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Waikato
Scientific
Instruments

SYP Mk III Autosampler

Lithium Battery Specification & Air-Travel Information

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1. Overview

This document provides the lithium-polymer battery specifications, safety certification details, and air-travel guidance for the SYP Mk III autosampler. Please retain a copy with the instrument and present it on request to airline security, customs officials, or freight handlers.

2. Battery specifications

Product	SYP Mk III Autosampler (rechargeable battery pack installed)
Battery configuration	3S — three Li-polymer cells in series
Cell manufacturer	Dongguan Sunrise Technology Co., Ltd., Dongguan, Guangdong, China
Cell model	8455116
Cell chemistry	Lithium-ion polymer (LiCoO ₂ cathode / graphite anode)
Cell nominal voltage	3.7 V
Cell capacity	8 000 mAh (8.0 Ah)
Pack nominal voltage	11.1 V (marketed as 12 V)
Pack capacity	8 000 mAh (8.0 Ah)
Pack watt-hour rating	88.8 Wh (3 × 3.7 V × 8.0 Ah)
Pack appearance	Silver, rectangular, sealed solid battery

3. Safety certification & regulatory classification

UN 38.3 test report	W09143028421D and W09143028421D~1 (Pony Testing International Group)
MSDS report	W09143028716D (Pony Testing International Group, issued 24 September 2024)

UN number (installed in equipment)	UN3481
UN number (spare / standalone)	UN3480
IATA packing instruction (installed)	PI 967, Section II
IATA packing instruction (spare)	PI 965, Section II
IMDG	Special Provision 188
UN Model Regulations	Compliant with Recommendations on the Transport of Dangerous Goods
Classification	Not subject to full dangerous-goods regulation (under 100 Wh)

4. Air-travel rules

At 88.8 Wh per pack the SYP battery is under the 100 Wh threshold defined in the IATA Dangerous Goods Regulations and recognised by the FAA, TSA, EASA and CAA. No airline pre-approval is required to carry the SYP or a spare pack on passenger aircraft. The following rules apply:

- **Battery installed in the SYP** — UN3481 / PI 967 Section II. Permitted in carry-on or checked baggage. Carry-on is strongly recommended so the instrument can be monitored. Power the unit off completely and protect any external ports before travel.
- **Spare battery pack (separate from the SYP)** — UN3480 / PI 965 Section II. Spare lithium batteries are NEVER permitted in checked baggage. They must travel in the aircraft cabin.
- **Terminal protection** — spare packs must be packed so the terminals cannot short circuit. Acceptable methods are: the original packaging; a rigid plastic battery case; or insulating tape over each terminal.
- **Quantity per passenger** — for packs under 100 Wh there is no airline-imposed limit on quantity for personal use, although large numbers may be questioned.
- **Damaged or recalled batteries** — must not be transported by air under any circumstances. A pack that has been physically damaged, has swollen, or is leaking should be reported to Waikato Scientific and disposed of locally per the MSDS guidance.

5. Documents to carry at the airport

The following documents are sufficient for any airline security or customs query. We recommend keeping printed copies with the instrument and electronic copies on a phone or tablet:

- **This document** — summarising the pack specifications, certification IDs and applicable regulations.
- **MSDS report W09143028716D** — issued by Pony Testing International Group, 24 September 2024.
- **UN 38.3 test summary** — report W09143028421D / W09143028421D~1. This is the document airline ground staff and freight forwarders are specifically trained to recognise. Available from Waikato Scientific on request.
- **IATA Lithium Battery Guidance Document (current edition)** — free PDF at [iata.org/lithiumbatteries](https://www.iata.org/lithiumbatteries). Defines the 100 Wh / 160 Wh thresholds and carry-on rules.

- **FAA Pack Safe — Lithium batteries** — faa.gov/hazmat/packsafe/lithium-batteries (US travel).

6. Handling, storage & disposal

The Dongguan Sunrise MSDS classifies the cells as stable under normal use. Key handling points (see the full MSDS for complete guidance):

- **Do not** open, crush, puncture, short-circuit, over-charge, over-discharge, immerse in liquids, or expose to fire or sustained temperatures above 60 °C.
- **Storage** — cool, dry, ventilated location with minimal temperature variation. Avoid direct sunlight and proximity to heating equipment. Long-term storage at 30–50 % state of charge is recommended.
- **End of life** — discharge fully and recycle through an authorised lithium-battery recycling facility. Do not dispose of in general waste.
- **In case of venting or fire** — evacuate the area, ventilate, and use a dry-chemical or CO₂ extinguisher. Do not inhale fumes (carbon monoxide, carbon dioxide and lithium oxide may be released).

7. Manufacturer & contact information

Cell manufacturer: Dongguan Sunrise Technology Co., Ltd.

Address: No. 28, The Second Jinsha Road, Jinshadun Industrial Park, Shuikou Village, Dalang Town, Dongguan City, Guangdong, 523770, China

Tel: +86 769 81066802 · **Emergency:** +86 769 81066802

Pack integrator / instrument manufacturer: Waikato Scientific Ltd, Hamilton, New Zealand

Contact: Dr Adam Hartland, Managing Director · admin@sypsampler.com

8. Disclaimer

The information in this document is based on the manufacturer's MSDS and UN 38.3 test reports current at the date of issue and is provided in good faith. Air-travel rules vary by airline and jurisdiction and are subject to change; passengers should confirm requirements with their carrier prior to travel. Waikato Scientific Ltd accepts no liability for misuse of the battery pack or for transport decisions made by carriers, customs officials or third parties.