

SKYCELL™ PHARMA LOGISTICS PACKAGING SYSTEM

THE THERMOSTABLE SYSTEM

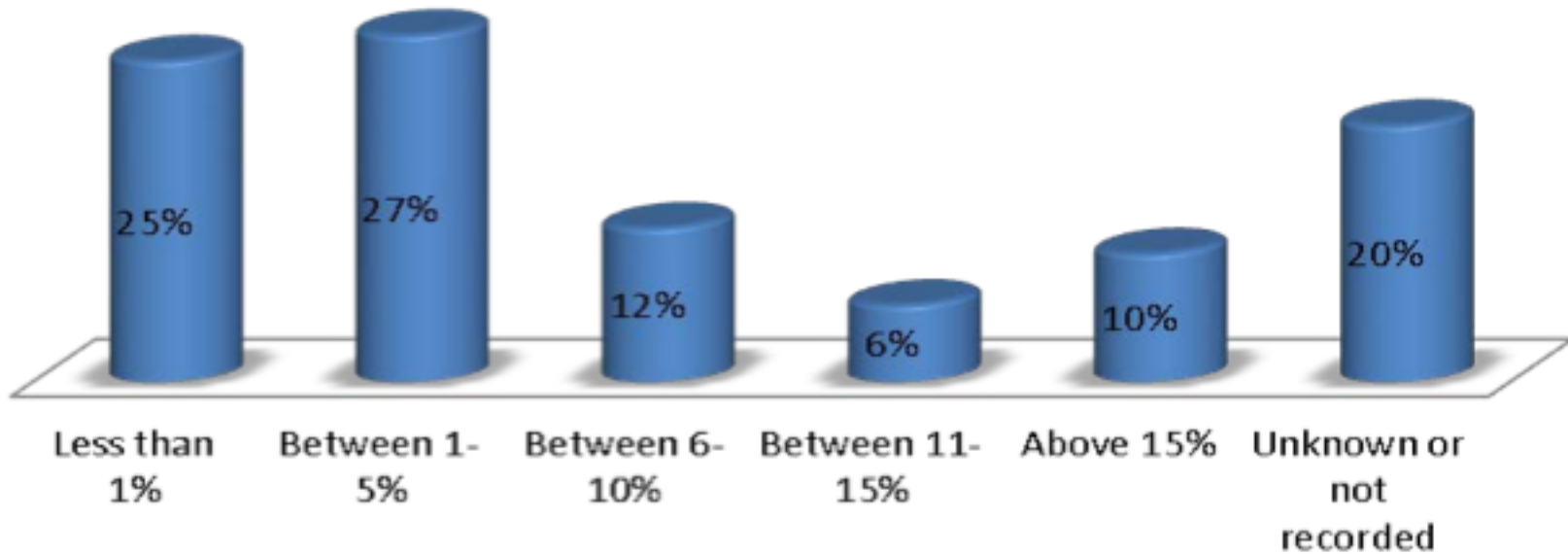


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Survey of Pharma Supplychain Managers 2012

Currently what percentage of temperature sensitive product shipped is recorded as having an excursion or deviation whilst in the distribution chain?

