

No instrumentation required

for anytime, anywhere, anyone **kikkoman** 

Histamine Check Swab



Simple

Soak the swab in diluted sample and activate the device.

Rapid

About 5 minutes for reagent reaction.

Easy

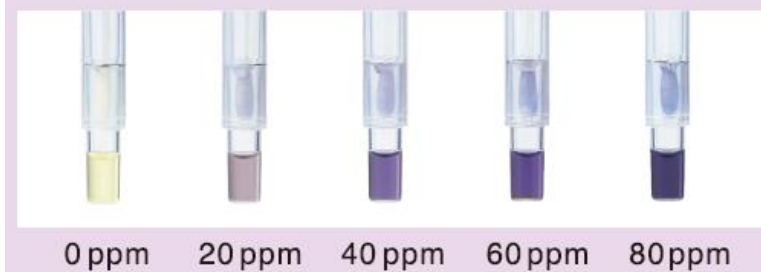
Interpret result of histamine level with the color chart.

Product summary

【Products Detail】

Code	60448
Product Name	Histamine Check Swab
Contents	Total 40 assays (20 x 2 aluminum bags) User's manual
Storage	2-8 °C (Do not freeze)
Total Weight	355g
Expiry	End of month after 18 months from manufacturing date.

Color Results

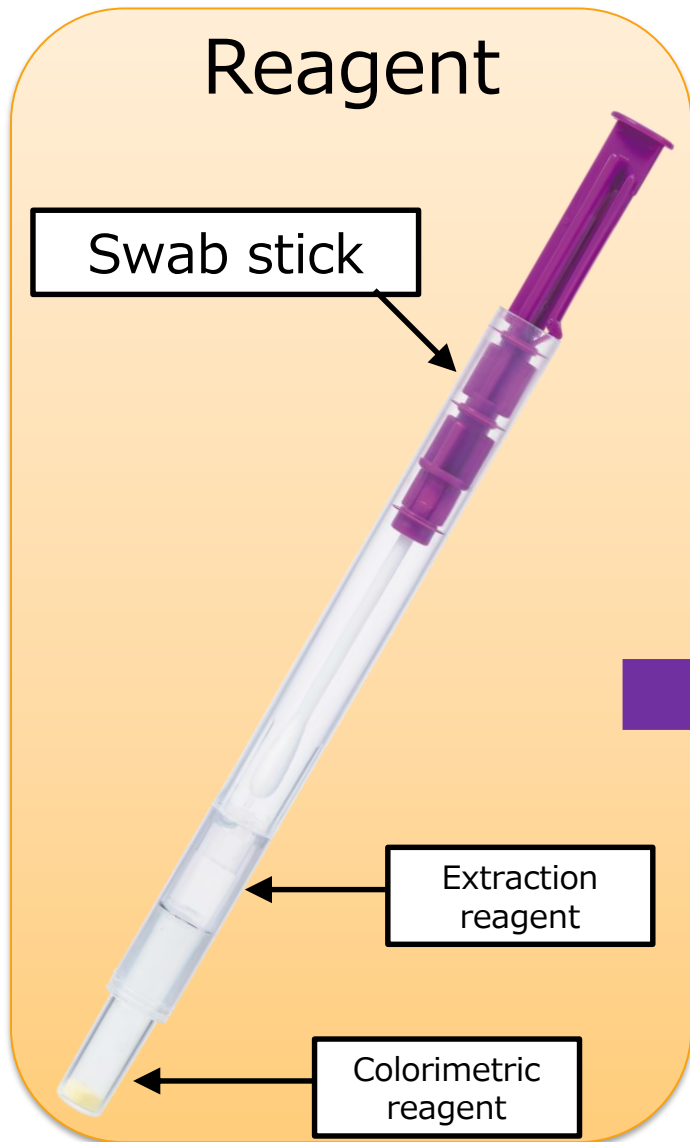


【Seal Label】

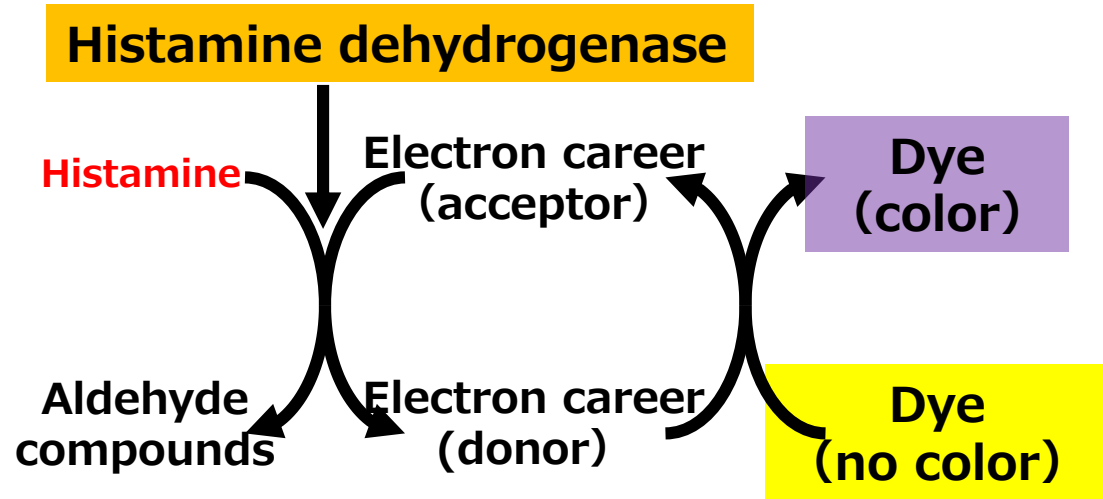


For 40 tests

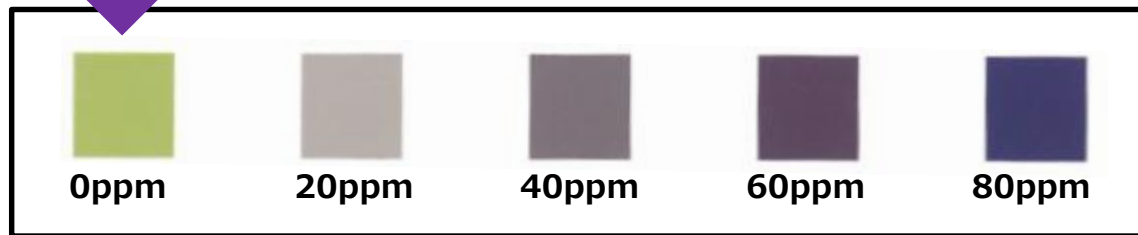
Principle of testing



Histamine Check Swab



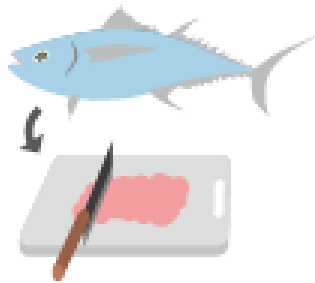
Same testing principle as the
Check Color Histamine
Visually check the color



Color Chart for determination

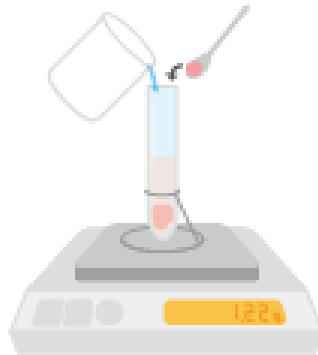
Histamine Check Swab: Assay Procedure

1

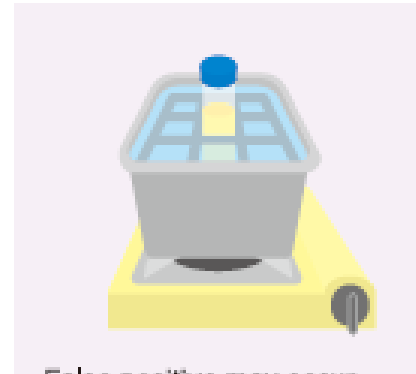


Mince the fish meat.
*Solid form assay samples should be minced.

