Calcium (Ars III) Test Kit

REF	Pack Size	Reagent
CALLMB01	2 X 70	2 X 70 ml

INTENDED USE
Calcium (ARS III) kit is used for the quantitative estimation of calcium concentration in human serum or plasma

CLINICAL SIGNIFICANCE
Calcium plays an essential role in many cell functions: intracellularly in muscles contraction and glycogen metabolism, extracellularly in bone mineralization, in blood coagulation and in transmission of nerve impulses. Calcium is present in plasma in 3 forms, bound to proteins or complexed with anions and phosphate, citrate and bicarbonate. Decreased total calcium levels can be associated with diseases of the bone apparatus (Especially osteoporosis), absorption and hyperparathyroidism, malignant diseases with metastases and sarcoidosis. calcium measurements also help in monitoring of calcium supplementation mainly in the prevention of osteoporosis.
METHOD Arsenazo III method.

TEST PRINCIPLE
Ca^{2+} forms a blue colored complex with Arsenazo III. The intensity of the color formed is directly proportional to calcium concentration.

KIT CONTENTS/COMPONENTS
Reagent : Arsenazo III

MATERIAL REQUIRED BUT NOT PROVIDED
Fully Auto Biochemistry Analyzer: LM1016-400TPH.
Calibrator
Controls.

REAGENT PREPARATION, STORAGE AND STABILITY
Reagent is ready to use & are stable up to expiry date if stored at 15 - 30°C.

ON - BOARD REAGENT STABILITY-
On board reagent stability is 15 days.

SPECIMEN
Serum (preferred) plasma (heparinase). Venostasis should be avoided in specimen collection. Samples are stable for 7 days at 2-8°C.& 6 months when frozen.

APPLICATION For LM1016-400 TPH

Method	End point
Blank	Reagent blank
Primary filter	620
Secondary filter	No
R1 Volume	300
R1 Position	*
Incubation time (Sec)	120
R2 Volume	-
R2 Position	-
Incubation time (Sec)	-
Sample Volume	3
Read Time	27
Calibrator Concentration	As on the vial label
Mix speed set	Middle
Unit	mg/dl
Decimal	2

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CALIBRATION
For calibration, it is recommended to use any multi calibrator.

CALCULATION
Calculations Fully automated systems automatically calculate the calcium concentration of each sample.

NORMAL VALUES
8.10 – 10.4 mg /dl

LIMITATIONS
If the value exceeds 15 mg / dL, dilute the sample with 0.9% saline solution rerun and result multiplied by dilution factor.

SAFETY PRECAUTIONS AND WARNINGS
1.For in-vitro diagnostics use only.
2.Do not use the reagent after the expiration date printed on the kit.
3.Avoid reagents contamination.
4.These Reagent kits meant for laboratory/professional use only, not for Drug use.

QUALITY CONTROL AND CALIBRATION
It is recommended 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 multi calibrator, calibrate the assay.
1.When using a new reagent or lot
2.When QC values are out of range

PRECISION
Reproducibility was determined using quality control sera as shown below

	Intra run		Inter run	
Control	Level 1	Level 2	Level 1	Level 2
n	20	20	20	20
Mean (mg/dl)	10.64	13.45	10.64	13.45
SD	0.317	0.626	0.317	0.626
CV (%)	0.03	0.05	0.03	0.05

WASTE DISPOSAL
Reagents must be disposed off in accordance with local regulations.

REFERENCES
Tietz NW, ed. Clinical Guide to Laboratory Tests, 3rd ed. Philadelphia Pa: WB Saunders, 1995:22-24.
Lords Data File.

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

IFU/CAL/03 Rev.: 00; Rev Date.: 22/07/2024

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