

OPERATOR'S MANUAL

Disposable Electrode

Vitrode V

0654-0007070

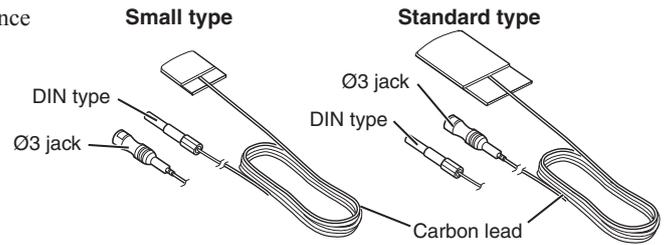
First Edition: 29 Aug 2002 Sixteenth Edition: 09 Nov 2016

The Vitrode V disposable electrode is designed for ECG monitoring and impedance method respiration monitoring.

The standard type is for adults or children and the small type is for neonates or children. Both the electrode and the lead are made of radiolucent carbon fiber.

Please read this manual thoroughly prior to operation to ensure optimum performance.

The Vitrode V disposable electrode is radiolucent. The electrode passes X-rays easily without making a shadow on the X-ray.



NOTE

Depending on the irradiated time and site, the electrode might make a slight shadow. The electrode does not perfectly pass X-rays.

| Qty | Electrode Size | Connector Type | Lead Color | Application |
|-----------------------|-----------------------------|----------------|---------------------------------------------------|-----------------------------------------|
| 40 (4 × 10 packages) | Small type 20 × 20 mm | DIN, Ø3 jack | 4 colors red, yellow, green, black | ECG monitoring for neonates or children |
| 50 (5 × 10 packages) | | DIN | 5 colors red, yellow, green, black, white | |
| 60 (6 × 10 packages) | | DIN, Ø3 jack | 6 colors red, yellow, green, brown, black, purple | |
| 120 (3 × 40 packages) | Standard type 45 × 25 mm | DIN | 3 colors red, yellow, green | ECG monitoring for adults or children |
| 90 (3 × 30 packages) | | DIN | 5 colors red, yellow, green, black, white | |
| 50 (5 × 10 packages) | | DIN, Ø3 jack | 4 colors red, yellow, green, black | |
| 40 (4 × 10 packages) | | DIN, Ø3 jack | 6 colors red, yellow, green, brown, black, purple | |
| 60 (6 × 10 packages) | | DIN, Ø3 jack | 6 colors red, yellow, green, brown, black, purple | |

本品は、出荷される国や地域により仕様等が異なります。
※日本向け製品については、日本語で記載しています。
英語などその他の言語で記載されている内容は、日本以外に出荷される製品の説明です。

Some specifications of this product may differ depending on the destination country or region. Therefore descriptions in the Japanese manual and English and other language manuals may also differ.

| Symbol | Description | Symbol | Description |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------|
| | Caution | | Non-reusable, single use |
| | Lot number | | Expiration date |
| | Temperature limits | | Manufacturer |
| | Keep away from sunlight | | Follow instructions for use |
| | European representative | (Background color: blue) | |
| | The CE mark is a protected conformity mark of the European Community. Products marked with this symbol comply with the requirements of the Medical Device Directive 93/42/EEC. | | |

WARNING

- Do not use this electrode during MRI examination because it may cause skin burn on the electrode placement area.
- When performing defibrillation, discharge as far as possible from electrodes on the chest of the patient. If there is a possibility that the defibrillator paddle could touch electrodes, remove the electrodes from the patient. If the defibrillator paddle directly contacts electrodes, the discharged energy may cause skin burn to the patient.

CAUTION

- For the following patients and skin sites, redness and skin erosion may occur and occasionally result in scar.
 - Patients with weak skin (patient with allergy, neonate or low birth weight infant)
 - Delicate or weak skin
- Do not attach the electrode on a wound or inflamed skin. Redness or irritation may occur on the skin.
- If the skin gets irritated or redness appears on the skin from the electrode, change the attachment site or stop using the electrode. Take extreme care for the patients with delicate skin.
- Iodine may cause discoloration of the electrode. If the skin was disinfected with iodine, wipe the skin with ethanol before placing the electrode.
- When removing the electrode from the patient, remove it carefully and slowly from the edge. If you remove it forcefully, the skin may tear.
- Take extreme care to prevent the patient from swallowing the electrode. The electrode is chemically harmless to people but the adhesive gel on the Vitrode V is highly expansive. If the electrode is swallowed, the adhesive gel absorbs gastric juice and swells several to several dozen times in size and stays in the stomach. Swelling adhesive gel in stomach will cause the patient to vomit and be unable to eat and drink. After removing the electrode, check there is no adhesive gel left on the patient.
- To prevent electrodes from being swallowed, make sure that the number of electrodes to be disposed of is the same as the number of electrodes that were taken out of the package.
- Be careful not to touch the adhesive gel on the small type electrodes for neonates or children (20 × 20 mm). The gel contains a bitter flavor to prevent the patient from swallowing the electrode. Wash your hands if you touch the gel.

