

# INTELSIUS **TECHNICAL SERVICES**



# OVERVIEW

With over 20 years of experience working in temperature controlled and sample transport solutions our technical team can provide an array of services for organisations of all sizes.

The services offered are split into digital and physical services. The digital services are maintained under the ATMOS umbrella. ATMOS is our Intelsius branded software suite capable of digitally building, testing and validating temperature controlled solutions against a range of historical temperature profiles. These services can be utilised individually or combined to provide a full service offering for designing and qualifying your packaging products.



## Technical Services we provide

Thermal Testing - Physical thermal testing is completed in state of the art climate chambers, capable of testing against a variety of profiles from -20°C and +50°C

Drop Testing - carried out in line with PI650 as described in IATA Dangerous Goods Regulations

ATMOS Packaging - Our process of creating digital temperature controlled systems capable of simulating physical thermal testing

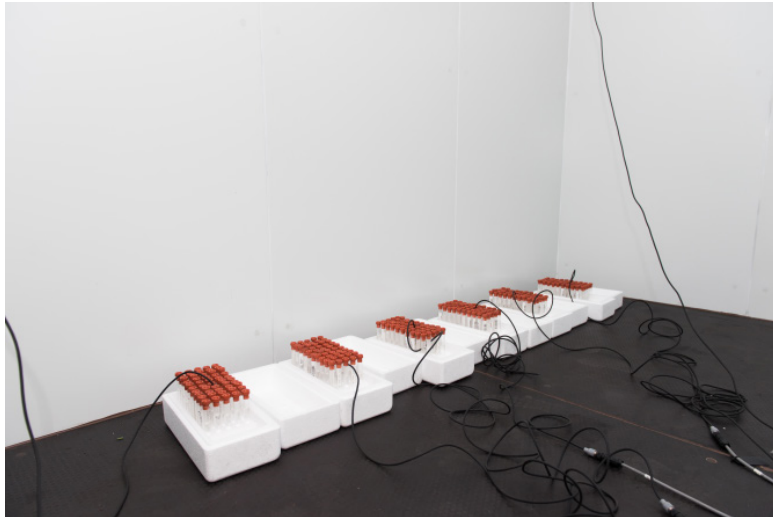
ATMOS Lane - Allowing digitally created temperature controlled systems to be tested against a vast range of real historical data across a variety of shipping lanes

Customer Design Services - Offering services from custom branding of our standard products to fully tailored solutions



# THERMAL TESTING

Intelsius is an ISTA accredited laboratory, certified to carry out thermal testing on temperature controlled packaging (TCP) for development and qualification. All testing is carried out in our calibrated environmental test chambers by trained and experienced personnel. Data recorded is analysed and presented in a qualification report, alongside a summary of the testing procedure, results and conclusions.



## **Benefits of having your thermal testing carried out by Intelsius:**

- Can test against any temperature profile between the temperatures of -30°C and +50°C
- Calibrated Elpro Ecolog Pro loggers with a temperature range of -80°C to +50°C
- Data recorded in a secure digital format and analysed by data analysis software MATLAB
- Technical support and advice in creating test procedures and support throughout the testing process
- Production of high-quality qualification reports for each TCP system tested



# DROP TESTING

All drop testing is carried out in line with Packing Instruction 650 (PI650) as described in IATA Dangerous Goods Regulations (60th Ed 2019), certifying all systems that pass as Category B and therefore, capable of carrying UN3373 Biological Substances. A drop test report will be produced stating the outcome of the test.

## Benefits of having your drop testing carried out by Intelsius:

- Expertise in testing requirements and regulatory compliance
- Guidance on system builds and payloads to help increase pass rates
- Production of drop test reports, doubling as certificates and necessary to confirm for category B compliance