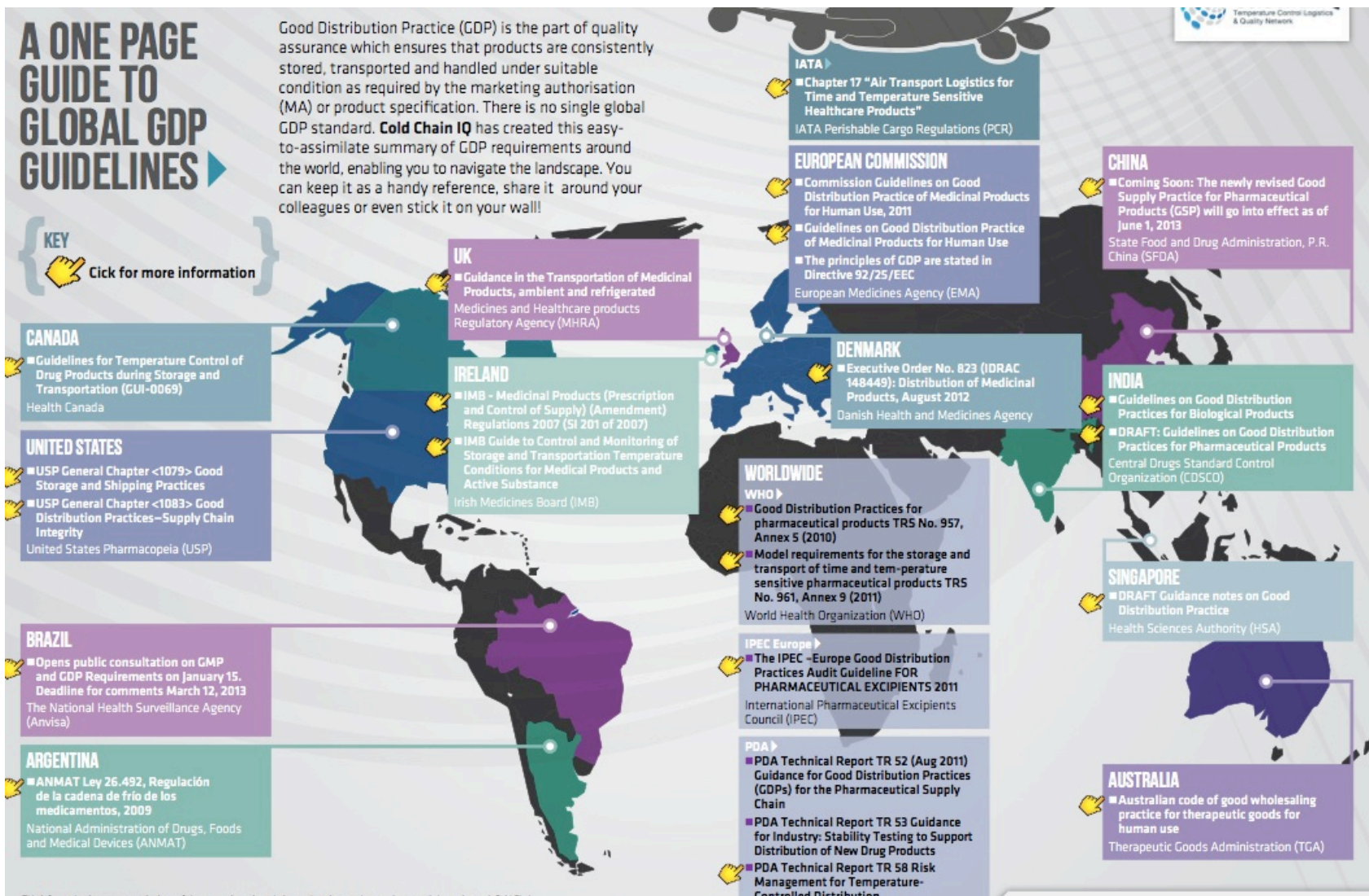


Source: IQPC 2012

Examples of Airport Situations in Emerging Markets with strong impact on pharma logistics performance



Regulatory Changes Worldwide: from EU, China, Saudi Arabia to Brazil

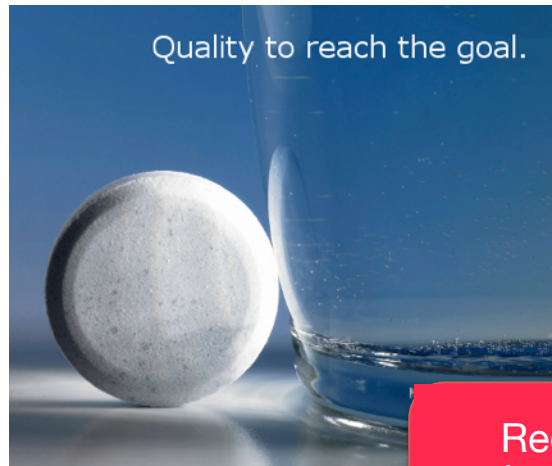


The Problems in Pharma Logistics

4 Problems in Pharma Logistics

Product Quality Protection

Unreliable in extreme temperature
+45°C / -20°C



Regulation Increase =
"100% control"



Volume / weight efficiency

500+ kg/m³ cargo
25% net volume

Complexity of Supply Chain

Availability issues
→ Q4, Vulcano etc.



Sustainability

Non-recyclable materials
Styrofoam,
Polyurethane

SkyCell the Solution delivers: reliable, door-to-door performance for the most challenging markets

Protection of pharmaceutical products

- Reliable / fail safe system
- Unbroken coolchain
- Extreme Ambient Temperatures
+65°C / -35°C
- Duration 100h+



SkyCell's focus is delivering
pharma products for
100% patient safety

Availability

- „Go anywhere,
anytime“
- Door-to-door
- Easy rental system
- Customer on-site-
stock option



Total cost reductions

- Efficient design
- Higher net volume
- Lower weight / m3
(below pivot weight,
fully loaded)

