

# **Pre-Analytical Care For Arterial Blood Gas Analysis**

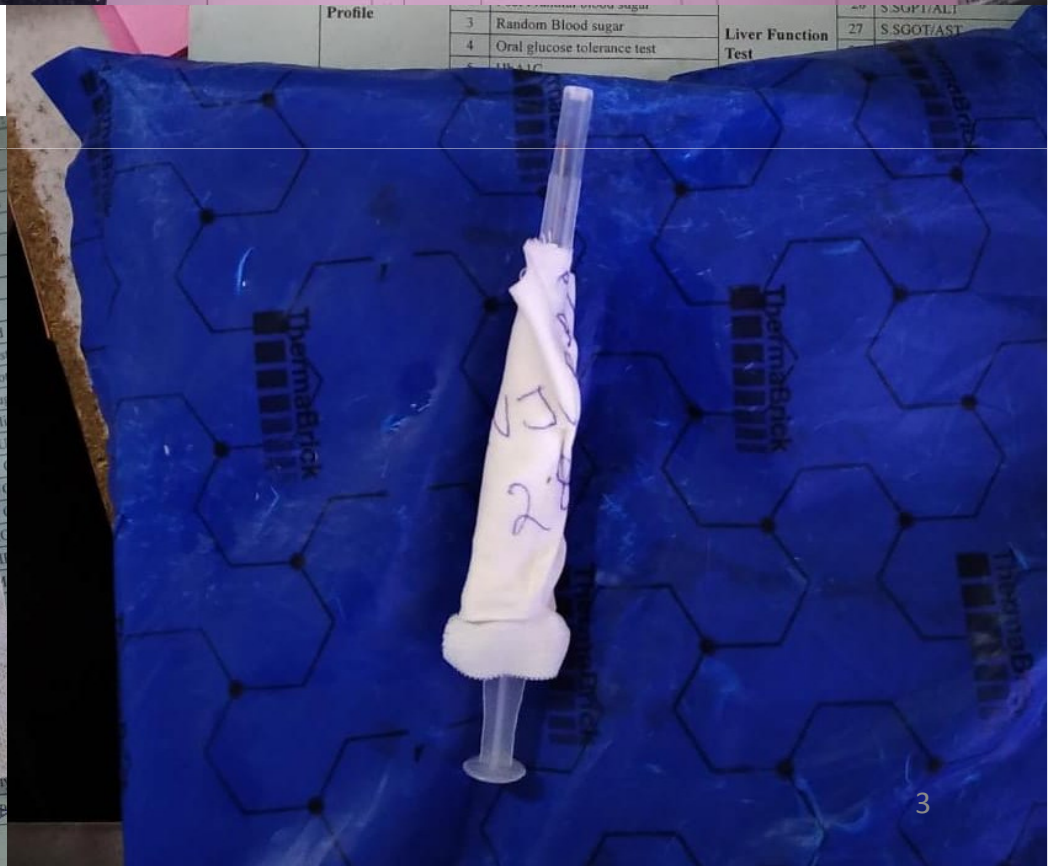
**Clinical Biochemistry Laboratory  
Sir T Hospital, Bhavnagar**

