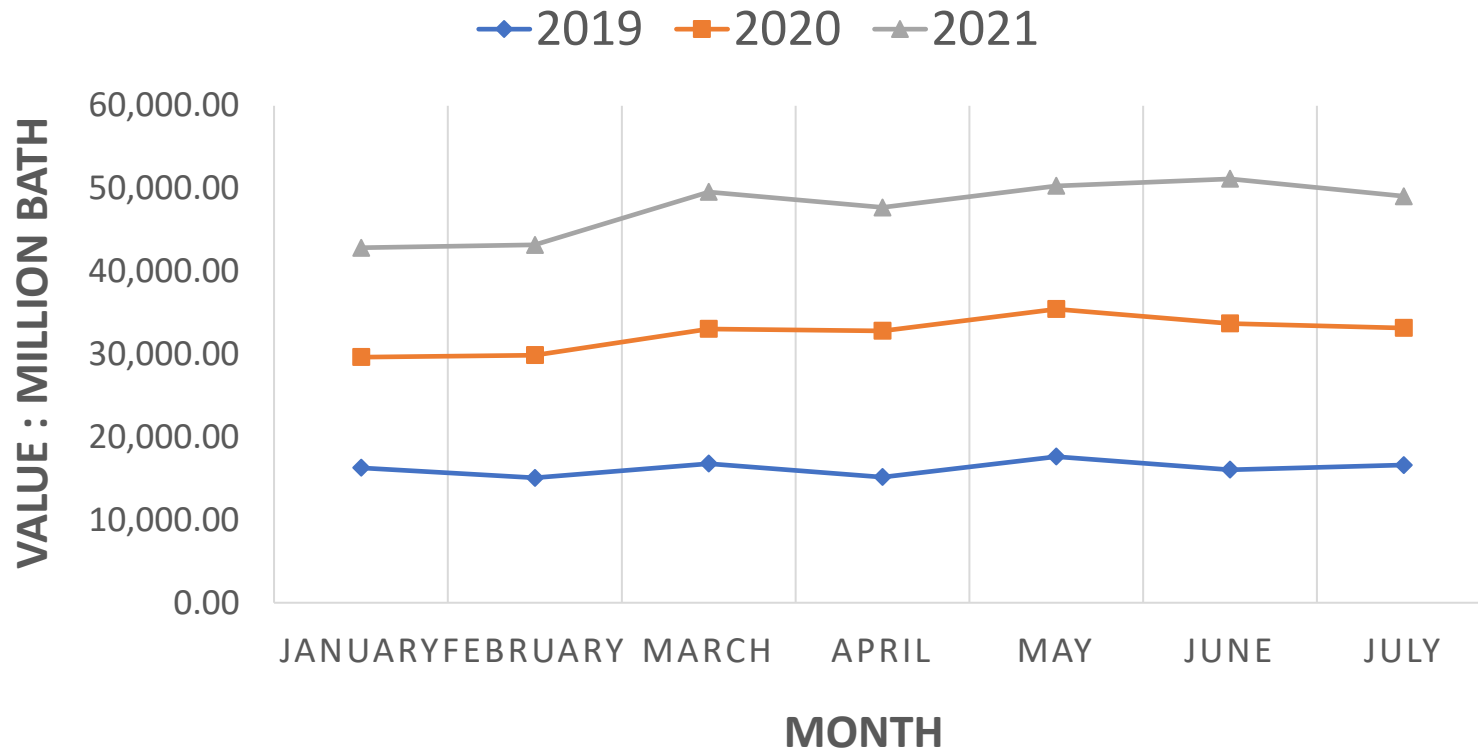
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Problems & Background