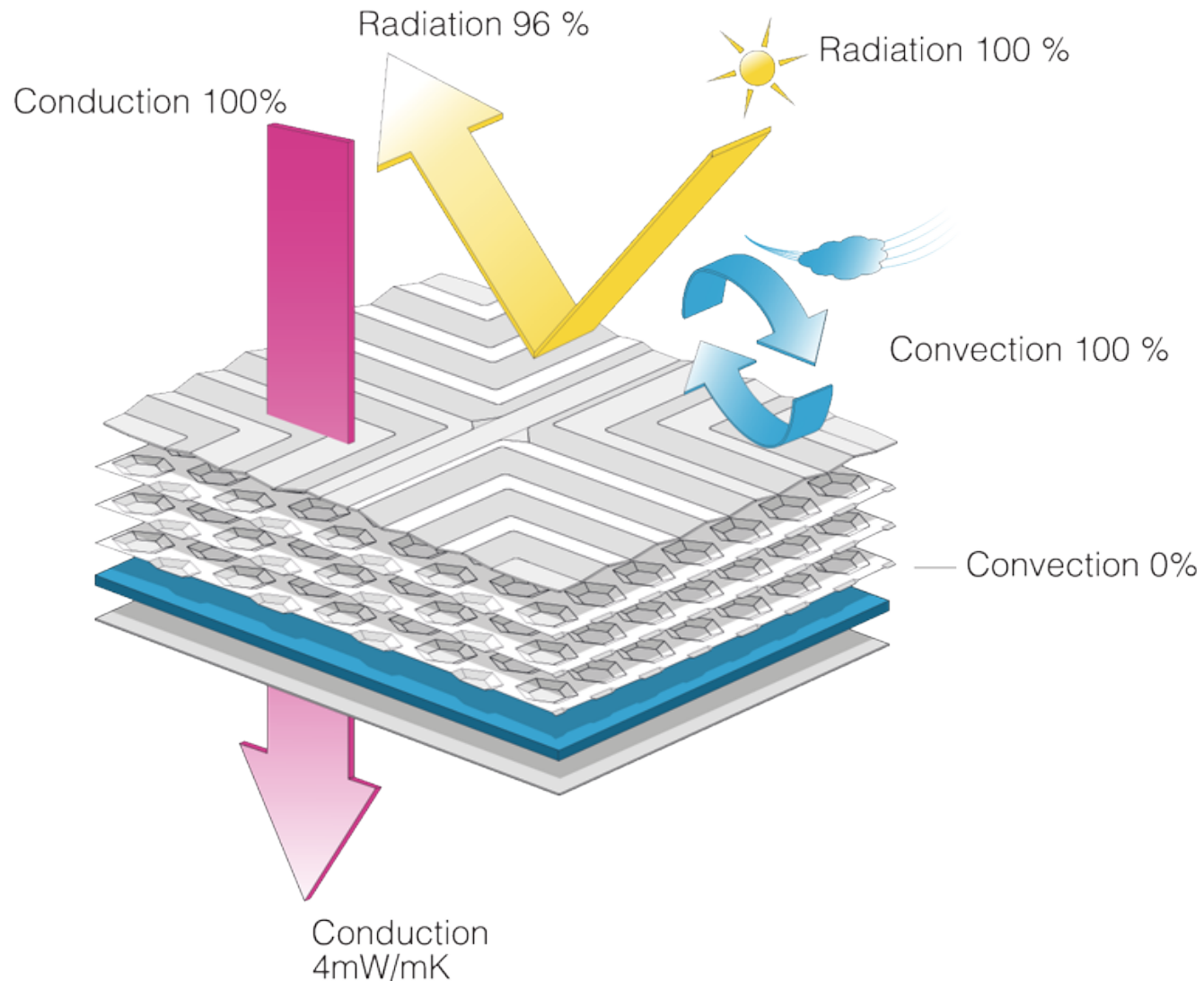


Sustainability

- „Green“
- 100% recyclability
- Not an additional
task on pharma

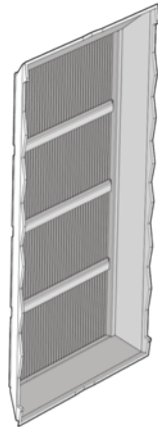
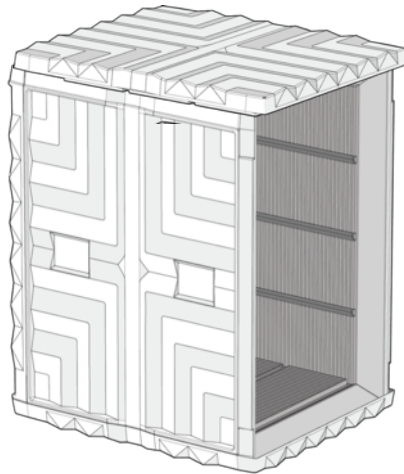


SkyCell's Core Technology: ISOPET insulation + chemical cooling technology



SkyCell's first product: SkyCell770C

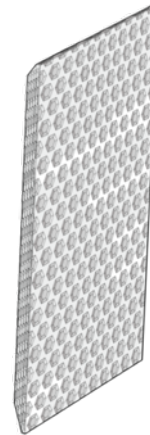
safest container for the airfreight of 2-8°C pharmaceutical products



Inner Shell



Rechargeable
cooling
technology
- Like a “cold
energy battery”



Insulation



Outer shell

SkyCell770C – The Product



Protection

- Failsafe Temperature Control independent from external temperature
Ex. +65°C, - 35°C
- Recharging <5°C (like a “cold-energy” battery)



100% Availability

- Global rental network
- On-site stock @ 2-8°C
- 500+ ready-to-use (2014:09)



Efficient Design

- 44% net volume
- 315kg tara for 770l of net volume



Redefining sustainability

- Container 100%
Worldwide recyclable

SkyCell770C – The Solution



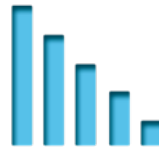
Protection

- Preconditioning = quality check
- Every SkyCell is performance checked before delivery to customer
- Temperature Monitoring
- Tested and used by leading Pharma companies



100% Availability

- SkyCell operates global fleet of containers
- Return logistics not responsibility of Pharma
- SkyCell produces containers with industrial processes and scale



Efficient Design

- Loose Goods, Non-DGR Classified
- Efficient Design (weight, net volume)

