

CALIBRATION CERTIFICATE

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| Customer : Naalvar diagnostics : Neelakidangu Street, : Karaikal-609602 : PH-04368-224313 | Date of Calibration : 10.01.2022 Due Date : 09.01.2023 Serial No : YX-79001078 |
| Instrument : Fully Auto Chemistry Analyzer Model : BS240 Manufacturer: SHENZHEN MINDRAY BIO-MEDICAL ELECTRONICS CO., LTD | |

Golden Harvest Industries is an organization dealing in MINDRAY Auto Hematology Analyzers. It has a Technically Qualified Technical Team to ensure trouble free operation. The Described instrument has been checked and calibrated under the ambient conditions stated above.

| Power Supply | | | |
|------------------|------------------|------------------|----------------|
| UPS Supply | Expected reading | Measured reading | Remarks |
| Earth to Phase | 230 ± 10 VAC | 226 VAC | With in Limits |
| Neutral to Phase | 230 ± 10 VAC | 226 VAC | |
| Earth to Neutral | 0 - 5 VAC | 0 VAC | |

| Power Supply Unit | Expected reading | Measured reading | Remarks |
|---------------------|------------------|------------------|---------------------------|
| 5V Output | 5VDC ± 0.25V | 5.02 | Values are with in Limits |
| 12V Output | 12 VDC ± 1.2V | 12.04 | |
| 12V Reagent Refrig. | 12 VDC ± 1.2V | 12.08 | |
| 24V Output | 24 VDC ± 2.4V | 24.10 | |

| Software Communication | Status | Remarks |
|---|--------|---------|
| Operation Software Initialization Check | Normal | Nil |
| Communication between PC and Analyzer | Normal | Nil |
| Shutdown Check | Normal | Nil |

| Optical System Check | AD value | AD value range | Remarks |
|----------------------|----------|----------------|-------------------------------|
| 340 nm | 50709 | 48000 to 54000 | AD values are with in limit - |
| 405 nm | 50770 | | |
| 450 nm | 50765 | | |
| 510 nm | 50750 | | |
| 546 nm | 50745 | | |
| 578 nm | 50755 | | |
| 630 nm | 50841 | | |
| 670 nm | 50785 | | |

| Temperature Check | Range | Measured Value | Remarks |
|------------------------------------|------------------|----------------|-------------------------|
| Reaction Carousel Temperature | 36.7 ° - 37.3 °C | 37.0 °C | Values are within Range |
| Cuvette cleaning Fluid Temperature | 39.0 ° - 49.0 °C | 43.9 °C | |
| Cuvette wash solution Temperature | 39.0 ° - 49.0 °C | 44.1 °C | |
| Reagent Preheating Temperature | 40.0 ° - 50.0 °C | 45.0 °C | |

| Robotic Check | Status | Remarks |
|--------------------------------|---------|---------|
| Sample / Reagent Probe Check | Normal | Nil |
| Sample / Reagent Syringe Check | Normal | Nil |
| Wash Unit Movement | Normal | Nil |
| Mixer Unit Check | Normal | Nil |
| Interior Washing Probe | Normal | Nil |
| Exterior Washing Probe | Normal | Nil |
| Exterior Washing Mixer | Normal | Nil |
| Reagent Unit | Normal | Nil |
| Reaction Unit | Normal | Nil |
| Reagent Preheater | Normal | Nil |
| Dust Filters | Cleaned | Nil |

| Fluidic Check | Status | Remarks |
|--------------------------------------|--------|---------|
| Wash Unit Detergent & Water Dispense | Normal | Nil |
| Wash Unit Sample & Water Aspiration | Normal | Nil |
| Interior Washing Probe | Normal | Nil |
| Exterior Washing Probe | Normal | Nil |
| Exterior Washing Mixer | Normal | Nil |
| Liquid Level Detection | Normal | Nil |
| Distilled Water filter | OK | Nil |

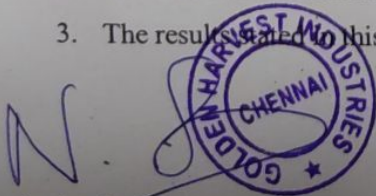
The Calibration includes:

- Adjustments:** Checked the alignments for Sample/Reagent probe, Washing Unit, Mixer, Reaction Disk, Reagent/Sample Disk and their respective home positions.
- Pneumatics:** Checked the functions of Sample/Reagent Syringe and Distilled Water Supply Unit Pump and Solenoid Valves.
- Temperature:** Checked the temperature monitor for Pre-Heater, Reagent disk and Reaction Disk.

The above mentioned values are found to be with in the standard specified by SHENZHEN MINDRAY BIO-MEDICAL ELECTRONICS CO., LTD - CHINA.

REMARKS/DEVIATIONS IF ANY:

1. The recalibration interval should be determined based on the user's requirements.
2. The user should determine the stability of the instrument for its intended use.
3. The results of this certificate relate only to the instrument calibrated.



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