EXPORTS OF THAI FISHERIES PRODUCT



Seafood exports in 2019 - 2021. The seafood has a high value

Problems & Background



The Freshness of the seafood is therefore important to decisions of the consumer

Problems & Background



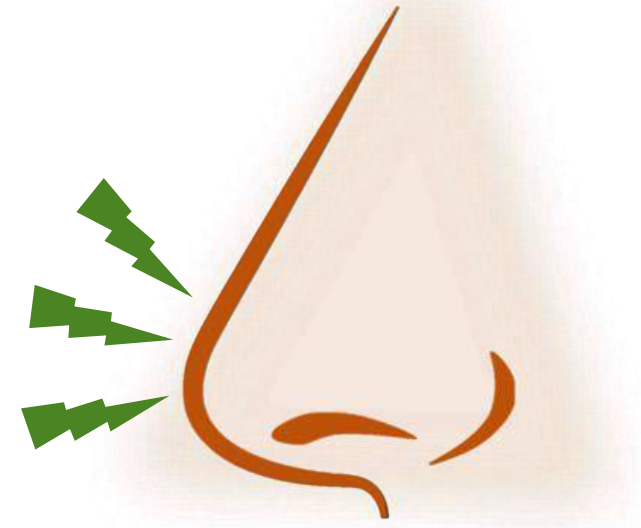
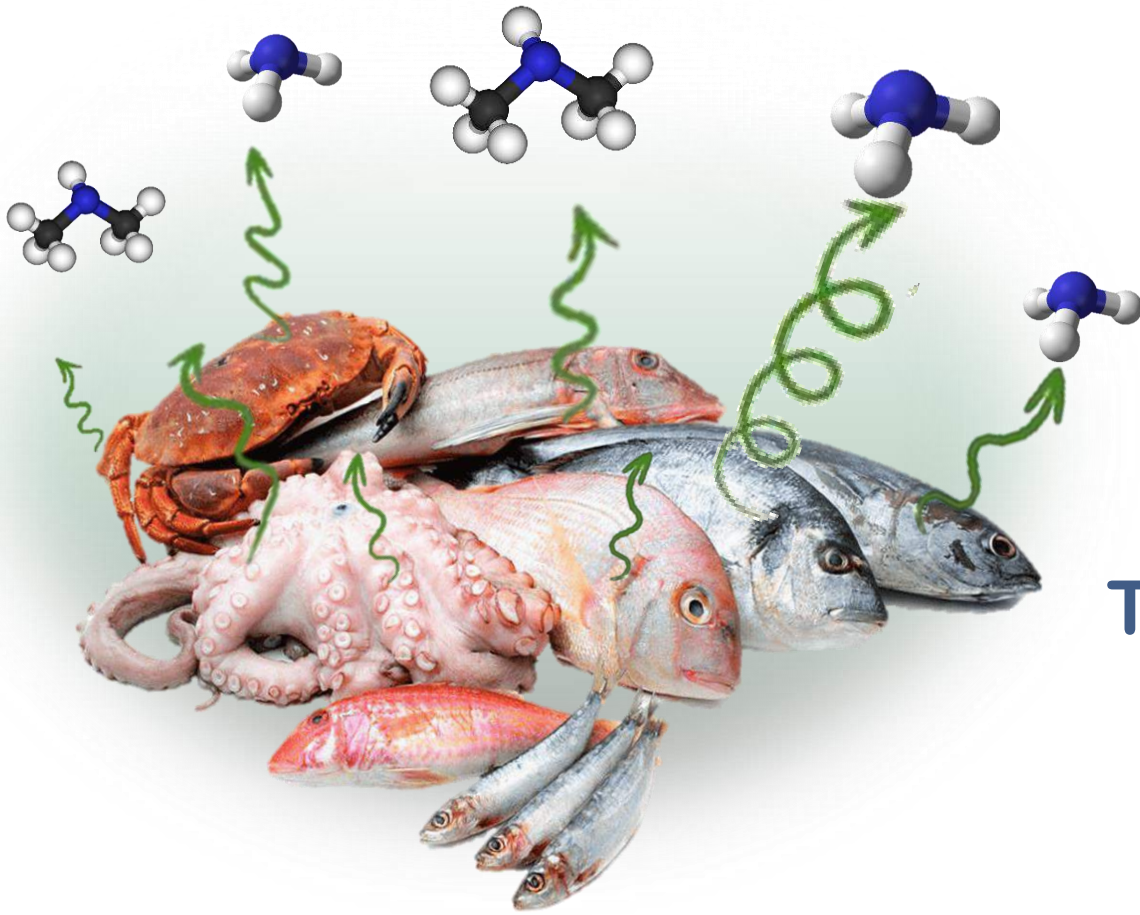
Seafood already packed in the package cause the inability to check the freshness