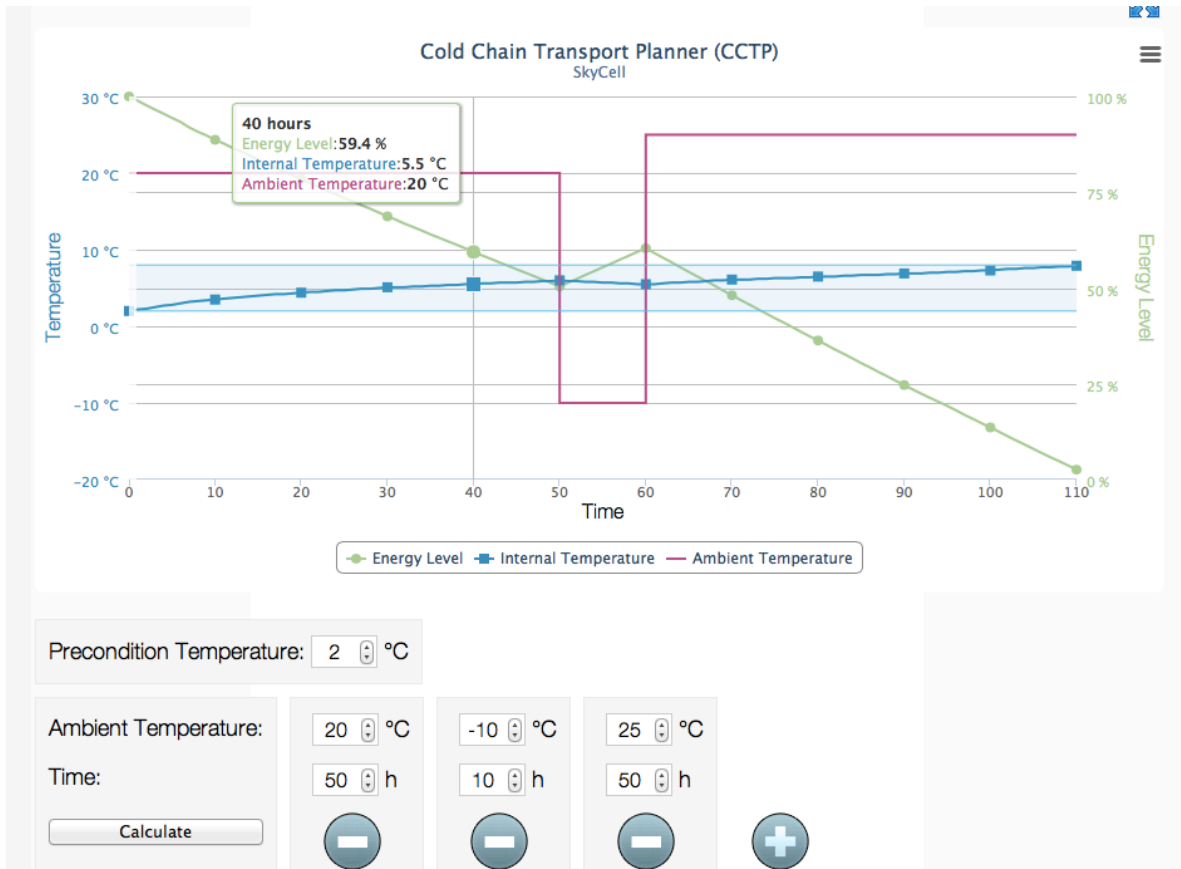


Redefining sustainability

- 100% recycling today
- Up to 50% CO2 Savings
- Recycling in home for handicapped people in Switzerland

