

Pharma Preservation in a Cold Storage

- Innovation & Technical Head
Gubba Pharma Cold Storage



Pharma Preservation in a Cold Storage

RACK SUPPORTED EURO PALLET COLD STORAGE



Guoba
Pharma Cold Storage
Precision in Preservation

Various Packagings



BLOCK STACKING MULTI LEVEL COLD STORAGE – 2 TON JUMBO BAG



MECHANISED HANDLING SYSTEM



SINGLE FLOOR BLOCK STACKING 2 TON JUMBO BAG COLD STORAGE FACILITY



EXTERNAL VIEW OF A SINGLE LEVEL COLD STORAGE



ACCURATE INVENTORY MANAGEMENT

INVENTORY

Web Enabled Inventory Monitoring System

Reports - Windows Internet Explorer
http://www.gubbacold.com/Content/ReportPopUp.aspx?Window=PopUp&FeatureId=20

As On Kgs Report

Date: 05/08/2013 Location: GUBBA S1 (AGRO)
Placement in Grill: Both Report-Type: Product-wise
Company: MARS INTERNATIONAL INDIA PVT LTD-COMMERCIAL

Show on selected date [View Report](#) [Export](#) [Get memos with -ve stock](#) [Close](#)

Displaying Report As On '05/08/2013'

Grill Placement	Location	Company	Chamber	Date
Both	GUBBA S1 (AGRO)	MARS INTERNATIONAL INDIA PVT LTD-COMMERCIAL	ALL	05/08/2013

Silo	Company	Location	Chamber	Product	BAGS	KGS
1	MARS INTERNATIONAL INDIA PVT LTD-COMMERCIAL	GUBBA AGRO FRESH PVT LTD (SHAMEERPET)	KRISHNA	BROKEN RICE	986	49520
2	MARS INTERNATIONAL INDIA PVT LTD-COMMERCIAL	GUBBA AGRO FRESH PVT LTD (SHAMEERPET)	KRISHNA	MAIZE	24218	1477919
					TotalBags: 25204	TotalKgs: 1527439.00

Internet | Protected Mode: On 12:16 PM 8/5/2013

STOCK AUDITING

Monthly Inventory Audit

S1 - Performance Audit Report [Protected View] - Microsoft Excel (Product Activation Failed)

File Home Insert Page Layout Formulas Data Review View

D6

Inventory Deviations Report

	MemoNo	Comany	Product	Hybrid	Lot	Chamber	Rack	Bags	Total Wt(Kgs)	Points	Category	Remarks	Action Taken	Remarks
3	S-2657	INDIA PVT LTD-COMMERCIAL	MAIZE		SRISHIVACORPORATION	KRISHNA	A10	140	8560	Stock updated after inspection.	Major	Total bags- 420 - Ok	Completed.	Ok
4	S-2665	MARS INTERNATIONAL INDIA PVT LTD-COMMERCIAL	MAIZE		SRISHIVACORPORATION	KRISHNA	A10	141	8683	No Denomination On stack card	Minor		Not Completed	Not Ok
5	S-2671	MARS INTERNATIONAL INDIA PVT LTD-COMMERCIAL	MAIZE		SHUSHEELAENTERPRISERS	KRISHNA	TBR	415	25104	No Denomination On stack card	Minor	Need Rack Number	Rack Number Completed. Denomination Pending.	Not Ok
6	S-2730	MARS INTERNATIONAL INDIA PVT LTD-COMMERCIAL	MAIZE		SRILAXMI MATHATRADERS	KRISHNA	TBR	417	25024	No Denomination On stack card	Minor	Need Rack Number	Rack Number Completed. Denomination Pending.	Not Ok
7	S-2651	MAHINDRA & MAHINDRA LTD-AGRI BUSINESS COMMERCIAL	MAIZE	8007	1320251	KRISHNA	TBR	121	10890	No Denomination On stack card	Minor	Need Rack Number	Rack Number Completed. Denomination Pending.	Not Ok
8	S-2677	MARS INTERNATIONAL INDIA PVT LTD-COMMERCIAL	MAIZE		GOLIRANGIA HBROTHERS	KRISHNA	TBR	415	25448	No Denomination On stack card	Minor	Need Rack Number	Rack Number Completed. Denomination Pending.	Not Ok
9	S-2655	MARS INTERNATIONAL INDIA PVT LTD-COMMERCIAL	MAIZE		SRILAXMIMATHATRADERS	KRISHNA	TBR	429	26218	No Denomination On stack card	Minor	Need Rack Number	Rack Number Completed. Denomination Pending.	Not Ok
10	S-2683	MAHINDRA & MAHINDRA LTD-AGRI BUSINESS COMMERCIAL	MAIZE	827	1320351	KRISHNA	TBR	177	17095	No Denomination On stack card	Minor	Need Rack Number	Rack Number Completed. Denomination Pending.	Not Ok

