

# 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



# 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		SHUSHEELA ENTERPRISES	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

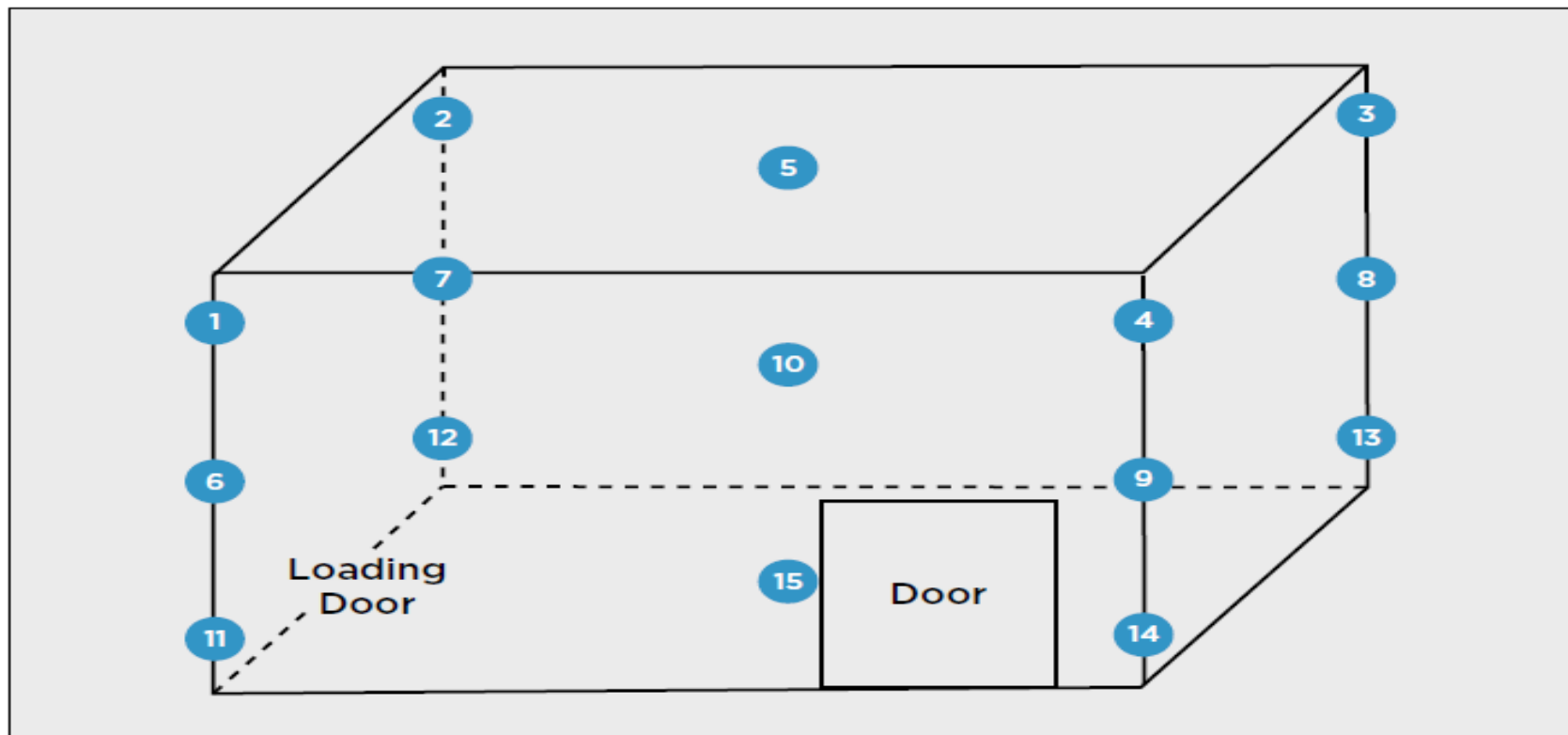
Inventory Audit Report Deviations Report