Risk Management – SkyCell Transport Planner

www.skycell.ch/SCTP Online Tool for lane risk assessment

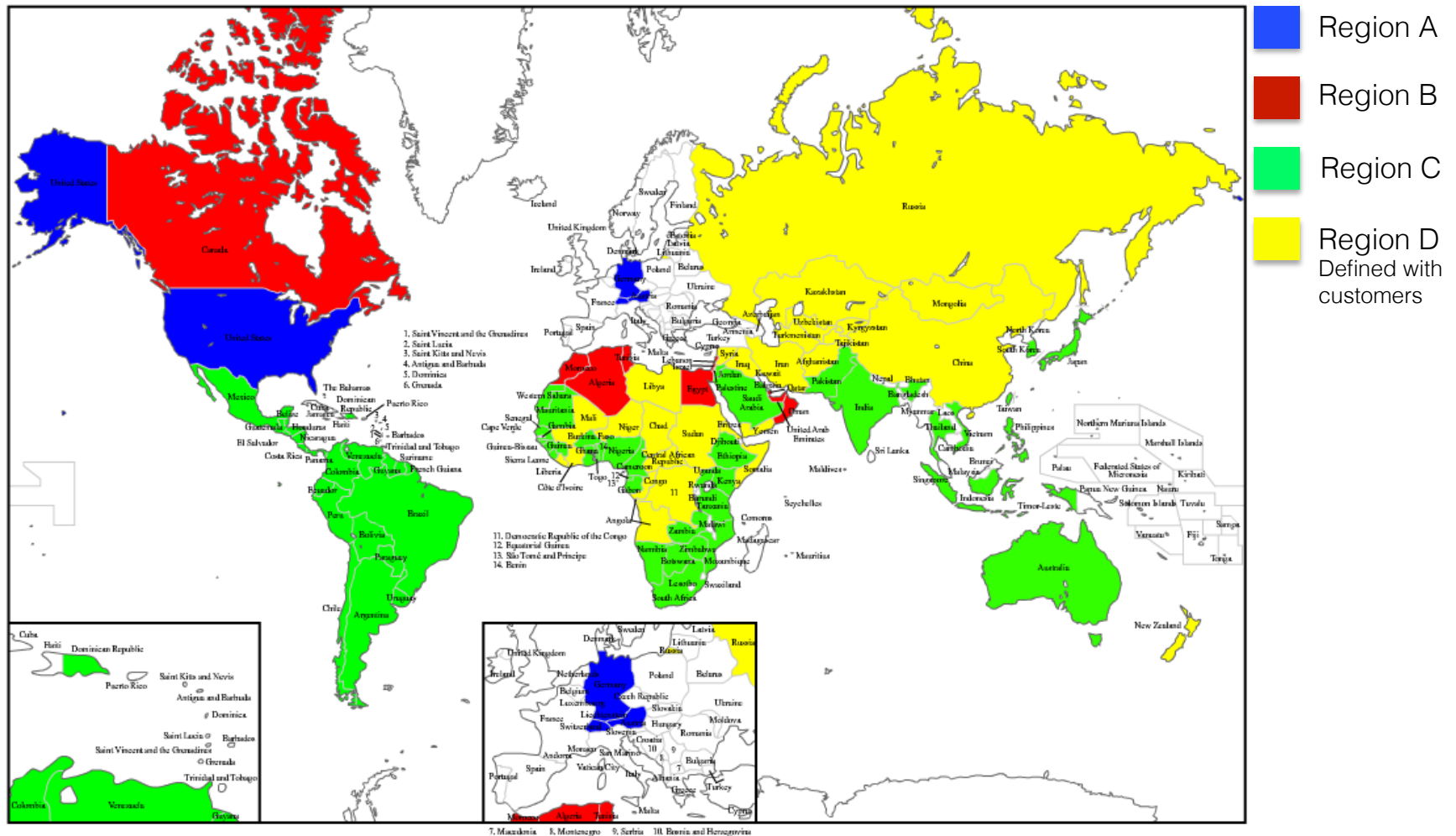


Model:

- More than 40 Tests – climate chamber and real life were performed to calibrate the model
- Measured at the worst point (empty)

Simulates SkyCell 770C remaining energy level (worst case scenario)

SkyCell – Pricing defined by Regions



SkyCell helps to solve Emerging Markets distribution challenges

Case Study - End to end solution Switzerland to Sao Paulo



Swiss Pharma Company sending 2-8°C biopharmaceuticals to Brazil

Issues:

- Current container solutions needed to be reloaded at Sao Paulo airports – creating risks in the supply chain
- Processes at airports were not stable and container solution was not able to handle them which produced significant temperature excursions resulting in huge non-quality costs

SkyCell's solution

- SkyCell analyzed with customer the supply chain setup to Brazil to identify and address weaknesses
- Review of SOPs with Pharma customer and freight forwarders
- SkyCell's 770C eliminated temperature excursions and increased safety margin of transporting to Brazil significantly
- Constant inside and outside temperature recording of SkyCell 770C of the trip, enables tracing problems in the supply chain

Result

- Eliminated temperature excursions by establishing an End-2-End closed cold chain without reloading
- Reduced administrative effort for customer (SkyCell takes care of import / export of container and reverse logistics)

Live Shipment Data: CH – BR

31 days Pratteln, CH to Sao Paulo, BR

- SkyCell's longest transportation leg to-date was 31 days counting from Pratteln, Switzerland to Taboa da Serra (SP), Brazil. The temperature was maintained within the container constantly between 2-8°C. During the clearing process at the airport in Sao Paulo was the container stored in a 2-8°C pharma room

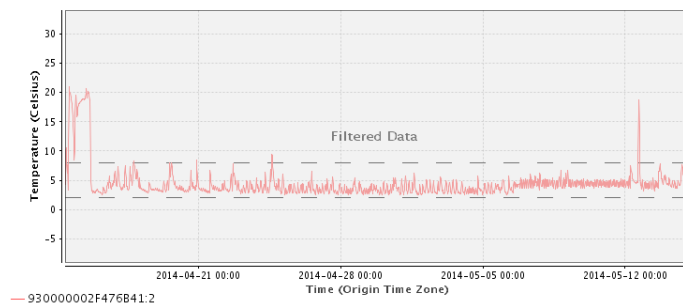
Details

- SkyCell delivered the 770C container quality checked, pre-conditioned to the customer's warehouse in Pratteln 2 days prior to transportation and was stored until use in the 2-8°C zone
- The shipment (about 20kg load) was shipped from Pratteln, Switzerland to Taboa da Serra (SP) on a direct flight via Zurich and Guarulhos Airport and was booked with the pharma service
- Due to errors in the airway bill (incorrect weight) the shipment was blocked at customs and stored as 2-8°C
- Total shipment time was from 2014-4-14: 10:06 CET till 2014-5-14:22:10 CET totalling: 31 days, 12h and 8 min
- Customer used 3 loggers inside (Brasilien 4,5,6) 2 outside (Brasilien 1,2)
- During that time internal temperature remained between 3 and 5°C (Brasilien 4,5,6)
- SkyCell offers into Brazil a door to door solution agreed by the customs authorities

Live Shipment Data: CH – BR

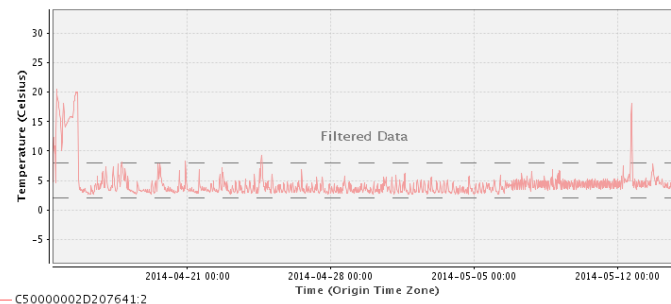
31 days Pratteln, CH to Sao Paulo, BR- outside (Brasilien 1,2)