2

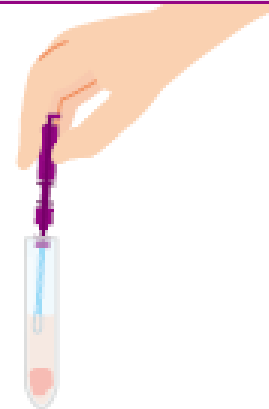


Dilute an assay sample by two to five times.



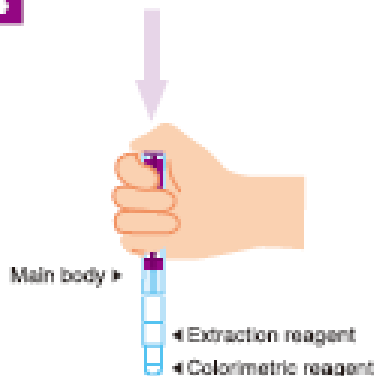
False positive may occur depending on samples. False positive may be prevented by heating the diluted sample.

3



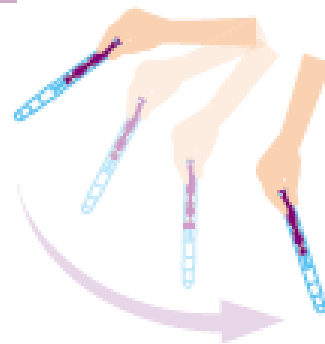
Leave sample about 5min to be prepared. Soak the swab in the diluted sample.
*Avoid solid object.

4



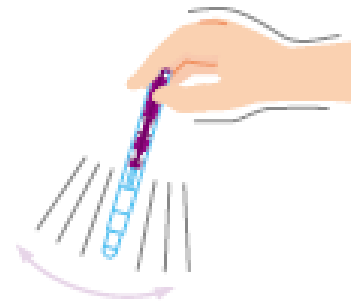
Push the swab stick all the way into the main body.

5



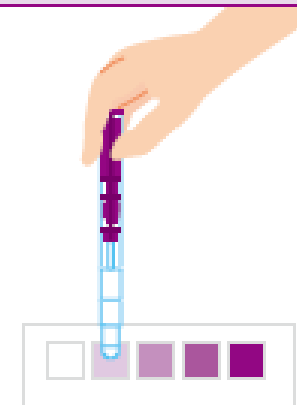
Drop extraction reagent and mix with the colorimetric reagent.

6



Shake the main body until leftover colorimetric reagent fully dissolve.

7



After 5min, determine histamine concentration by comparing result with the color chart.

