

CALIBRATION CERTIFICATE

Certificate No: 4409

| | |
|--|----------------------------------|
| Customer : CPC Medical Laboratory | Date Calibrated : 15/01/2021 |
| Sreedevi Buildings, | Working Temperatures : 25 ± 1° C |
| Mavoor Road, | Due Date : 14/01/2022 |
| Calicut, Kerala | Serial No : KJ18C19030007 |
| Instrument : Electrolyte Analyzer | |
| Model : AFT-800E | |
| Manufacturers : MEIZHOU CORNLEY© HI-TECH CO., LTD. | |

Golden Harvest Industries is an organization dealing in MEIZHOU CORNLEY© HI-TECH CO., LTD. Electrolyte 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 |
| Phase to Neutral | 230 ± 10 VAC | 230 VAC | Within Limits |
| Phase to Earth | 230 ± 10 VAC | 230 VAC | |
| Neutral to Earth | 0 - 5 VAC | 0 VAC | |

| Parameter | mV Range | Cal A | Cal B | Remarks |
|----------------|-----------|---------|----------|---------------|
| Sodium [Na+] | 45-140 mV | 61.4 mV | 76.4 mV | Within Limits |
| Potassium [K+] | 45-120 mV | 53.0 mV | 46.7 mV | |
| Chloride [Cl-] | 50-120 mV | 108 mV | 112.0 mV | |

| Parameter | Cal B - Cal A | Measured Voltage | Remarks |
|----------------|----------------|------------------|---------------|
| Sodium [Na+] | 12.0 ~ 21.0 mV | 15 mV | Within Limits |
| Potassium [K+] | -4.2 ~ -7.3 mV | -6.3 mV | |
| Chloride [Cl-] | 5.4 ~ 10.8 mV | 4.0 mV | |

| Sample Sensor | Without Liquid mV | Measured reading | Resistance Range | Resistance |
|---------------|-------------------|------------------|------------------|------------|
| Front Sensor | 1.70 ± 0.1 V | 1.70 V | 10 ~ 230 | 24 |
| Back Sensor | 1.70 ± 0.1 V | 1.70 V | 10 ~ 230 | 79 |

| Sample Sensor | With Liquid mV | Measured reading | Range |
|---------------|----------------|------------------|---------------|
| Front Sensor | ≤ 1.0 V | 0.8 V | Within Limits |
| Back Sensor | ≤ 1.0 V | 0.7 V | |

| | With Liquid mV | Measured reading | Range |
|-------|----------------|------------------|---------------|
| 5 V | 5.0 V | 4.75 ~ 5.25 V | Within Limits |
| 12 V | 11.98 V | 11.40 ~ 12.60 V | |
| -12 V | -12.01 V | -11.40 ~ 12.60 V | |
| 24 V | 24.40 V | 22.80 ~ 25.20 V | |
| 3.3 V | 3.3 V | 3.2 ~ 3.4 V | |

| Test | Status | Remark |
|-----------------------|--------|--------|
| System Initialization | Normal | Nil |
| Display | Normal | Nil |
| Fluid Flow | Normal | Nil |
| Printer Check | Normal | Nil |

This Instrument and the above measuring parameters are calibrated as per Manufacturer Guidance. The estimated uncertainty to be associated with the results is at a confidence level of approximately 99%.

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 stated in this certificate relate only to the instrument calibrated.

Calibrated By:



Jithin Raj
Sr. Engineer - Technical Support

Verified & Certified By:

Vinoth Kumar. S
Zonal Manager - Technical Support

INSTALLATION & OPERATIONAL QUALIFICATION DOCUMENTS

Model : **AFT-800 E Electrolyte Analyzer**
Manufacturer : **Meizhou Cornley Hi-Tech Co., Ltd.**
Serial No : **KJ-18C19030007**
Installation Date : **15.06.2019**

Installation / Validation Report

| | | |
|---|---|---|
| CORNLEY –AFT-800 E Electrolyte Analyzer | | - IQ/ OQ / Documents |
| Customer Address: Calicut Pathology Centre(CPC) Calicut Sreedevi Buildings, Mavoor road. Calicut-673004 | | Contact Person: Mr.Mohanan., Telephone No: 984751747 |
| Serial No | : KJ-18C19030007 | Installation date: 15.06.2019 |
| Installation Qualification | | |
| Transport damage | | |
| Package damaged: | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Parts damaged | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| If yes, please specify: | | |
| Initial check | | |
| Missing Parts (if any) (Check against packing list) | Number | Part description |
| <input type="checkbox"/> Yes → Please specify parts | _____ | _____ |
| <input checked="" type="checkbox"/> No | _____ | _____ |
| <input type="checkbox"/> Yes → Please specify parts | _____ | _____ |
| <input checked="" type="checkbox"/> No | _____ | _____ |
| * Please return parts, including a malfunction report. | | |
| <input checked="" type="checkbox"/> Line Voltage / Main Supply: 210 – 230V: 231V | | |
| <input checked="" type="checkbox"/> Earthing Voltage (0-5V): 0V | | |
| <input checked="" type="checkbox"/> Room Air conditioned: | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input checked="" type="checkbox"/> Stabiliser / UPS: ONLINE UPS | | Rating : 1 KVA |
| (We recommend connecting AFT-800E to UPS of 0.5 KVA) | | |
| The system Described meets all the criteria outlined in this installation qualification Documents. All items have been checked & Installation has been completed. | | |
| The System is ready for Performing Operational Qualification. | | |
| Performer: Mr.Jithin Raj | | Reviewer: Mr.N.Ganesan |
| Date : 29.11.2021 | | |

Installation / Validation Report

CORNLEY – AFT-800 EElectrolyte Analyzer

- IQ/ OQ / Documents

Customer Address: Calicut Pathology Centre(CPC) Calicut
Sreedevi Buildings, Mavoor road,

Contact Person: Mr.Mohanan.,

Calicut-673004

Telephone No: 984751747

Serial No : KJ-18C19030007

Installation date: 15.06.2019

Operational Qualification

- | | | |
|--|---|--------|
| <input checked="" type="checkbox"/> Switch ON the Analyzer, Check the initialising process | : | Normal |
| <input checked="" type="checkbox"/> Cal A Priming status | : | Normal |
| <input checked="" type="checkbox"/> Cal B Priming status | : | Normal |
| <input checked="" type="checkbox"/> 2 Point Calibration status | : | Normal |
| <input checked="" type="checkbox"/> Flow Path Status | : | Normal |
| <input checked="" type="checkbox"/> Aspiration Status | : | Normal |
| <input checked="" type="checkbox"/> Checked All Electrodes Millivolts and Performance | : | |

Tests/Comments (if any):

The instrument is performing in the prescribed standards; validation of the same has been performed.

This is to certify that the instrument can be used for operational analysis.

The system Described meets all the criteria outlined in this installation qualification Documents. All items have been checked & Installation has been completed.

The System is ready for Performing Performance Qualification.

Performer: Mr.Jithin Raj
Date : 29.11.2021

Reviewer: Mr.N.Ganesan

Certificate

This is to certify that the following instrument have been validated as per the manufacturer's protocol & is found to be working satisfactorily.

Instrument Name : Electrolyte Analyzer

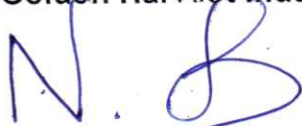
Model : AFT-800 E

Serial No : KJ-18C19030007

Manufacturer : Meizhou Cornley Hi-Tech Co., Ltd.

This IQ & OQ Certificate valid from: **15.06.2019** to **14.06.2020**

For **Golden Harvest Industries**



Zonal Manager - Technical Support