Unit S/N: 93000002F476B41		Type: TT22		Page: 1 of 1		[Filtered] No alarms triggered	
Mission S/N: 2		Profile Used: 25 MX BR COOL 2 - 8 °C - v.2					
Configuration		Configured By: dmerkle [2014-04-11 16:29]				TVN 4.6.2	
Low Threshold		2.00°C		14d 0h 0m		High Threshold	
1: Cumulative						8.00°C	
2: Single		-20.00°C		1m		5d 0h 0m	
3: Disabled						1m	
4: Disabled							
5: Disabled							
						Settings	
						Sample Rate: 30m	
						Start Delay: 1h 0m	
TripTag Values							
Tracking Information				Origin Information			
Order #: 7292148478 / 4700068940				Origin: Pratteln			
AWB #:				Country:			
Pallet #:				Origin E-Mail:			
Product: 717462 SANDOSTATIN LIAM 0.5MG/1ML 1X5 BR				Destination Information			
Shipping #: 8000300914				Customer:			
Package #:				Destination: BR0100			
Delivery #: 5001165694				Country: BR Brasilien			
Shipping Information				Notes Reference 1			
Transport: Luftweg							
Carrier:							
F. Forwarder: DHL LOGISTICS SCHWEIZ AG							
TT Location: Coli # 1							
[Filtered] Mission Result							
Stopped By: SILVARA1 [2014-05-15 03:34]							
Temperature Log Data							
Started: 2014-04-14 10:20		First Recording: 2014-04-14 10:20		[F] Average: 4.53°C			
Ended: 2014-05-15 03:34		Last Recording: 2014-05-15 03:20		[F] Mission length: 30d 11h 30m			
[F] Highest: 23.01°C (2014-05-14 21:50)		[F] MKT: 5.39°C		[F] Time Within Range: 29d 3h 0m			
[F] Lowest: 2.45°C (2014-05-06 04:20)		Extended Time: 14m					
[Filtered] Low Alarm				[Filtered] High Alarm			
Total Time: 0m		< 2.00°C: 0m		Total Time: 1d 8h 30m		> 8.00°C: 1d 8h 30m	
		< -20.00°C: 0m				> 30.00°C: 0m	
Filter parameters							
Created by: Silva, Rafalsmoura (SILVARA1)				Start date: 2014-04-14 10:20		Stop date: 2014-05-14 22:10	



Time zone: Origin Time Zone (UTC +2.0)

Unit S/N: C5000002D207641		Type: TT22		Page: 1 of 1		[Filtered] No alarms triggered	
Mission S/N: 2		Profile Used: 25 MX BR COOL 2 - 8 °C - v. 2					
Configuration		Configured By: dmerkle [2014-04-11 16:29]				TVN 4.6.2	
Low Threshold		2.00°C		14d 0h 0m		High Threshold	
1: Cumulative						1: Cumulative	
2: Single		-20.00°C		1m		2: Single	
3: Disabled						3: Disabled	
4: Disabled						4: Disabled	
5: Disabled						5: Disabled	
						Settings	
						Sample Rate: 30m	
						Start Delay: 1h 0m	
TripTag Values							
Tracking Information				Origin Information			
Order #: 7292148478 / 4700068940				Origin: Pratteln			
AWB #:				Country:			
Pallet #:				Origin E-Mail:			
Product: 717462 SANDOSTATIN LIAM 0.5MG/1ML 1X5 BR				Destination Information			
Shipping #: 8000300914				Customer:			
Package #:				Destination: BR0100			
Delivery #: 5001165694				Country: BR Brasilien			
Shipping Information				Notes Reference II			
Transport: Luftweg							
Carrier:							
F. Forwarder: DHL LOGISTICS SCHWEIZ AG							
TT Location: Coli # 2							
[Filtered] Mission Result							
Stopped By: SILVARA1 [2014-05-15 03:18]							
Temperature Log Data							
Started: 2014-04-14 10:20		First Recording: 2014-04-14 10:20		[F] Average: 4.50°C			
Ended: 2014-05-15 03:18		Last Recording: 2014-05-15 02:50		[F] Mission length: 30d 11h 30m			
[F] Highest: 22.11°C (2014-05-14 21:50)		[F] MKT: 5.18°C		[F] Time Within Range: 29d 2h 0m			
[F] Lowest: 2.60°C (2014-04-16 06:20)		Extended Time: 28m					
[Filtered] Low Alarm				[Filtered] High Alarm			
Total Time: 0m		< 2.00°C: 0m		Total Time: 1d 9h 30m		> 8.00°C: 1d 9h 30m	
		< -20.00°C: 0m				> 30.00°C: 0m	
Filter parameters							
Created by: Silva, Rafaelmoura (SILVARA1)		Start date: 2014-04-14 10:20		Stop date: 2014-05-14 22:10			
Data History							



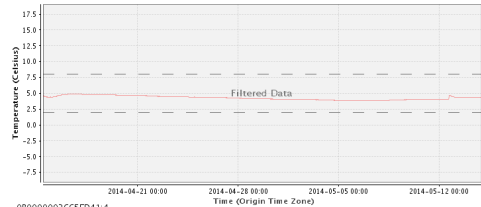
Time zone: Origin Time Zone (UTC +2.0)

