



# KYORITSU PACKTEST INSTRUCTIONS

## Nitrite

(High Range)

Model: WAK-NO<sub>2</sub>(C)

### Griess Romijn Visual Colorimetric Method

Main Reagent: Sulfanilic Acid

Measuring Range: NO<sub>2</sub><sup>-</sup> 16 - ≥660 mg/L (ppm)

NO<sub>2</sub><sup>-</sup>-N 5 - ≥200 mg/L (ppm)

### How to Use



- ① Remove the colored line at the top of the tube to clear the aperture.
- ② Press the tube's side wall to expel air and hold the tube.
- ③ Immerse the aperture of the tube into the sample, release the finger to fill up the tube halfway. Invert the tube back and forth lightly for 5-6 times.
- ④ After 5min, invert the tube slowly several times to remove air bubbles and place the tube on the provided Standard Color as shown to compare the color.

### How to Read the Result

After the reaction time, compare the color of the tube with Standard Color. The nearest color indicates the concentration value of the analyte in your sample. A color between two standard colors indicate the value between them.

### Handling of PACKTEST Before and After Use

#### First Aid

**Eye Contact** → Immediately flush eyes with plenty of water.

**Skin/Cloth Contact** → Immediately flush contacted area with water.

**Ingestion** → Immediately rinse mouth.

If swallowed the content or any symptom appears, seek medical advice immediately.

#### Storage

Keep unused PACKTEST tubes in the provided preserving bag after opening the laminated package and use them as soon as possible. Depending on the storage condition, the reagent may deteriorate in several days especially under the hot and humid weather.

#### Disposal

For business use, please follow in the manner consistent with relevant laws and regulations. Otherwise, the tube can be disposed as combustible waste.



**KYORITSU**  
CHEMICAL-CHECK Lab., Corp.

1-18-2 Hakusan, Midori-ku, Yokohama, Kanagawa  
226-0006, Japan

## PACKTEST Nitrite (High Range)

### Caution

1. This product allows to measure both nitrite ion ( $\text{NO}_2^-$ ) and nitrite-nitrogen ( $\text{NO}_2\text{-N}$ ).
2. The optimum pH upon reaction will be around 3. If the pH of the sample exceeds 2-9, please neutralize with dilute sodium hydroxide solution or dilute sulfuric acid prior to measurement.
3. A nitrite standard solution of 1000 mg/L develops a color similar or darker than  $\geq 660$  on the Standard Color and foams. Standard solution of 10000mg/L becomes reddish-brown and vigorously bubbles. When the value is expected to be high, please dilute the sample prior to use.
4. Ensure that the PACKTEST tube is filled up to half.
5. Mix with reagent immediately after drawing the sample into the tube. If taking sometimes before mixing with reagent, it may develop false coloring.
6. Please be sure to invert the tube up and down slowly to remove air bubble before comparing with Standard Color. If leaving the air bubble inside the tube may result in false reading.
7. Partially undissolved reagent will not affect the measurement.
8. Keep the sample temperature between 20-40°C. If sample temperature is low, please follow reaction time as indicated below:  
at 15°C ... 15min                      at 10°C ... 30min
9. When comparing to the Standard Color, please be sure to read under the daylight. It may be difficult to determine the color under the direct sunlight, certain florescent lights, mercury lamp or LED.
10. You can put the line back into the aperture to seal. This will avoid possibility of spilling the content of the tube.

### Interference

Standard Color is prepared based on the standard solution. If there are some coexisting substances that may cause interference, please compare the result with official method or standard addition method for verification. Below is the list of interference data for on color development when adding each of the single substances to the standard solution.

$\leq 1000\text{mg/L}$	will not affect	... B(III), $\text{Ba}^{2+}$ , $\text{Ca}^{2+}$ , $\text{Cl}^-$ , $\text{Co}^{2+}$ , $\text{F}^-$ , $\text{K}^+$ , $\text{Mg}^{2+}$ , $\text{Mn}^{2+}$ , Mo(VI), $\text{Na}^+$ , $\text{NH}_4^+$ , $\text{Ni}^{2+}$ , $\text{NO}_3^-$ , $\text{PO}_4^{3-}$ , $\text{SO}_4^{2-}$ , $\text{Zn}^{2+}$ , Anionic Surfactant, Phenol
$\leq 500\text{mg/L}$	"	... $\text{CN}^-$
$\leq 250\text{mg/L}$	"	... $\text{Al}^{3+}$ , $\text{Cr}^{3+}$ , $\text{I}^-$
$\leq 100\text{mg/L}$	"	... $\text{Cu}^{2+}$
$\leq 20\text{mg/L}$	"	... Residual Chlorine
$\leq 10\text{mg/L}$	"	... $\text{Fe}^{2+}$ , $\text{Fe}^{3+}$ , $\text{SO}_3^{2-}$
$\leq 1\text{mg/L}$	"	... Cr(VI)

Seawater causes longer time to develop color, and it only shows 25-50% of what it should be at 5min reaction time as stated. However, extending reaction time 10 to 20min to perform colorimetry, you may obtain the appropriate color development for reading.

In general, nitrite ion does not coexist with oxidizing substances like residual chlorine, but residual chlorine and chloroamines may react and develop color even if nitrite ion does not present, causing false positive reading to misidentify as nitrite ion exists.

## 【Caution】

- This product is made for analyzing water quality purpose only. Do not use for any other purpose.
- This product contains small amount of chemicals. Please read instruction manual, GHS labels, SDS, and other necessary document thoroughly prior to use.
- Please keep this information handy for future reference.

<Safety> ● Please wash your hands thoroughly before and after the test.  
Do not inhale the chemical reagents.

- It is highly recommended to wear protective gloves, eye protection, and mask upon using this product.

- Avoid release chemical reagents or waste solution to the environment.

<Storage> ● Please keep this product out of reach of children. Keep it in the dry and dark place at room temperature.

<Other> ● Please check the expiration date shown on the box, and make sure to use within the date.

- Specifications are subject to change without notice.



**KYORITSU**  
CHEMICAL-CHECK Lab., Corp.

1-18-2 Hakusan, Midori-ku, Yokohama, Kanagawa  
226-0006, JAPAN E-mail:eng@kyoritsu-lab.co.jp

2102