Some consumers in a household don't have experience or devices for check seafood freshness

Problems & Background

Spoilage of Seafood



**Total Volatile Based-Nitrogen
(TVB-N)**

Process of working

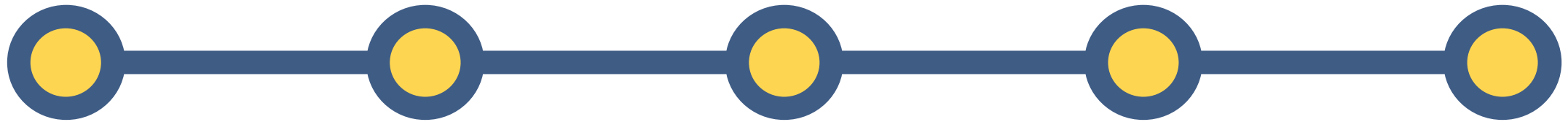
Preliminary
Study

Usability

Prepare
The Roselle
Paper

Label design

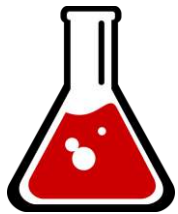
Product
Application



Experimental (PRELIMINARY STUDY)

1

Prepare
Roselle
crude
extract



2

Moisten
the paper
with
Roselle
extract



3

Detected
paper with
Ammonia
gas



4

Observe
the color
of Roselle
paper



Experimental

1



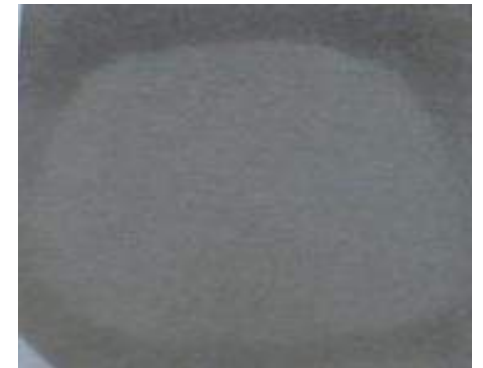
Before study

2



0.020 %

3



0.028 %

The Roselle crude extract can be changed color from red to green when it was detected with TVB-N gas.

Discussion



Acidic form

Neutral form

Basic form



Experimental (Spoilage Test)

1



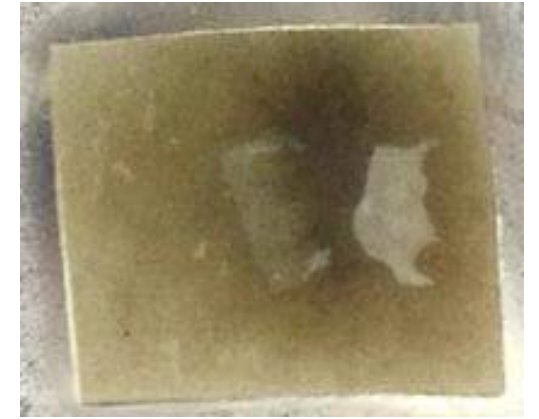
Seafoods not spoiled

2



Seafoods not fresh or some spoilage

3



Seafoods spoiled

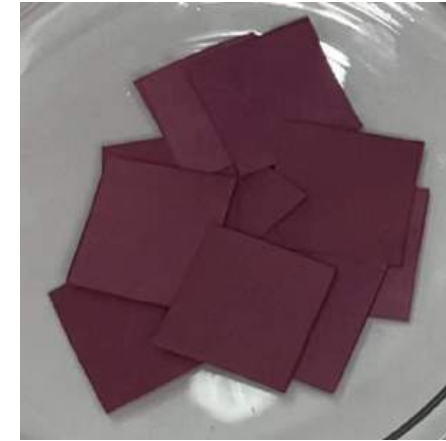
The application test to examined the function of Roselle indicator paper with white shrimp and crab in refrigerator

Label Design



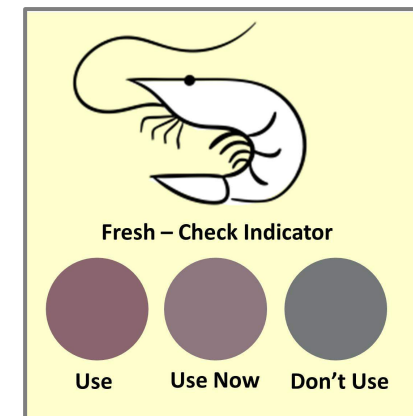
Designed for use in packaging or container to check seafood freshness.