Live Shipment Data: CH – BR

31 days Pratteln, CH to Sao Paulo, BR, BR – Inside (Brasilien 4,5,6)

Unit S/N: 98000002CCE5D41	Type: TT22	Page: 1 of 1	[Filtered] No alarm triggered
Mission S/N: 4	Profile Used: 25 °MC BR COOL 2 - 8 °C - 2		
Configuration	Configured By: dmerkle	2014-04-11 16:30	TVN 4.6.2
Low Threshold 1: Cumulative 2: Single 3: Disabled 4: Disabled 5: Disabled	2.00°C 144 Ohm -20.00°C 1m 1m	High Threshold 1: Cumulative 2: Single 3: Disabled 4: Disabled 5: Disabled	8.00°C 30.00°C 30.00°C 1m 1m
Settings	Sample Rate: 50s Start Delay: 10 min		
TripTag Values			
Tracking Information Order #: 729218478 / 470008040 AWB #: Pallet #: Product: 717402 SANDOSTATIN LIAM 0.5MG/1ML, 1X3 BR Shipping #: 800030914 Package #: Delivery #: 50016504	Origin Information Origin: Pratteln Country: Origin E-Mail: Destination Information Customer: Destination: BR0100 Country: BR Brazilien		
Shipping Information Transport: Luftweg Carrier: F. Forwarder: DHL LOGISTICS SCHWEIZ AG TT Location: Col # 3	Notes Sample A		
[Filtered] Mission Result	Stopped By: SILVARA1	2014-05-15 03:20	
Temperature Log Data Start: 2014-04-14 10:00 End: 2014-05-15 03:20 [F] Highest: 4.80°C (2014-04-16 00:00) [F] Lowest: 3.85°C (2014-05-02 23:30)	First Recording: 2014-04-14 10:00 Last Recording: 2014-05-15 03:05 [F] Mission length: 304 12h 0s [F] MKE: 4.25°C Extended Time: 0s	[F] Average: 4.29°C [F] Time Within Range: 304 12h 0s	
[Filtered] Low Alarm Total Time: 0s < 2.00°C: 0s < -20.00°C: 0s	[Filtered] High Alarm Total Time: 0s > 8.00°C: 0s > 30.00°C: 0s		
Filter parameters Created by: Silva, Rafaelmann (SILVARA1)	Start date: 2014-04-14 10:00	Stop date: 2014-05-14 22:10	

Data History

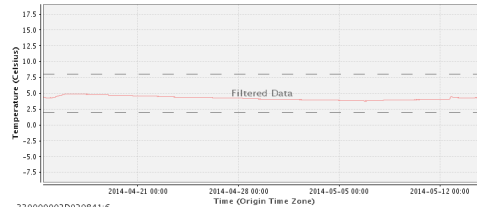


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Time zone: Origin Time Zone (UTC +2.0)

Unit S/N: 33000002D929041	Type: TT22	Page: 1 of 1	[Filtered] No alarm triggered
Mission S/N: 4	Profile Used: 25 °MC BR COOL 2 - 8 °C - 2		
Configuration	Configured By: dmerkle	2014-04-11 16:30	TVN 4.6.2
Low Threshold 1: Cumulative 2: Single 3: Disabled 4: Disabled 5: Disabled	2.00°C 144 Ohm -20.00°C 1m 1m	High Threshold 1: Cumulative 2: Single 3: Disabled 4: Disabled 5: Disabled	8.00°C 30.00°C 30.00°C 1m 1m
Settings	Sample Rate: 50s Start Delay: 10 min		
TripTag Values			
Tracking Information Order #: 729218478 / 470008040 AWB #: Pallet #: Product: 717402 SANDOSTATIN LIAM 0.5MG/1ML, 1X3 BR Shipping #: 800030914 Package #: Delivery #: 50016504	Origin Information Origin: Pratteln Country: Origin E-Mail: Destination Information Customer: Destination: BR0100 Country: BR Brazilien		
Shipping Information Transport: Luftweg Carrier: F. Forwarder: DHL LOGISTICS SCHWEIZ AG TT Location: Col # 4	Notes Sample B		
[Filtered] Mission Result	Stopped By: SILVARA1	2014-05-15 03:22	
Temperature Log Data Start: 2014-04-14 10:00 End: 2014-05-15 03:22 [F] Highest: 4.90°C (2014-04-16 04:36) [F] Lowest: 3.77°C (2014-05-06 18:06)	First Recording: 2014-04-14 10:00 Last Recording: 2014-05-15 03:06 [F] Mission length: 304 12h 0s [F] MKE: 4.25°C Extended Time: 0s	[F] Average: 4.24°C [F] Time Within Range: 304 12h 0s	
[Filtered] Low Alarm Total Time: 0s < 2.00°C: 0s < -20.00°C: 0s	[Filtered] High Alarm Total Time: 0s > 8.00°C: 0s > 30.00°C: 0s		
Filter parameters Created by: Silva, Rafaelmann (SILVARA1)	Start date: 2014-04-14 10:00	Stop date: 2014-05-14 22:10	

Data History

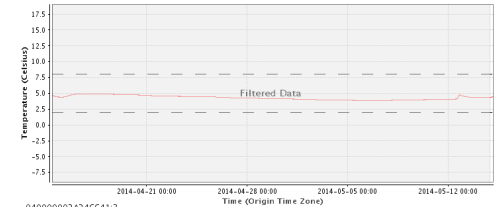


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Time zone: Origin Time Zone (UTC +2.0)