Inventory Audit Report Deviations Report

Ready 64% available (plugged in, charging) 12:42 PM 8/5/2013

REPORTS

- Product Expiry Report
- FIFO Report
- Automated Previous day Transaction reports
- Stock report (Daily/Weekly/Monthly)
- Space Utilisation Report
- Transaction Mail/SMS
- Monthly Audit Report
- Air Monitoring Report
- Temperature Mapping Report

TEMPERATURE MAPPING

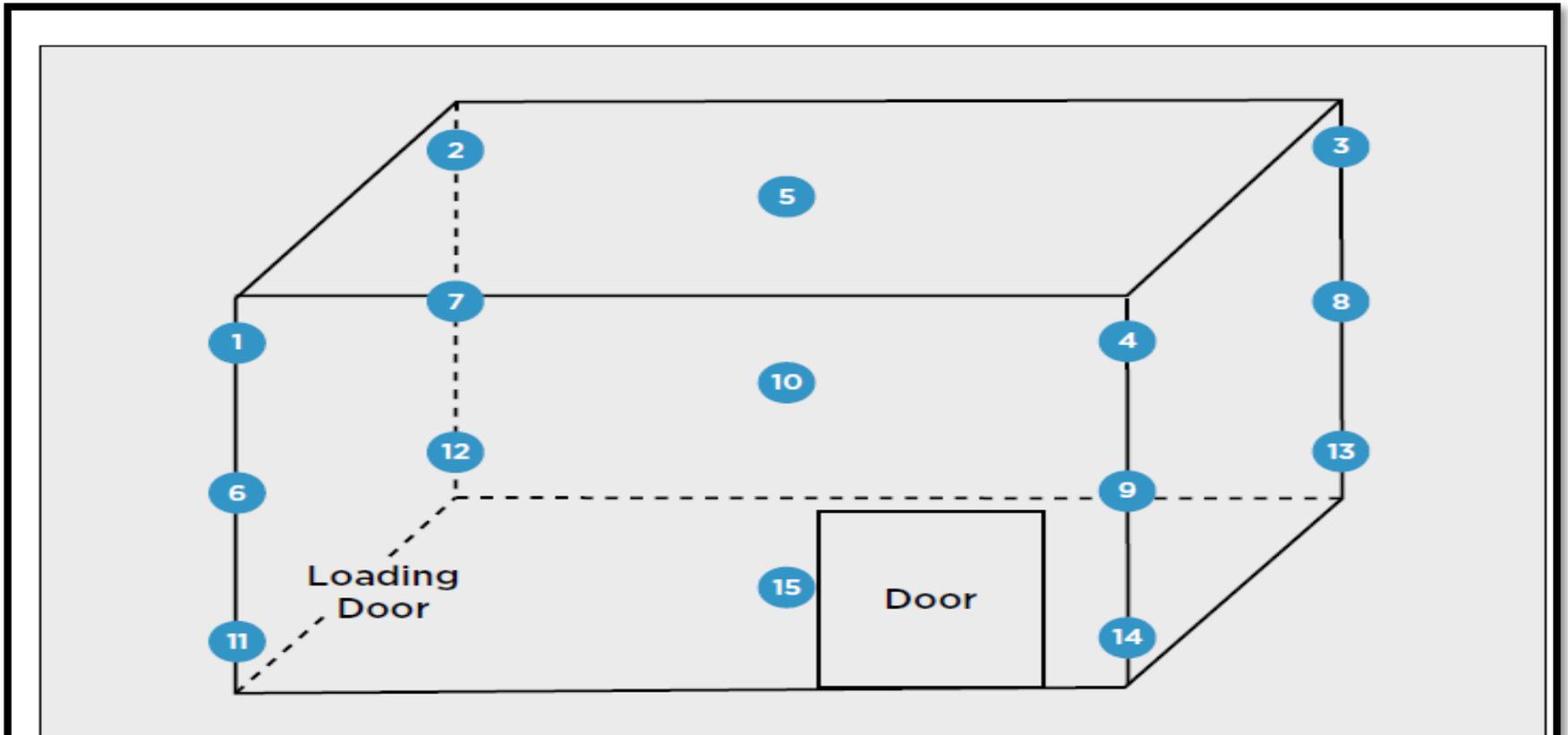


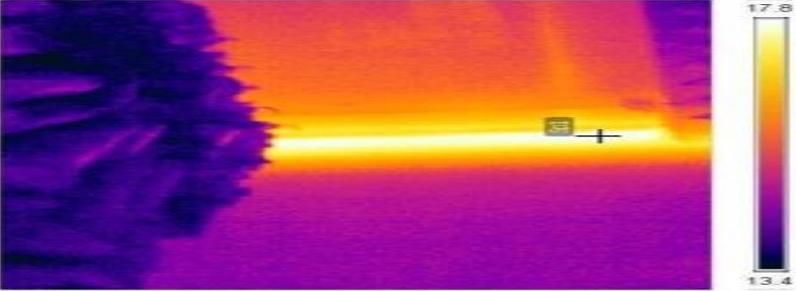
Figure 1. The even distribution of 15 sensors is a typical pattern for three-dimensional mapping of a small space.

THERMAL TRACKING

Gubba
COLD STORAGE LTD

GUBBA COLD STORAGE
LOCATION: Y5

8/17/2012 11:43:05 AM **Thermal Camera View**



8/17/2012 11:43:05 AM **Naked Eye View**



Measurements		°C
Sp1	18.0	

Parameters	