1



Roselle Indicator Paper

2



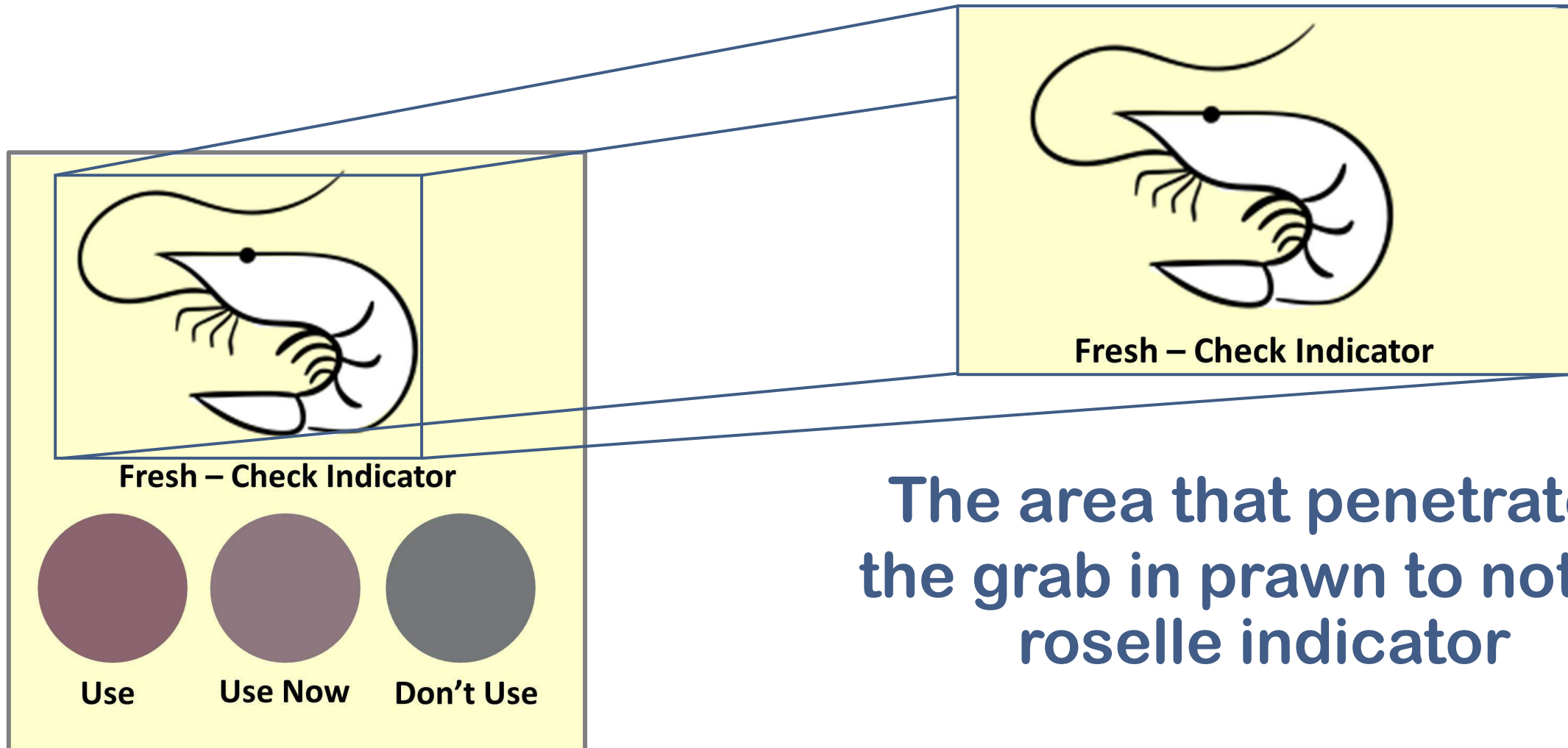
Freshness Check Sticker

Label Design



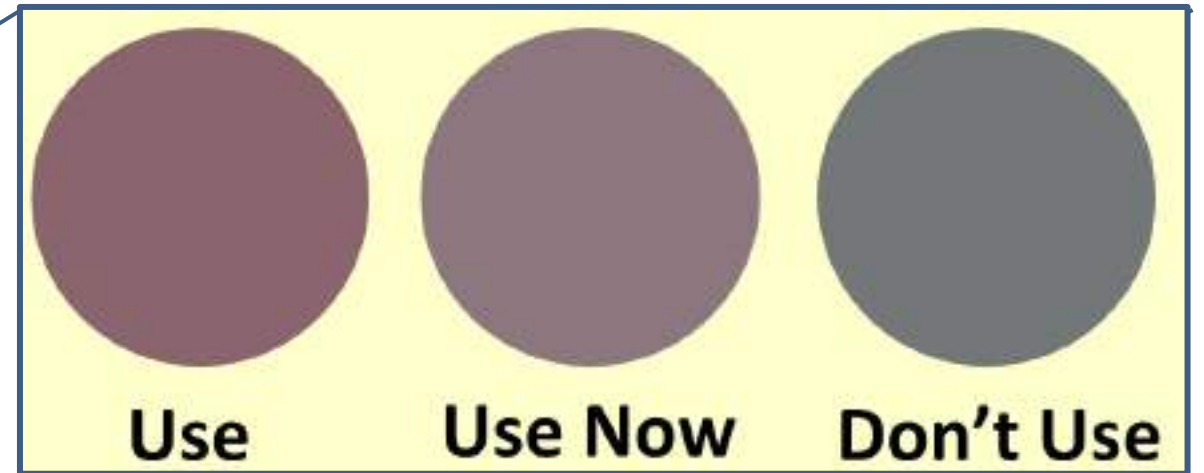
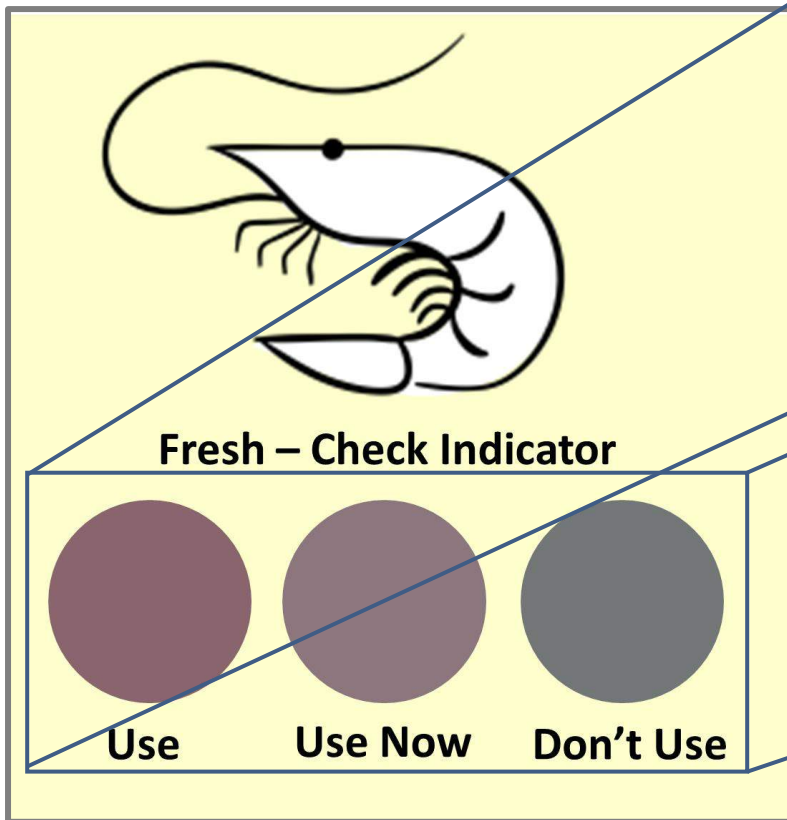
Use as indicator to detected with TVB-N that released from rotten seafood.

Label Design



The area that penetrated the grab in prawn to notice roselle indicator

Label Design



Color bars by designed from previous experimentation for comparison color to check seafood freshness.