Unit S/N: 94000002A24CC41	Type: TT22	Page: 1 of 1	[Filtered] No alarm triggered
Mission S/N: 3	Profile Used: 25 °MC BR COOL 2 - 8 °C - 2		
Configuration	Configured By: dmerkle	2014-04-11 16:30	TVN 4.6.2
Low Threshold 1: Cumulative 2: Single 3: Disabled 4: Disabled 5: Disabled	2.00°C 144 Ohm -20.00°C 1m 1m	High Threshold 1: Cumulative 2: Single 3: Disabled 4: Disabled 5: Disabled	8.00°C 30.00°C 30.00°C 1m 1m
Settings	Sample Rate: 50s Start Delay: 10 min		
TripTag Values			
Tracking Information Order #: 729218478 / 470008040 AWB #: Pallet #: Product: 717402 SANDOSTATIN LIAM 0.5MG/1ML, 1X3 BR Shipping #: 800030914 Package #: Delivery #: 50016504	Origin Information Origin: Pratteln Country: Origin E-Mail: Destination Information Customer: Destination: BR0100 Country: BR Brazilien		
Shipping Information Transport: Luftweg Carrier: F. Forwarder: DHL LOGISTICS SCHWEIZ AG TT Location: Col # 5	Notes Sample C		
[Filtered] Mission Result	Stopped By: SILVARA1	2014-05-15 03:28	
Temperature Log Data Start: 2014-04-14 10:00 End: 2014-05-15 03:28 [F] Highest: 4.92°C (2014-04-16 10:36) [F] Lowest: 3.85°C (2014-05-03 05:36)	First Recording: 2014-04-14 10:00 Last Recording: 2014-05-15 03:06 [F] Mission length: 304 12h 0s [F] MKE: 4.30°C Extended Time: 0s	[F] Average: 4.29°C [F] Time Within Range: 304 12h 0s	
[Filtered] Low Alarm Total Time: 0s < 2.00°C: 0s < -20.00°C: 0s	[Filtered] High Alarm Total Time: 0s > 8.00°C: 0s > 30.00°C: 0s		
Filter parameters Created by: Silva, Rafaelmann (SILVARA1)	Start date: 2014-04-14 10:00	Stop date: 2014-05-14 22:10	

Data History

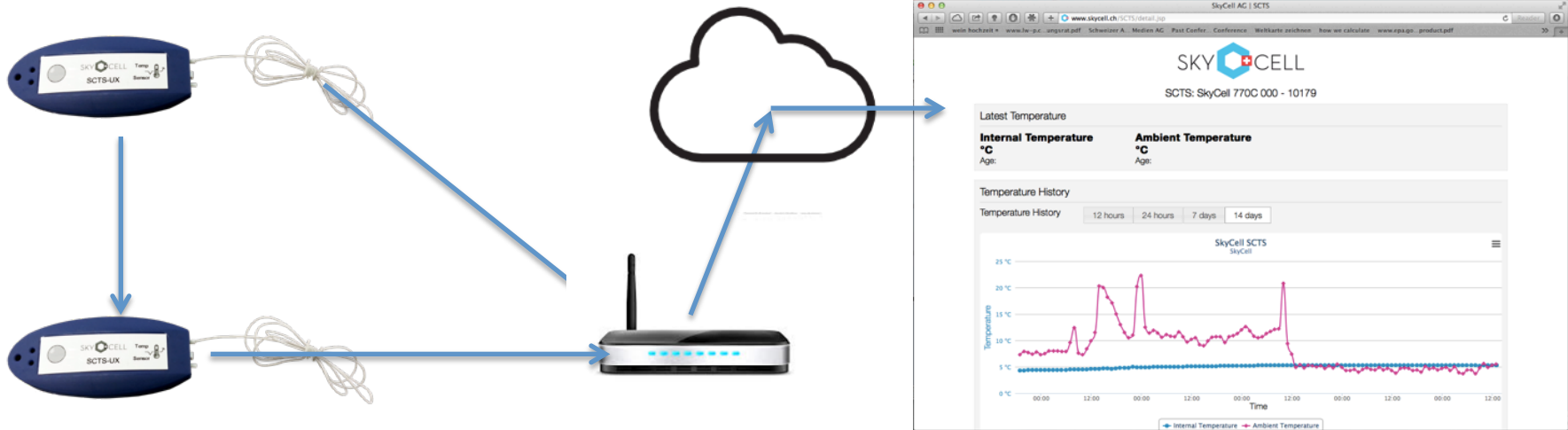


— 94000002A24CC41.3

Time zone: Origin Time Zone (UTC +2.0)

SkyCell Temperature Monitoring

Cloud-based Temperature Monitoring Solution



SCTM is a cloud-based monitoring solution enabling tracking of temperature/ humidity combining:

- passive Loggers
- active Gateways with GPS and GSM
- back-end and a web-based front-end
- Air worthiness approval by more than 20 carriers (09:2014) for on-board inflight use
- Up to 500m range
- Loggers relays data between each other to Gateways – enabling communication in crowded space

SKYCELL™ PHARMA LOGISTICS PACKAGING SYSTEM

THE THERMOSTABLE SYSTEM

Thank you!

