



KYORITSU

PACKTEST

INSTRUCTIONS

Boron (High Range)

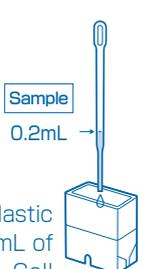
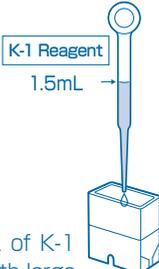
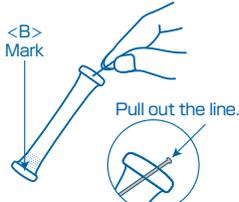
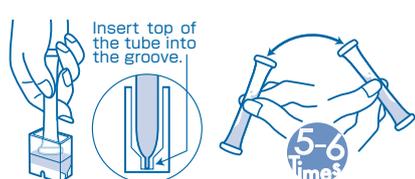
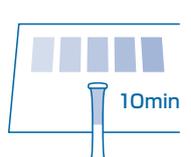
Model WAK-B(C)

Azomethine H Visual Colorimetric Method

Main reagent: Azomethine H

Range: B 0 - 100 mg/L(ppm)

How to Use

- 
- ① Using the small plastic pipette, take 0.2mL of sample to the Cell (PACKTEST Square Cup).
- 
- ② Add 1.5mL of K-1 Reagent with large plastic pipette.
- 
- ③ Place the cap and shake the Cell 2-3 times.
- 
- ④ Remove the colored line at the top of the tube to clear the aperture.
- 
- ⑤ Press tube's side wall to expel air, and hold the tube.
- 
- ⑥ Immerse the aperture of the tube into the Cell, pressing it against the bottom, and release to take all the sample from the Cell into the tube. Invert the tube back and forth for 5-6 times.
- 
- ⑦ After 10 min, compare the actual color in the tube with provided Standard Color.
- 
- You can check the result digitally.

How to Read the Test

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 indicates the value between them.

Handling of PACKTEST Before and After Use

First Aid **Eye contact** → Immediately flush eyes with plenty of water.

Skin contact → Immediately flush contacted area with water.

Ingestion → Immediately rinse mouth.

If ingesting the content, or any symptom appears, seek medical advice immediately. Especially when ingesting the reagent, drink plenty of water or milk, then get medical attention immediately. Please refer to SDS for further information.

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 could deteriorate in several days, especially under the hot and humid weather.

Disposal For business use, please follow in a manner consistent with Federal, State, and Local Regulations. Otherwise, the tube, bottle, and other plastics can be disposed as combustible waste (including plastic pipette).



KYORITSU
CHEMICAL-CHECK Lab., Corp.

5-37-11 Den-enchofu, Ota-ku, Tokyo 145-0071, JAPAN
FAX: +81-3-3721-0666 E-mail: eng@kyoritsu-lab.co.jp
<http://kyoritsu-lab.co.jp/english/>

PACKTEST Boron (High Range)

Feature

This product utilizes similar method to Azomethine H absorptiometry method stated in JIS K 0102 47.2 (Japanese Industrial Standards). This allows to measure boron in borax (sodium tetraborate decahydrate) or boric acid in industrial wastewater and other sample easily and rapidly.

For measuring lower concentration, please use PACKTEST Boron (Model: WAK-B)

Caution

1. This product measures boric acid in the sample and converts to value in boron. This cannot measure boron tetrafluoride anion (BF_4^-).
2. The optimum pH upon reaction will be around 6. If the pH of the sample exceeds 5–9, it needs to be neutralized with diluted Sulfuric Acid or diluted Sodium Hydroxide solution prior to use.
3. When concentration value of boron standard solution is 1000mg/L, the color develops stronger than indicated on the Standard Color. If the concentration is expected to be very high, please dilute the sample prior to the measurement.
4. Keep temperature of the sample and K-1 Reagent between 15–25°C.
5. Rinse the small plastic pipette (for taking sample) with pure water or same sample thoroughly before use. Please use measuring pipette instead of provided plastic pipette for better accuracy.
6. Ensure that the PACKTEST tube is filled up to the half.
7. Even the reagent is not completely dissolved, it will not affect the reading.
8. Please make sure to wait for 10min (reaction time) to compare the color. After taking the sample into the tube, it will change color around 10–20mg/L. And depending on the concentration value of boron in the sample, it will have different chronological changes as stated below.
 - 0mg/L ... The color will gradually fade and stay at 0mg/L after 5min.
 - 5mg/L ... The color will fade at first, and get darker afterwards.
 - 20mg/L or higher ... The color will continue to get darker.
9. When comparing to the Standard Color, please be sure to read under the daylight or equivalent light source. It may be difficult to determine the closest color under the direct sunlight, certain florescent lights, mercury lamp, or LED.
10. You can put the line back into the tube 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 acceptable level by adding each of the single substances to the standard solution.

- ≤5000mg/L : As(III), Ba^{2+} , Ca^{2+} , Cl^- , F^- , I^- , K^+ , Mg^{2+} , Na^+ , NH_4^+ , NO_2^- , NO_3^- , PO_4^{3-} , SCN^- , SO_4^{2-} , Phenol, Anionic Surfactant
- ≤2500mg/L : Cd^{2+} , Mn^{2+} , Pb^{2+} , Zn^{2+}
- ≤1200mg/L : Ni^{2+}
- ≤500mg/L : Cr^{3+} , Fe^{2+} , Fe^{3+} , Residual Chlorine
- ≤250mg/L : Al^{3+} , Co^{2+} , Cr(VI)
- ≤120mg/L : Cu^{2+}
- ≤50mg/L : CN^- , Sn^{2+}
- ≤20mg/L : Pd^{2+}
- ≤10mg/L : Ag^+

Seawater does not affect the result.

However, seawater naturally contains boron about 4–5mg/L.

Digital Water Analyzer

If you prefer more detailed result in digital notation, please use with DIGITAL PACKTEST·MULTI SP (Model: DPM-MTSP). When measuring with these analyzer, the measuring range, reaction time, and interference information are different from PACKTEST (visual colorimetry).

Please refer to instruction manual for further information or contact us for more details.

[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 breathe 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, cool, and dark place.
- <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.



5-37-11, Den-enchofu, Ota-ku, Tokyo, 145-0071, JAPAN
E-mail:eng@kyoritsu-lab.co.jp FAX:+81-3-3721-0666
<http://kyoritsu-lab.co.jp/english/index.html>

0151-1×4