

Portable Electrolyte Analyzer STAX-5 inspire

Contraindication

- ✓ To prevent infection, wear globes while handling the blood samples or used sensor card
- ✓ To prevent infection, execute proper disinfection before collecting blood from fingers
- ✓ Waste used sensor card as medical waste in follow the law
- ✓ Do not place and operate the instrument near magnetic fields instruments that generate magnetic fields
- ✓ Do not dismantle, remodel or repair
- ✓ Do not measure coagulated samples
- ✓ Do not measure samples collected by EDTA tube
- ✓ Do not re-use sensor card
- ✓ Do not insert objects except sensor card into the instrument

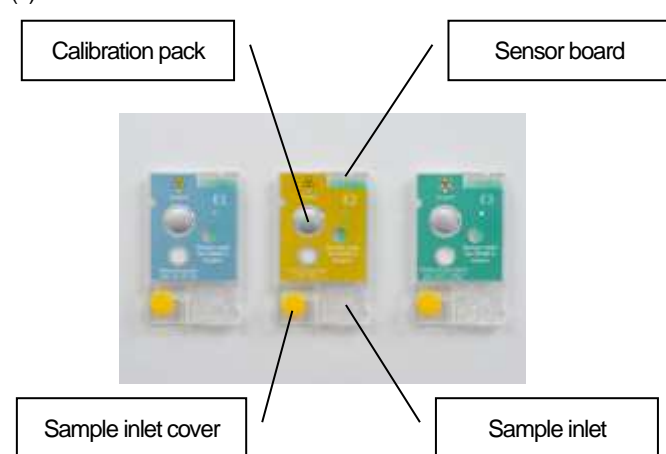
Construction

(1) STAX-5 inspire



Dimensions: 95W x 215D x 86.5H mm
Weight: About 850g (without battery)

(2) Sensor Card



Cat No. 0160901 Sensor Card E1
Cat No. 0160902 Sensor Card E2
Cat No. 0160903 Sensor Card E3

Test available	Sensor Card E1	Sensor Card E2	Sensor Card E3
pH		●	●
pCO ₂		●	
cNa ⁺	●		
cK ⁺	●		
cCl ⁻	●		
cMg ²⁺			●
cCa ²⁺			●
Hct	●		

Dimensions: 45W x 69D x 7H mm
Weight: About 11g

Power supply voltage

Rated voltage:

- ✓ When battery is used:
DC6V (AA batteries)
- ✓ When the exclusive AC adpoter is used:
Input: AC100 – 240V, 50/60Hz, 0.6A
Output: DC9V, 2A

Principle

<cNa⁺> Ion selective electrode liquid membrane type
Chemical substances which selectively react with sodium ion are captured by polyvinyl chloride membrane with plasticizer. The potential difference generated when standardized calibrator and sample contact membrane in order are measured. Sodium ions (cNa⁺) are calculated based on this potential difference of calibrator and sample.

<cK⁺> Ion selective electrode liquid membrane type
Chemical substances which selectively react with potassium ion are captured by polyvinyl chloride membrane with plasticizer. The potential difference generated when standardized calibrator and sample contact membrane in order are measured. Potassium ions (cK⁺) are calculated based on this potential difference of calibrator and sample.

<cCl⁻> Ion selective electrode liquid membrane type
Chemical substances which selectively react with chlorine ion are captured by polyvinyl chloride membrane with plasticizer. The potential difference generated when standardized calibrator and sample contact membrane in order are measured. Chlorine ions (cCl⁻) are calculated based on this potential difference of calibrator and sample.

<cCa²⁺> Ion selective electrode liquid membrane type
Chemical substances which selectively react with calcium ion are captured by polyvinyl chloride membrane with plasticizer. The potential difference generated when standardized calibrator and sample contact membrane in order are measured. Calcium ions (cCa²⁺) are calculated based on this potential difference of calibrator and sample.

<cMg²⁺> Ion selective electrode liquid membrane type
Chemical substances which selectively react with magnesium ion are captured by polyvinyl chloride membrane with plasticizer. The potential difference generated when standardized calibrator and sample contact membrane in order are measured. Magnesium ions (cMg²⁺) are calculated based on this potential difference of calibrator and sample.

