# Sodium Test Kit

| REF | Pack Size | Reagent 1 | Reagent 2 (Std) |
|---|---|---|---|
| SODLMS01 | 25×1 ml | 25×1 ml | 1×2 ml |

## INTENDED USE
Sodium reagent is used for quantitative estimation of Sodium concentration in human serum or plasma

## CLINICAL SIGNIFICANCE
Sodium Is the major positive ion in fluids outside of cells. Most of the sodium in the body (about 85%) is found in blood and lymph fluid. It ensures a proper fluid and electrolyte or pH balance in our body, together with chloride and potassium. It enables our cell wall to draw in nutrients. It plays a role in nerve function and muscle contraction, in controlling the heartbeat by helping in its origin and maintenance. Sodium levels in the body are the adrenal glands. Aldosterone levels tell the kidney when to hold sodium in the body instead of passing it in the urine. Too much or too little sodium therefore can cause cells to malfunction, and extremes in the blood sodium levels (too much or too little) can be fatal. Too much sodium in the diet may raise blood pressure in some people. For those who have high blood pressure, eating foods with a lot of sodium makes their chance of heart disease, stroke, and kidney damage higher, heart failure gets worse when too much sodium is eaten. It increases the amount of water the body holds in and this causes swelling of the legs and hands. Increased sodium (hypernatremia) in the blood occurs wherever there is excess sodium in relation to water. There are numerous causes of hypernatremia: these may include kidney disease, too little water intake, and loss of water due to diarrhea and/or vomiting. High levels of sodium in the body are associated with high blood pressure and hypertension. Low sodium levels are uncommon and most often occur as a side effect of taking medicines that make you urinate more, such as diuretics. Severe diarrhea or vomiting or heavy sweating may also cause low sodium levels.

## METHOD: Colorimetric method

## TEST PRINCIPLE
The method is based on reaction of sodium with a selective chromogen producing a chromophore whose absorbance varies directly as the concentration of sodium in the test specimen.

## KIT CONTENTS AND COMPONENTS
Reagent 1 : Sodium Reagent
Reagent 2 : Standard 150mmol/L

## MATERIAL REQUIRED BUT NOT PROVIDED
Laboratory instrumentation, spectrophotometer UV/VIS with thermostatic cuvette holder or clinical chemistry analyzer: semi-automated, calibrated micropipettes, glass or high-quality polystyrene cuvettes, test tubes/rack, heating bath, controls, saline.

## SAFETY PRECAUTIONS AND WARNING
1.For in-vitro diagnostics use only.
2.Do not pipette by mouth. Avoid contact with skin and eyes. If spilt thoroughly wash affected area with water.
3.Do not use the reagent after the expiration date printed on the kit.

## REAGENT PREPARATION STORAGE AND STABILITY
The reagent is ready to use.
The reagent is stable up to the kit expiry date printed on the package when stored at 2-8°C.. Protect from direct sunlight.

## REAGENT DETERIORATION
Discard the reagent if absorbance exceeds 1.0 against distilled water.

## PROGRAM

| | |
|---|---|
| Reaction Mode | End point |
| Wavelength | 630 nm |
| Light Path | 10 mm |
| Blanking | Reagent blank |
| Reagent Volume | 1000 µl |
| Standard Volume | 10 µl |
| Sample Volume | 10 µl |
| Incubation | 10 mins at 37°C |
| Standard Conc. | 150 mmol/L |
| Linearity | 180 mmol/L |

**PROCEDURE**

| Reagent | Blank | Standard | Test |
|---|---|---|---|
| R1 Sodium Reagent | 1000 µl | 1000 µl | 1000 µl |
| Distilled water | 10 µl | | |
| R2- Standard | | 10 µl | |
| Sample | | | 10 µl |

Mix well and incubate for 10 minutes at 37°c. Read the absorbance of test sample A(T) and standard sample A(S) against reagent blank (B)

## CALCULATION
Sodium concentration= A(T) / A(S) ×150mmol/L (standard concentration)

## NORMAL VALUES
135-155 mmol/L
It is recommended for each laboratory to establish its own reference ranges for local population.

## LIMITATIONS
If the value exceeds 180mmol/L dilute the sample with 0.9% saline solution rerun and result multiplied by dilution factor.

## QUALITY CONTROL AND CALIBRATION
It is suggested to perform internal quality control with assayed normal and assayed abnormal, to confirm the validity of the test and assure the accuracy of patient result. Using the recommended calibrator or the Standard included, calibrate the assay.

## WASTE DISPOSAL
This Product is made to be used in professional laboratories.

## HIGHLIGHTS
1.Storage condition mentioned on the kit is to be used.
2.Before testing bring the reagents to the R.T.
3.Avoid reagents contamination.
4.Every time use new pipette-tips for pipetting out the reagents.
5.These Reagent kits meant for laboratory/professional use only, not for Drug use.

## REFERENCE
Tietz N.W., ed. Clinical Guide to laboratory Tests, 3rd ed. Philadelphia, Pa: W.B. Saunders,1995:466;487
Lords Data File.

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|---|---|---|---|
| REF | Catalog No. | Σ | Contain Sufficient for test |
| LOT | Batch No. | | Instruction for use |
| | Manufacturing Date | IVD | *In-vitro* Diagnostics |
| | Expiry Date | | Storage temperature |
| | Manufacturer | | |

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