**Total 14 Slide  
Most of Slide Have Images  
No Any Major Theory**

# Sorry

**We are sharing  
some real time example  
For  
To Improve Our System.**

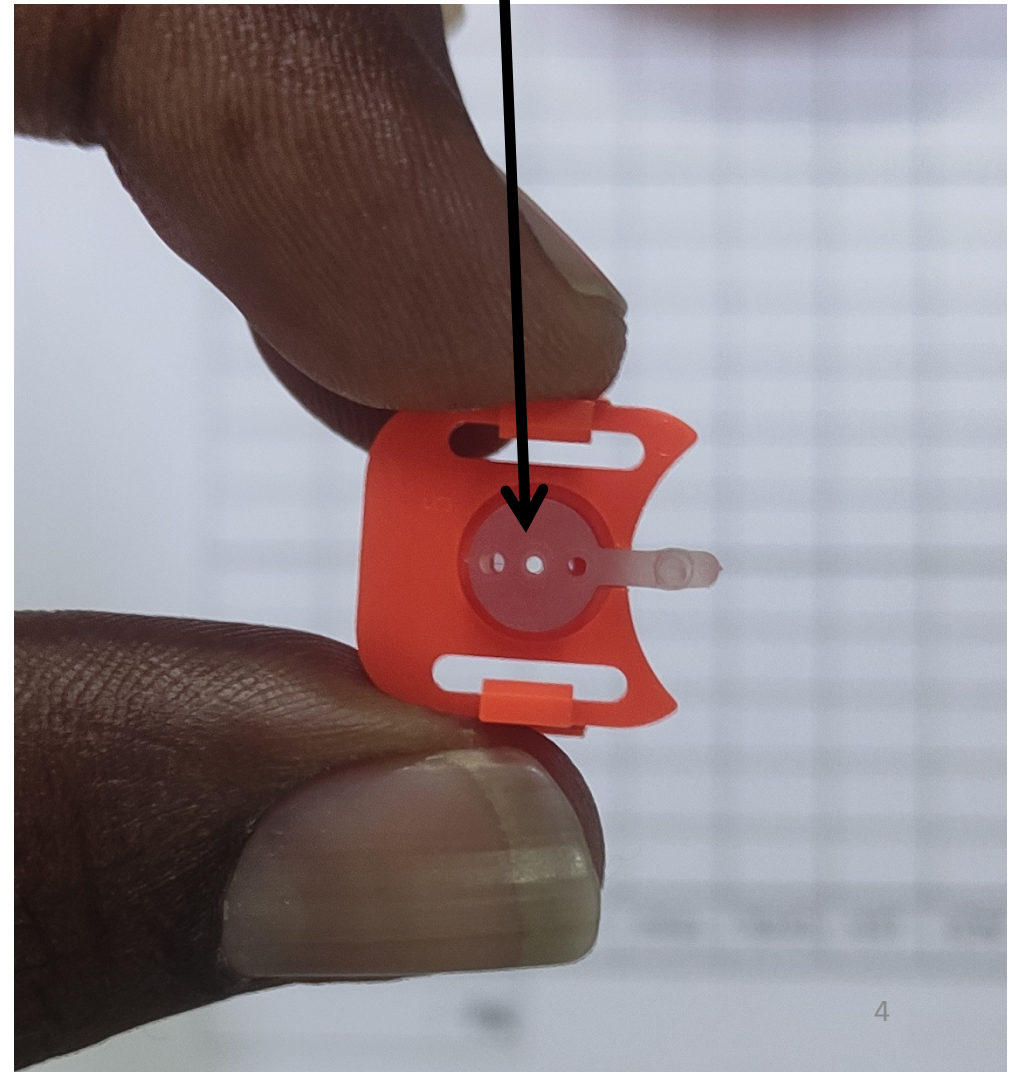
# In which sample can laboratory find the clot ?



Syringe fits here



Sample run through < 1 mm pore in instrument



- **If ABG Sample has any minor clot**
- Red Probe get deposition of clot
- This Red Probe deposited clot may go inside cartridge of the instrument.
- System Stops
- **Whole Cartridge ---- will be useless**
  - Loss of Testing service , until new cartridge received
  - Loss of remaining test of the cartridge
  - Financial 60,000 – 65000



# Arterial Sample Require

- **Minimum 1.0 ml** ----- **Maximum 2.0 ml**
- **With Heparin as Preservative (Anti-coagulant)**

**Two Type** of Heparin Vial Available In Market.

## 1. Sodium Heparin

With This Preservative , ABG sample

- Can be used for analysis of Potassium , Chloride & Lithium
- Can not be used for analysis of Sodium