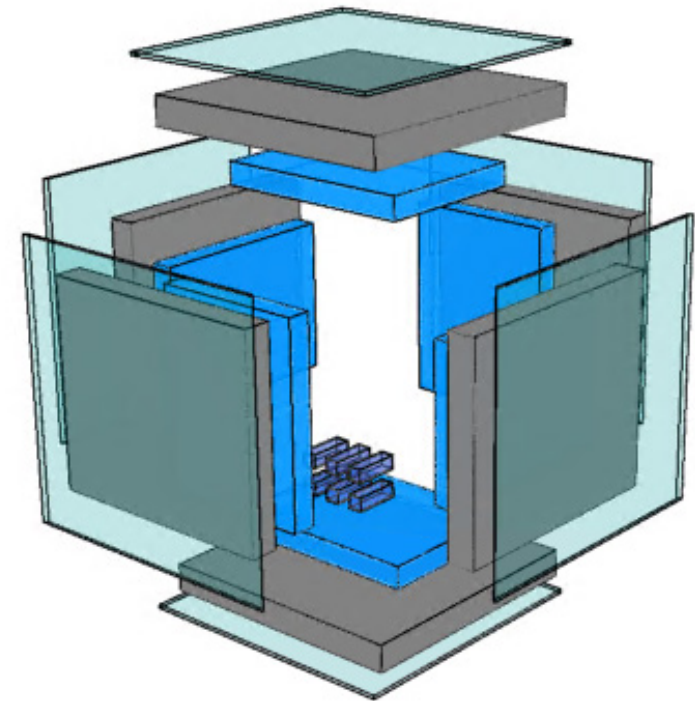


# ATMOS PACKAGING

ATMOS Packaging enables the construction of digital TCP systems and prediction of their thermal performance. Intelsius has built a database of materials, including insulation and phase change material (PCM), and a library of all Intelsius TCP products. Simulating a physical thermal test gives us accurate predictions of how a system will behave when under thermal stress in a fraction of the time. This can save days of thermal testing.

## Benefits of using ATMOS Packaging

- Test our systems with your products to predict what duration can be expected
- Simulating TCP systems against any temperature profile to directly compare systems
- Create custom packing configurations or concepts to aid product development
- Reduced time scales when compared to thermal testing timelines



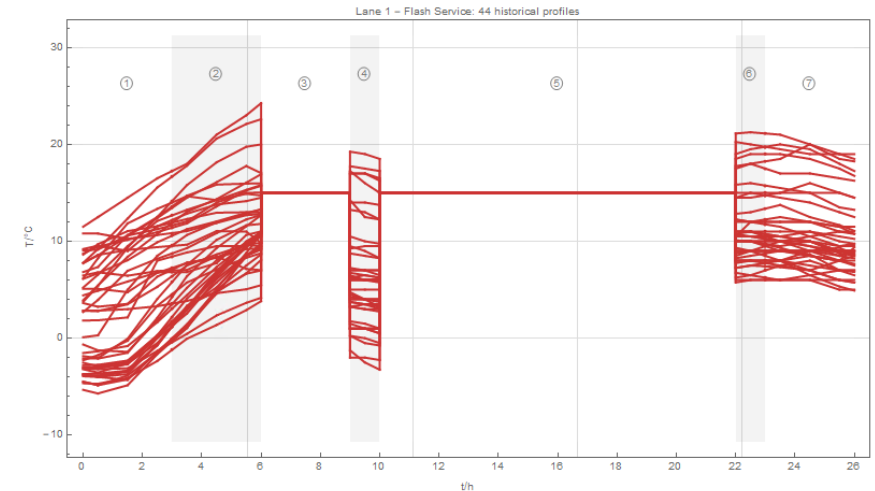


# ATMOS LANE

ATMOS Lane allows digital TCP systems to be transported via a virtual shipping lane, utilising real-world data, allowing you to predict the performance of a shipment before it's been sent. Using historical data collected from weather stations worldwide, systems can be tested against the actual exposure temperatures experienced on a lane on any particular day. This can be repeated for as many days, months or years as required.

## Benefits of using ATMOS Lane

- Test TCP systems against real-world temperature profiles created from your shipping routes
- Gain confidence in a shipment before it's been sent
- Understand how to tailor packaging to fit your own shipments
- Year-round virtual OQ testing



	Name	$\delta t/h$	UTC	T/°C	
1	Pickup from Madrid	3.00	07:00	√	x
2	Storage MAD	3.00	10:00	√	x
3	Flight MAD to FRA	3.00	13:00	15.0	x
4	Storage FRA	1.00	16:00	√	x
5	Flight FRA to HND	12.00	17:00	15.0	x
6	Storage Storage HND	1.00	05:00	√	x
7	Delivery Tokyo	3.00	06:00	√	x
	End	26.00	09:00		

# CUSTOM DESIGN SERVICES

Intelsius have over 20 years experience designing custom solutions to meet our customers' exact needs, from bespoke Sample Transport kits and components to fully designed and qualified Temperature Controlled Packaging solutions.

- Services range from custom branding of our standard products to fully tailored solutions
- Access to full design, testing and project management team noted for design innovation within Sample Transport and Temperature Controlled Packaging markets
- Access to a wide range of off the shelf components which can be tailored to your requirements
- Global supply possible through our other sites and distributors



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