Color after 5 minutes



0 ppm

20 ppm

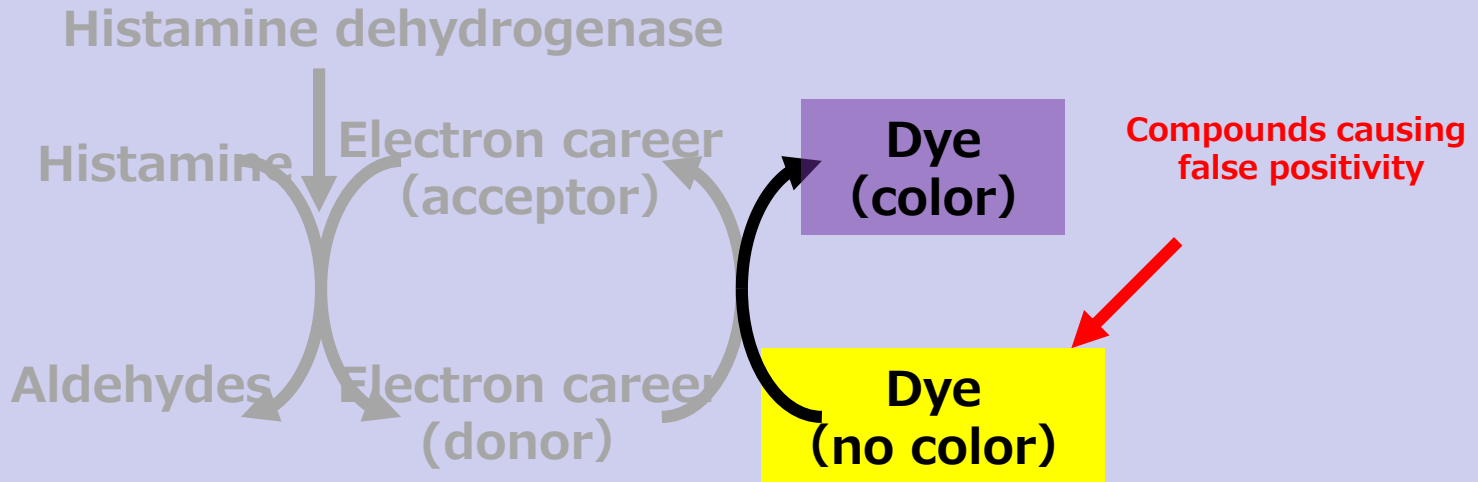
40 ppm

60 ppm

80 ppm

Caution of the usage

 **False colors may occur due to improper sampling or preparation**
(Caused by components in the sample even without histamine \neq false positive)



Recommend to confirm the potentiality of false positive:

Test with the sample that is not containing any Histamine and confirm that the color does not change, before applying Histamine Check Swab.

Process the sample

No color : Possible to measure

Color : Impossible to measure

(in some situation it is possible to measure histamine contents by using dilution method and/or heat processing)

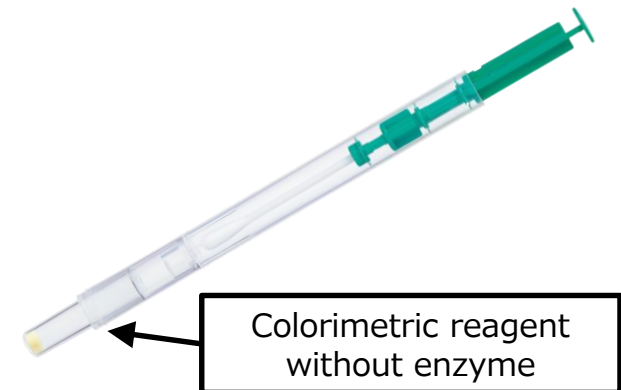
◆ If false positive

Measurements may improve through:

- more dilution, or
- heat processing

◆ If false positivity is not improved

⇒ We recommend other analysis methods such as “61341 Histamine Test Kit”



Example of measuring histamine in raw tuna (Ex 1)

【Sample】

Raw tuna (commercially available) Histamine content: below detection limit

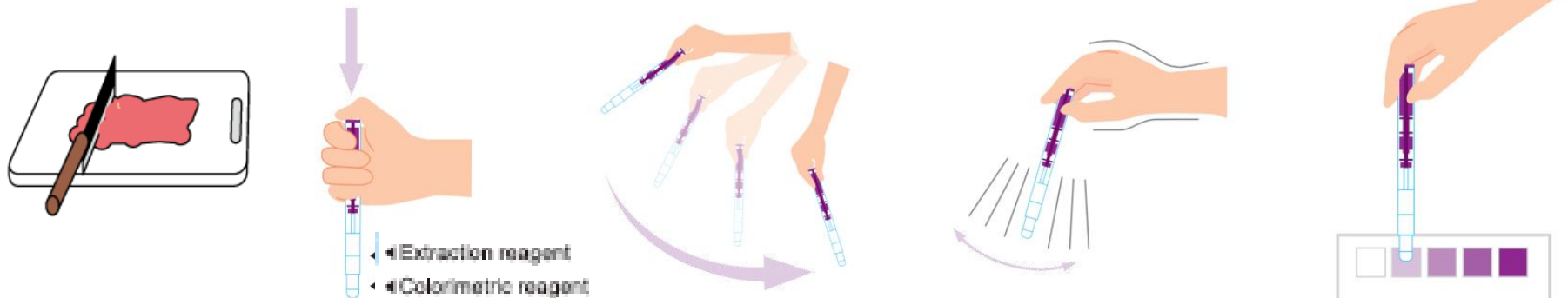
Spiking 0 and 40 ppm of histamine.