Emissivity	0.95
Ref. temp.	20 °C

3/1

REAL TIME ACCESS OF TEMPERATURE & HUMIDITY

The screenshot displays a web browser window titled "DATA LOGGER - Windows Internet Explorer" with the URL <http://14.140.127.10:8080/mlogger1.1/presentation/zul/MainPage.zul>. The interface includes a navigation menu with "Logger Live", "Logger Setting", "Show Settings", "Change Password", and "Exit". A status bar at the top indicates "ONLINE".

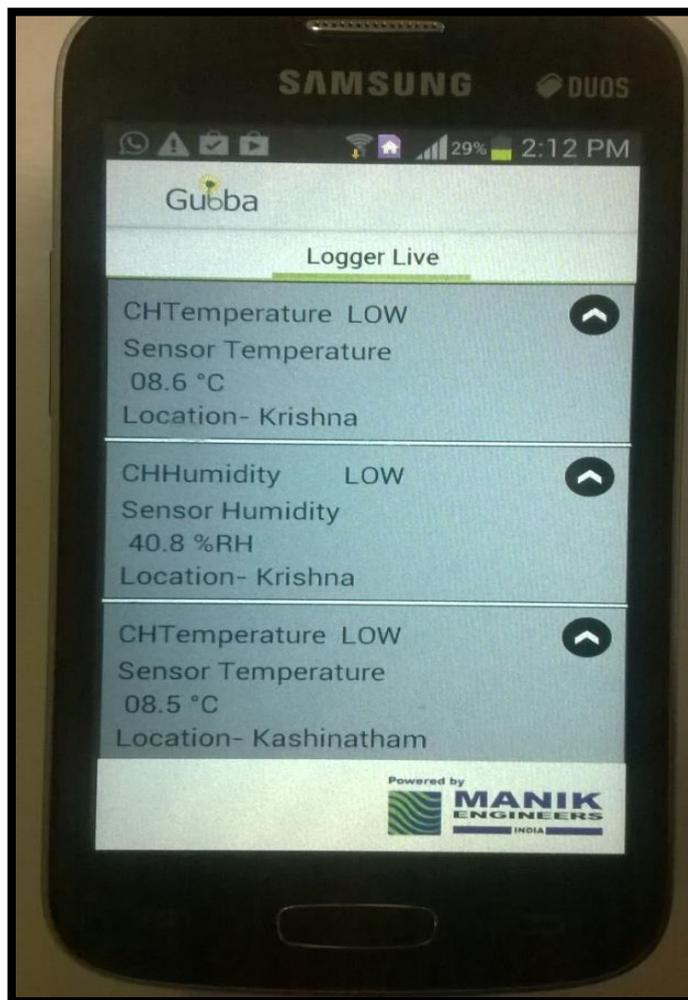
DATE TIME	CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7	CH 8
05/8/2013 12:28:00 PM	11.7 °C	45.6 %RH	08.7 °C	41.9 %RH	SKIP	SKIP	SKIP	SKIP
Status								
Sensor No	Temperature	Humidity	Temperature	Humidity	Temperature	Humidity	Temperature	Humidity
Location	Krishna	Krishna	Kashinatham	Kashinatham	5	6	7	8

