

purfresh

MAKING GLOBAL PRODUCTS LOCAL

Purfresh Total Active Environment Solution for Intermodal Shipping of Perishable and Temperature Sensitive Commodities
UC Davis Emerging Postharvest Technologies - 2013

Intermodal Perishable Shipping Challenges

Estimated 20-30% of Quality Loss due to Improper Temperature or Atmosphere in Long and Complex Perishable Cold Chain

Managed Shipping Environment

Unmanaged Shipping Environment

purfresh

Purfresh Total Active Environment - TAE

	Temperature	Ozone	Ethylene	CO2
Measurement	Yes	Yes	No	Yes
Management	Yes	Yes	Yes	Yes

purfresh

Benefits of Ozone

Highly Reactive and Powerful Oxidizer – 1.5 Times the Oxidizing Potential of Chlorine

Reduces Decay Controls Ripening Enhances Food Safety

Kills Decay-Causing & Pathogenic Microbiols (air/surface)

Controls Ripening (H₂O, CO₂)

Destroys Ethylene (C₂H₄)

FDA Approved as an additive for food products in 2001

USDA Approved by USDA and IFOAM for organic processing

purfresh

Intellipur In-Transit Visibility and Management

Near Real Time Monitoring of Container Conditions

- Data communicated via satellite and GSM to cloud-based Intellipur software platform

- Atmospheric Reporting
- Reefer Functionality Reporting
- Corrective or Proactive Control
- Logistical Tracking
- Security and Cargo Integrity

Container	Temp	Hum	CO2	O2	
CGMUS564789	17.4	2.5%	82%	0.049%	20.9%

intellipur **purfresh**

Current Applications of Intellipur

- Utilize In Transit Data For Arrival Preparation
- Corrective Actions in Transit
- Post Trip Reports to Benchmark Quality
- Logistic Email Alerts

intellipur **purfresh**

intellipur | Cold Chain Monitoring Customer Experience

High Value Frozen Root Stock

Identified Incorrect Set Temperature →

Corrected Temperature Setting

Averted Damage and Loss

Message
Subject: SUC0638011 | Temp. Setpoint Alarm | Alarm Triggered / Notification #3
From: Purfresh (purch@intellipur.com) Sent: Thu 03/07/2013 1:03 PM
To: Alarm Admin
Company: Fresh Fruit Inc.
Shipping Line: ABC Lines
Container: S000038911
Purfresh Unit #: 2000282
Alarm Code: 3118
Alarm Name: Temp. Setpoint Alarm | Alarm Triggered
Alarm Message: Temperature setpoint out of range for 60 minutes Alarm Timestamp: 10:42 AM PST, 03/07/2013

Message
Subject: SUC0638011 | Temp. Setpoint Alarm | Alarm Cleared
From: Purfresh (purch@intellipur.com) Sent: Thu 03/07/2013 1:09 PM
To: Alarm Admin
Company: Fresh Fruit Inc.
Shipping Line: ABC Lines
Container: S000038911
Purfresh Unit #: 2000282
Alarm Code: 3118
Alarm Name: Temp. Setpoint Alarm | Alarm Cleared
Alarm Message: Temperature setpoint out of range for 60 minutes Alarm Timestamp: 01:30 PM PST, 03/07/2013

Temperature (°C)	7.0	6.0	5.0	4.0	3.0	2.0	1.0	0.0	-1.0	-2.0	-3.0	-4.0	-5.0	-6.0	-7.0	-8.0	-9.0	-10.0
Setpoint	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2
Average	6.3	5.3	4.3	3.3	2.3	1.3	0.3	-0.7	-1.7	-2.7	-3.7	-4.7	-5.7	-6.7	-7.7	-8.7	-9.7	-10.7
Control Setting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vent Setting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

intellipur | purfresh

intellipur | Purfresh Total Active Environment

Integrated Solution to Optimize Container Environment and Cold Chain Integrity

Relative Humidity
Temperature
CO2
O2
Air
OZONE

COMPARE

intellipur | purfresh