【Measurement procedure】

1) Mince the tuna, dilute the sample by two times. Then, heat the sample for 5 minutes. Leave the sample at room temperature.

2) Dip the swab into the supernatant of the preparation.

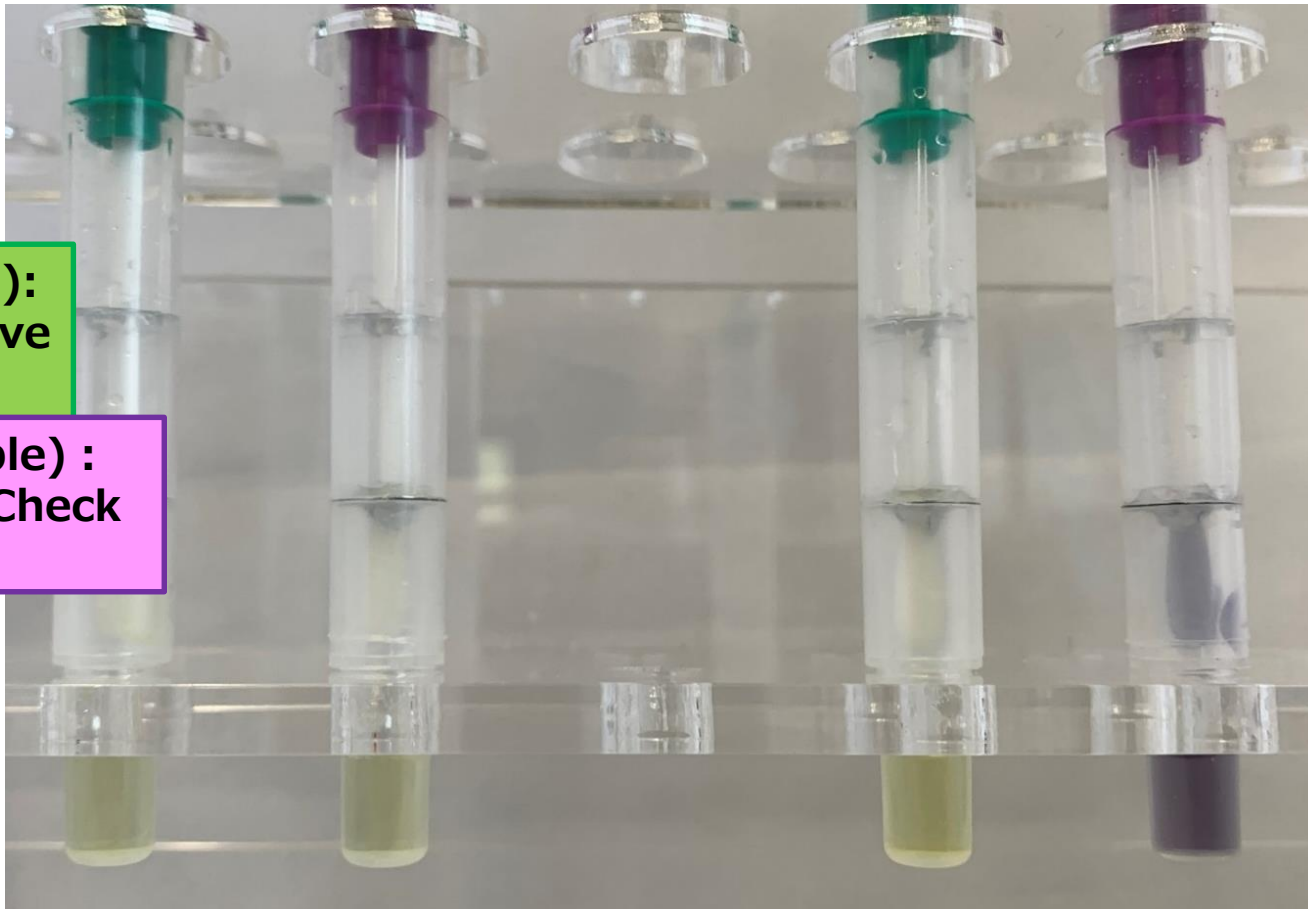
3) React with the reagent. After 5 minutes colorimetric analysis was performed