- Dispose of the connector holder after use. Take extreme care to prevent the patient from swallowing the connector holder. The connector holder is a part which is used to connect electrode leads to the ECG connection cord.
- The Vitrode V electrode should not be used in conjunction with other types of electrodes because offset voltage becomes high and it may affect ECG recording.
- After opening the package, use the contents soon to prevent the gel from drying. Store the rest of the electrodes by folding the top of the package twice and sealing it with tape to prevent the electrodes from drying.
- When noise interferes with the ECG or the electrode starts to come off, replace the electrode with a new one.
- Do not use electrodes which are past the expiration date.
- Do not use this electrode for electric stimulation.
- Do not alter the shape of electrodes. ECG may not be recorded.
- When removing the electrode from a neonate, remove it carefully and slowly, because neonatal skin is sensitive.
- Do not reuse the disposable electrode.
- Do not get liquid on the electrode. The adhesive becomes weak and correct measurement might be impossible.
- The electrode cannot be sterilized. Sterilizing the electrode may damage it.
- Black spots may appear on the silver surface of the electrode. These are caused by variation in the Ag and AgCl coating thickness and have no effect on the quality or performance of the electrode.
- When using remover for removing adhesive gel from the patient's skin, refer to the remover operator's manual.
- When using remover, wipe the remover completely before attaching a new electrode.
- When separating the small type electrodes with 3 color leads, separate them slowly to avoid twisting the leads. Otherwise the covering may peel off the wire and the electrodes may become unusable.
- Dispose of Nihon Kohden products according to your local laws and your facility's guidelines for waste disposal. Otherwise, it may affect the environment. If there is a possibility that the product may have been contaminated with infection, dispose of it as medical waste according to your local laws and your facility's guidelines for medical waste. Otherwise, it may cause infection.
- United States law restricts this product to sale by or on the order of a physician.

Composition

Electrode: Ag/AgCl applied carbon
 Adhesive gel: Acrylic hydrophilic high polymer, glycerin, water
 Electrode lead: Carbon, PVC

Attaching Electrodes

1. Determine the electrode site. Do not place the electrode on a wound, inflamed, wrinkled or uneven skin surface.
2. For stable ECG monitoring, clean the electrode site with a cotton pad moistened with alcohol.
3. For more stable ECG monitoring, rub the sites with skinPure skin preparation gel (YZ-0019).

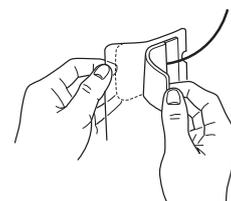
NOTE

This preparation is not needed for child or neonate use.

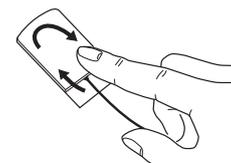
4. Thoroughly dry the skin with a clean cotton pad. Residual sweat, moisture or skinPure will reduce the adhesive properties of the electrode.
5. Open the package and take out the required number of electrodes.
6. Remove the electrode from the plastic film carefully.

NOTE

- Avoid touching the adhesive surface.
- Do not pull the lead when you remove the electrode from the plastic film. It may break the lead.



7. Press one edge of the electrode down on the site, then continue to apply the rest of the electrode in the same manner.
8. Press the tape down firmly with a finger for secure contact as shown right.
9. Connect the electrode lead to the corresponding input. If necessary, fasten the electrode lead to the skin with surgical tape.



NOTE

- Do not connect the electrode connector directly to the transmitter. The signals are not transmitted properly and the monitor cannot receive the signals. Use the JC-933P ECG connection cord.
- Make sure that there is enough slack in the electrode lead. This prevents body movement from peeling the electrode off and breaking the electrode lead.

Replacement

Replace the electrode about every 24 hours.

Storage

Store electrodes in a cool and dry place away from high temperatures or direct sunlight.

Specifications

Operating conditions

Temperature: 10 to 40°C (50 to 104°F)
 Humidity: 30 to 95%
 (When attaching to a place where the skin surface is not wet)

Storage conditions

Temperature: -10 to +40°C (14 to 104°F)
 Humidity: 15 to 95%

Lifetime

The lifetime of the electrode is printed on the package. The lifetime is 24 months (including the month of manufacture) after manufacture. (tested by Nihon Kohden)

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