## 2. Lithium Heparin

With This Preservative , ABG sample

- Can be used for analysis of Sodium, Potassium & Lithium
- Can not be used for analysis of Lithium

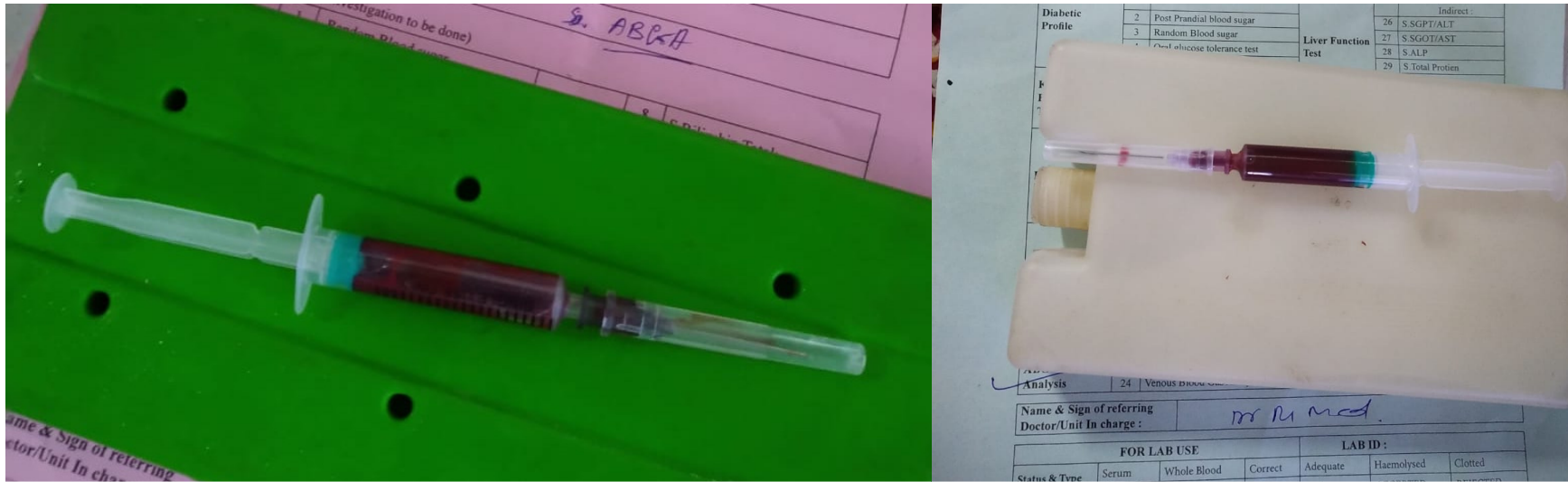
# Requirement of Heparin in ABG Sample

- Minimum 40 IU/ml concentration to prevent clot.

## Example :

- 5 ml Heparin Vial contain = 5000 units
- Means 1 ml Heparin = 1000 unit &
- Means 0.1 ml Heparin = 100 unit
- 0.1 ml Heparin + 2.0 ml Blood = 50 IU/ml conc. of Heparin
- 0.05 ml Heparin + 1.0 ml Blood = 50 IU/ml conc. of Heparin
- 0.1 ml Heparin + 5.0 ml Blood = 20 IU/ml conc. of Heparin
  - Maximum chance of clotting in sample , when sample reach to laboratory.