Results (2 times dilution)

No histamine (0 ppm)

Histamine spiking (40 ppm)



Left (Green):
False positive
check kit

Right (Purple) :
Histamine Check
Swab

It is possible to screen the histamine content in raw tuna

Examples of fish source measurement (Ex 2)

【Sample】

Fish source A : Squid fish source (made in Japan)

Histamine content 0.5 ppm

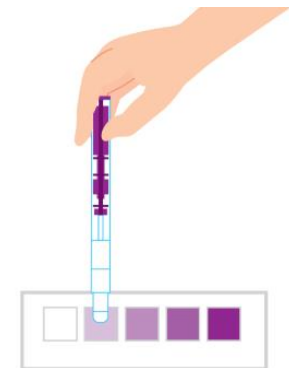
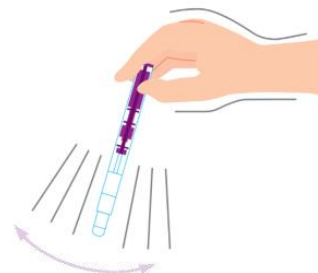
Fish source B : Anchovy source (imported)

Histamine content 380 ppm

【Procedure】

- 1) Dilute 5 times with water
- 2) Sampling by dipping the swab.
- 3) Reacting with the agent.

After 5 minutes, colorimetric evaluation



Results (5 times dilution)

Fish source A (0.5 ppm)

Fish source B (380 ppm)



Left (Green):
False positive
check kit

Right (Purple):
Histamine Check
Swab

Histamine Check Swab may be used for some types of fish source

Bonito flakes (Ex 3)

【Sample】

Commercially available bonito flakes (packed)

Histamine content: 9 ppm

Spiking 0, 50, 100, and 200 ppm

【Procedure】

1) 5 times dilution

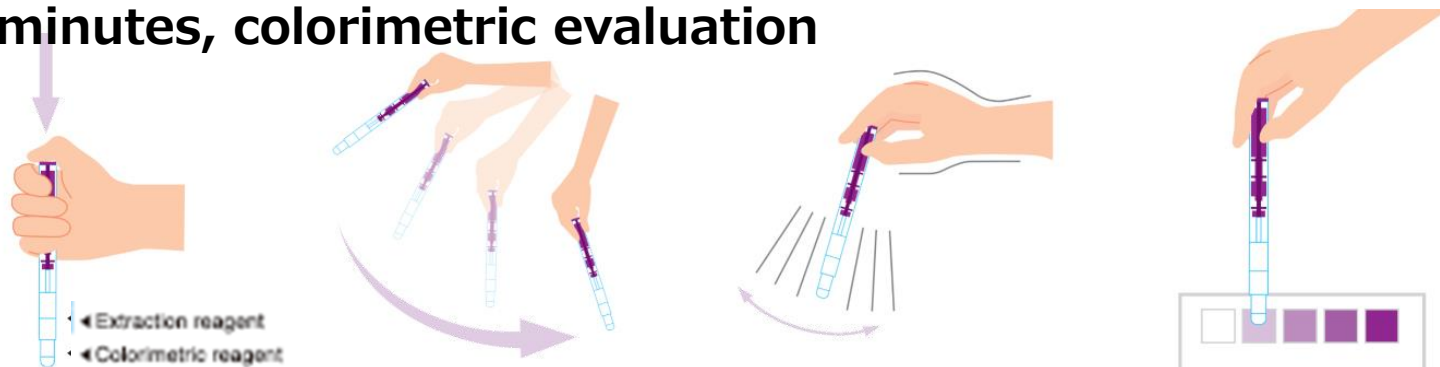
Add 4 mL of hot water (Ca. 80°C)
per 1 g of flakes. Then leave the sample
to room temperature

2) Centrifuge to separate extraction liquid
with flakes.