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



# REAL TIME ACCESS OF TEMPERATURE & HUMIDITY

DATA LOGGER - Windows Internet Explorer

http://14.140.127.10:8080/mlogger1.1/presentation/zul/MainPage.zul

DATA LOGGER

Logger Live | Logger Setting | Show Settings | Change Password | Exit

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

DATA RETRIVAL SECTION

START: Aug 5, 2013 0 0 0

END: Aug 5, 2013 23 59 59

DOWNLOAD

1 / 1

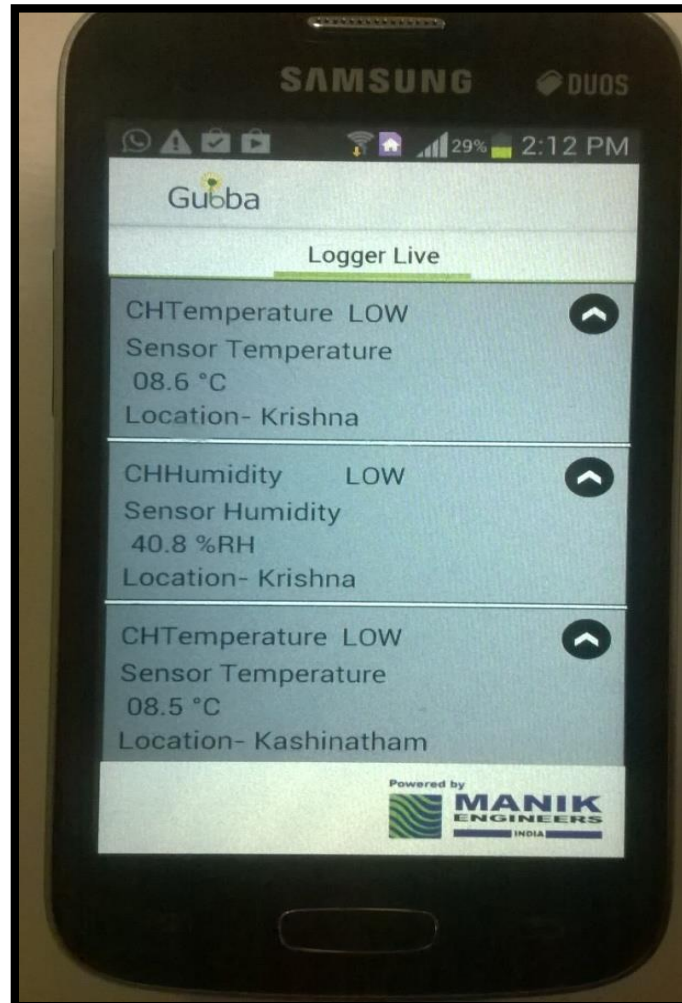
DATE TIME	CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7	CH 8
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Done

Internet | Protected Mode: On

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](#)

$\Delta H$  is the [activation energy](#) (typically within 60–100 kJ·mol<sup>-1</sup> 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



# PHYSICAL INSPECTION

All disputes subject to Hyderabad Jurisdiction only

INWARD MEMO



**Gubba** M2

**GUBBA AGRO FRESH PVT LTD**

**Office :** 3-6-305/43/1, Avantinagar, Basheerbagh,  
Hyderabad-500 029-17

**Phone :** 66787626, 66848626 **Fax:** 040-66133626

**Plant :** PLOT NO 101 & 103, I D A MEDCHAL, R DIST.

**Web :** [www.gubbagroup.com](http://www.gubbagroup.com)

**Email :** [support@gubbagroup.com](mailto:support@gubbagroup.com)

S.No	M2-23531	Date	21/Jul/2012
Company	GREAT SEEDS INTL PVT LTD		
TotalBags	20	Total Weight	500 kgs
In Time	10:30	Out Time	11:30
		Vehicle No	AP 28 TA 1465
Remarks			
Company DC.No	NO DC	Bags Condition	Good
Larva/Weevil	Not Present	Ded Larva/Weevil	Not Present
Grill In	No	Grill Out	Yes

### PALLET DETAILS

Pallet/Bay	Bags	Kgs	Lot No	Chamber	Hybrid	Product
L3	7	320	GREAT	KAILASH 4 EXTN	BHAVANI	BHENDI
L3	6	250	GREAT	KAILASH 4 EXTN	NEW DURGA	BHENDI
L3	7	330	GREAT	KAILASH 4 EXTN	VAJRA SUPER	BHENDI

Total	20	900
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Signature of Representative/Driver		Signature	
Name	null	Supervisor	HARI



 **Guoba**  
**Pharma Cold Storage**  
Precision in Preservation

# 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



Rodient & Insect  
Pest Controller



Inventory  
Auditor



Customer Care



Quality Control

# Outsourcing of Pharma Preservation

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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