Below the data table is a "DATA RETRIVAL SECTION" with "START" and "END" date pickers and a "DOWNLOAD" button. The "START" date is set to "Aug 5, 2013" and the "END" date is "Aug 5, 2013". A pagination bar shows "1 / 1".

DATE TIME	CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7	CH 8
-----------	------	------	------	------	------	------	------	------

The Windows taskbar at the bottom shows the system tray with the date and time: "12:41 PM 8/5/2013".

PHONE APP TO CHECK TEMPERATURE & HUMIDITY



21 CFR COMPLIANT DATA LOGGERS

Mean Kinetic Temperature

Mean Kinetic Temperature

MKT or Mean Kinetic Temperature gives a far better representation of the effects of temperature change on sensitive materials such as seeds during storage and distribution. In many instances it can be shown that the ‘shelf life’ of sensitive materials is directly related to the MKT. Mean Kinetic Temperature can be calculated from a series of temperatures. It differs from other means (such as a simple numerical average or arithmetic mean) in that higher temperatures are given greater weight in computing the average.

Mean Kinetic Temperature

$$T_K = \frac{\frac{\Delta H}{R}}{-\ln \left(\frac{e^{\frac{-\Delta H}{RT_1}} + e^{\frac{-\Delta H}{RT_2}} + \dots + e^{\frac{-\Delta H}{RT_n}}}{n} \right)}$$

Where:

T_K is the mean kinetic temperature in kelvins

ΔH is the activation energy (typically within 60–100 kJ·mol⁻¹ for solids or liquids)

R is the gas constant

T_1 to T_n are the temperatures at each of the sample points in kelvins

n is the number of temperature sample points

RODENT MANAGEMENT



CERTIFICATIONS

- ISO
- OHSAS
- HACCP

GUIDELINES

- GDP GUIDELINES
- ICH GUIDELINES
- WHO GUIDELINES
- BEST PRACTISE GUIDANCE FOR STORAGE AND HANDLING OF VACCINES AS PER CENTRE FOR DISEASE CONTROL AND PREVENTION

CUSTOM BONDED WAREHOUSE COLD STORAGE FACILITY

SAFETY CULTURE

SOPs & Documentation

Training

Mock Drill Training



Quality Control Team



HVAC & MHE
Maintenance



Safety Officer



IT Maintenance



Refrigeration Head



Rodent & Insect
Pest Controller



Inventory
Auditor



Customer Care



Quality Control

Outsourcing of Pharma Preservation

Outsourcing of Pharma Preservation

Why?

Outsourcing of Pharma Preservation Why?

- Need not Invest
- Use and Throw
- Scalability
- Worry Outsourced
- Expert Job

Outsourcing of Pharma Preservation Why?

Why Not? 😊

Thank You