(Filtering may be possible)

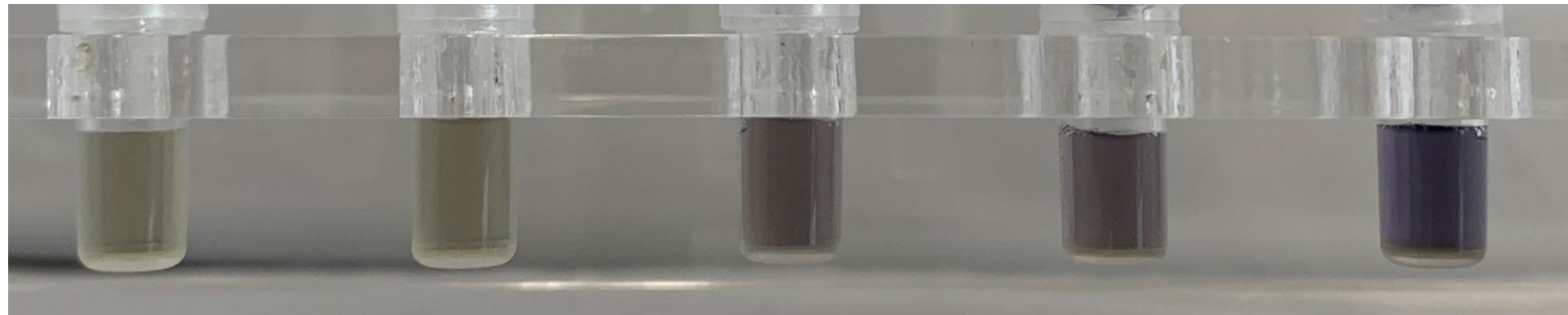
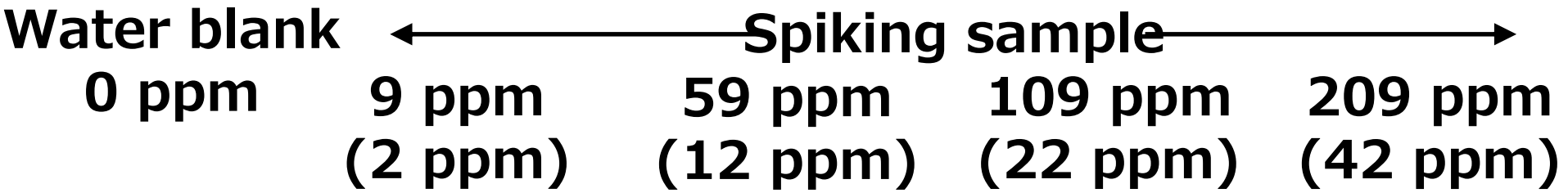
3) Reacting with the agent.

After 5 minutes, colorimetric evaluation



Results (5 times dilution)

※Values in parentheses indicate histamine concentration after dilution



Histamine Check Swab may be used for determining histamine content in Bonito flakes

Comparison with Check Color Histamine

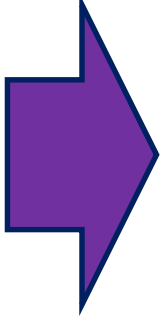
	Histamine Check Swab	Check Color Histamine
Range (test solution)	20 ppm - 80 ppm	0.4 ppm- 6.0 ppm
Recommended dilution	Fish source : 5 times / Fish meat : 2 times	Fish source : 200 times / Fish meat : 25 times
Range (Sample)	Fish source: 100 – 400 ppm Fish meat: 40 – 160 ppm	Fish source: 80 – 1,200 ppm Fish meat: 10 – 150 ppm
Measurement	Visually check the color change	Measured with absorptometer
Accuracy	Qualitative-Semiquantitative	Quantitative
Reaction time	5 minutes	15 minutes
Number of test kits	40 measurement (40 sticks)	60 measurement
Reagents needed	No	EDTA·2Na (as extract) Histamine hydrochloride (for retrieval testing)

Possible Usage

Interested in histamine analysis, however no laboratory equipment available; no experience with laboratory operation



If
Positive



Qualitative check with the Histamine Check Swab

Outsourced analysis
or
Quantitative analysis with the Check Color Histamine

- Simplified analysis in the field
- Start for introducing histamine analysis and management
- If already outsourced, to narrowing down the samples

Histamine Check Swab is Qualitative/Semi-Quantitative On-site easy test kits.