<pH> Ion selective electrode liquid membrane type

Chemical substances which selectively react with hydrogen ion (H⁺) are captured by polyvinyl chloride membrane with plasticizer. The potential difference generated when standardized calibrator and sample contact membrane in order are measured. pH are calculated based on this potential difference of calibrator and sample.

<PCO₂> Arranged Severinghaus type electrode
Arranged Severinghaus type electrode which includes Redox reactive layer including the base electrode reacting with hydrogen ion (H⁺), spreading layer, and gas transmission layer contact with standardized calibrator and sample to measure the potential difference. Partial pressure of carbon dioxide is calculated based on this potential difference of calibrator and samples.

<Hct> Electric conductivity electrode
Standardized calibrator and sample are contacted the surface of electric conductivity electrode to measure the alternative current impedance. Hematocrits are calculated based on this impedance.

Intended Use

STAX-5 Inspire, a point of care electrolyte analyzer is intended for in vitro diagnostic use by health care professionals for the quantitative determination of cNa⁺, cK⁺, cCl⁻, cCa²⁺, cMg²⁺, pH, pCO₂, Hct with using disposable sensor card.

Direction for use

Ensure to read operation manual before operate the instrument.

1. Press power button.
2. Introduce a sample to sample inlet and close the sample cover.
3. Insert the sensor card into the card inlet until a beep alarm sound. Measurement starts automatically.
4. Test results will be displayed after approx. 1minute for sensor card E1, approx. 3minutes for sensor card E2 and E3.
5. Remove the sensor card from the instrument. Waste the used sensor card as medical waste in follow the law.

Caution

1. Important precautions

- ✓ Ensure to read operation manual to operate the instrument appropriately
- ✓ Operational temperature for sensor card is 15-30 Celsius. In case sensor card is kept in refrigerator, leave it more than 1hour in room temperature.
- ✓ Insert sensor card into the instrument within 5minutes after applying blood to prevent the blood is coagulated.
- ✓ Do not hit or push sensor board and calibration pack.
- ✓ Do not insert the sensor card that blood or other liquids are attached.

<When blood is collected by syringe>

- ✓ TechnoMedica recommends using heparin lithium as anti-coagulant.
- ✓ Sample should be mix with anticoagulant immediately to ensure homogeneity.

<When blood is collected by finger>

- ✓ Clean the finger with tap water or washing cotton. Material attached to the finger may be contaminated and elevates K result.
- ✓ Do not squeeze or rub finger during blood collection. Interstitial fluid contamination and/or hemolysis may occur.

2. Other precautions

- ✓ STAX-5 is intended to use by medical professionals only.

- ✓ Do not measure samples except blood (whole blood, serum, plasma), dialysate, urine and Pinal fluid.
- ✓ Perform quality control if necessary.
- ✓ There is a case difficult to isolate problem caused by sample, instrument or sensor card. Re-measure sample when abnormal measurement result is delivered.
- ✓ Contact TechnoMedica or our local representative when insoluble trouble occurred.

Storage and Expiry

1. Storage

<Instrument>

Storage environment: Not specified

Transportation temperature: -10 – 60 Celsius

Do not leave the instrument in direct sunlight.

Operation environment: Temperature 10 – 35 Celsius, Humidity 10 – 85% (No condensation)

<Sensor card>

Storage temperature: 2 – 30 Celsius, Not frozen

Operation environment: 15 – 30 Celsius

2. Life time, expiration date

<Instrument>

Durable year: 4years when the instrument is used under appropriate operation temperature, storage environment.

<Sensor card>

Expiration date: Refer to package

Maintenance

Perform the following maintenances if necessary

- (a) Clean instrument's surface
 - (b) Clean sensor card inlet of the instrument
- © Disinfect instrument
- (D) Perform daily quality control
 - (E) Replace batteries

Read the following precautions carefully before performing above maintenance

- ✓ Wipe instrument softly by tissue paper or absorbent cotton soaked by water or detergent. Do not use alcohol, acetone and other solvents to prevent the instrument's coating is removed.
- ✓ Ensure to use brand-new batteries.

The main literature

Medical Practice 編集委員会編 : 「臨床検査ガイド '96」, 294-304(分光堂)

Manufacturer

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