How to use



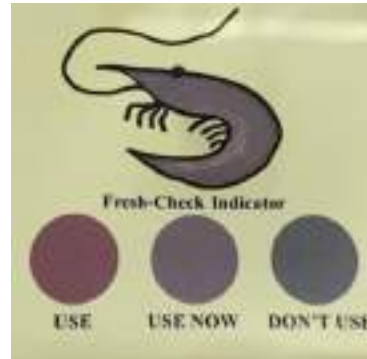
Usability

1



White Shrimp is not spoiled

2



White Shrimp is not fresh or some spoilage

3



White Shrimp is spoiled

The application test to examined the function of Roselle indicator paper with white shrimp at room temperature.

Usability



Product Application



Easy to use



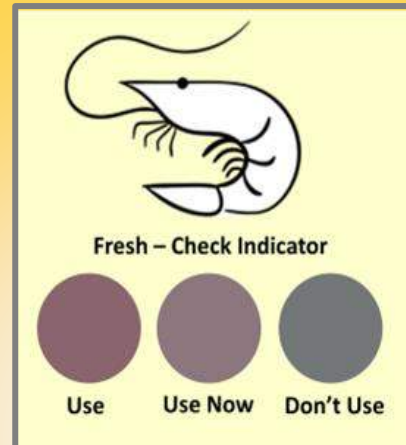
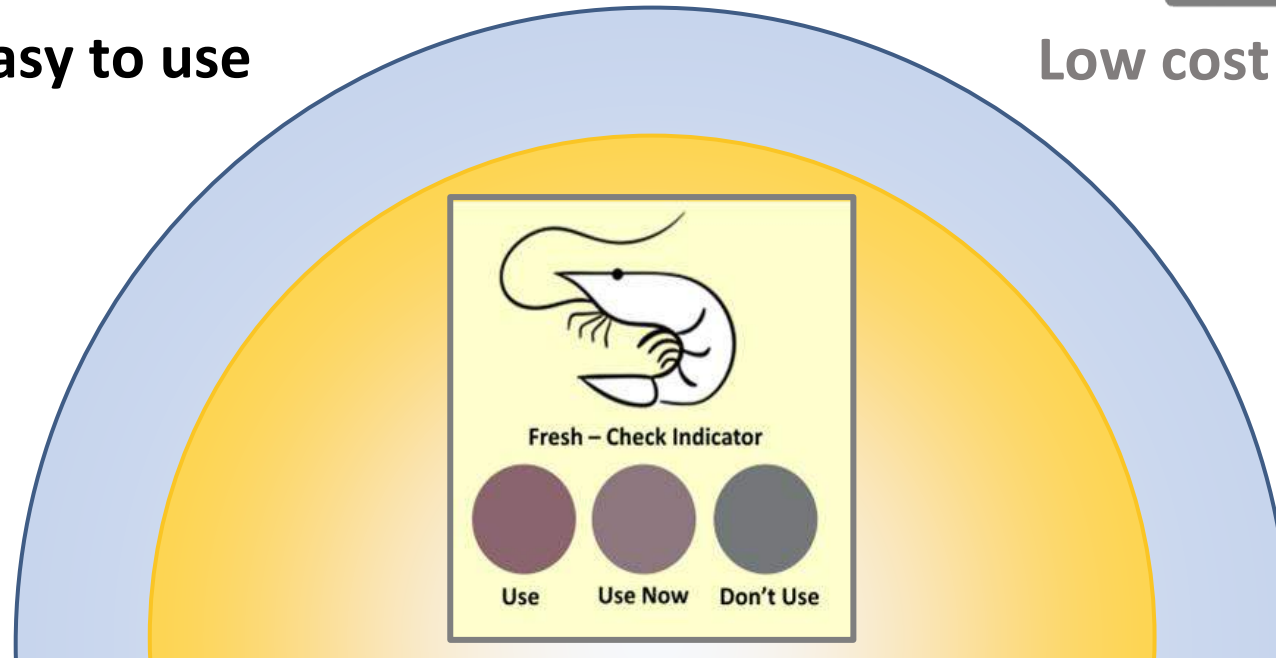
Good for health



Low cost material



Environmental
Friendly



Commercialization

THANK YOU
FOR YOUR
ATTENTION