# What can happen with this sample ?



**Now, Clinician Should Write Request, Like**

*ALL Enzyme*

*LFT*

*RFT*

*Electrolyte*

*Thyroid Profile*

*Full Lipid Profile*



# Venous Blood

- Following parameter may be same as arterial
- pH
- HCO<sup>-</sup>

# Minimum Information Require

- **On Request Form**

- Name of Patient

- MRD

- Unit / Department (to inform critical value)

- **On Sample**

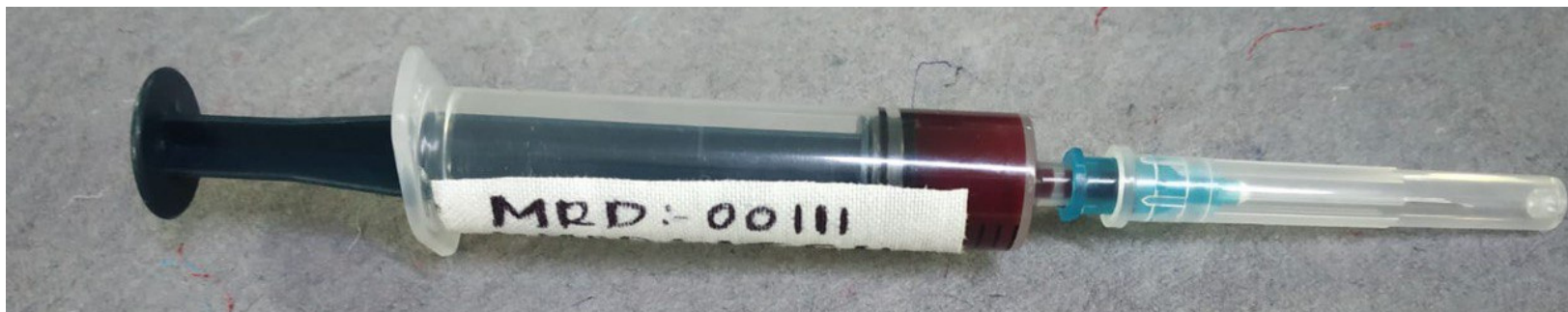
- Full & Correct MRD

- Full name (to verify MRD)



Laboratory can easily detect

- Sample Volume
- Clot
- MRD



# MRD

Is Most Crucial  
To Retrieve Report On  
**Your Mobile**

27.113.255.78/lisviewer/



Sir Takhtasinhji General Hospital, Bhavnagar  
Diagnostic Report Viewer

WELCOME BACK

LOGIN



# Sir Takhtasinhji General Hospital, Bhavnagar

## Diagnostic Report Viewer

[MEDICAL OFFICER] [Logout](#)

MRD No :

Find

PatientID	Patient Name
20/00196787	DHARMESHBHAI RAMESHBHAI PATEL (40/Male)
20/02967891	AAMAN (30/Male)
20/00396780	HITESH (7/Male)
21/00396780	HITESH (4/Male)
21/00396780	HITESH (7/Male)



## Diagnostic Report Viewer

MRD No :

Find

21/00096780	PRAVINBHAI (55/Male)
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### DIAGNOSTIC REPORTS

▼ [LABORATORY REPORTS](#)

- ▶ [Sr.Lipid Profile \(12-Sep-2022 19:23\) - \[1209221261- BIOCHEMISTRY LAB\]](#)
- ▶ [TIBC \(12-Sep-2022 19:24\) - \[1209221261- BIOCHEMISTRY LAB\]](#)
- ▶ [Electrolytes \(12-Sep-2022 18:32\) - \[1209221261- BIOCHEMISTRY LAB\]](#)

Patient Name : ASHABEN (43/F)

S. Sodium (NA);.....: 140 mEq/L (136 - 145)

S. Potassium (K);.....: 4.2 mEq/L (3.5 - 5.1)

Chloride.....: 110 mmol/L ( )

Notes :

Electronically Signed by Dr.Pratik G Dabhi at 12-Sep-2022 06:32

- ▶ [Iron \(12-Sep-2022 19:23\) - \[1209221261- BIOCHEMISTRY LAB\]](#)
- ▶ [Ferritin \(12-Sep-2022 19:23\) - \[1209221261- BIOCHEMISTRY LAB\]](#)

# Bridge of Better Output

