

TECH NOTES



SKC Sample Pump and Dosimeter Lithium-Ion Battery Pack Characteristics and Maintenance

Several SKC sample pumps and the SKC personal noise dosimeter use rechargeable battery packs that contain lithium-ion (Li-Ion) cells. Li-Ion battery chemistry has unique features and requirements. Batteries are perishable products that begin to age upon manufacture. Battery cycle life is not only predicated on the chemical makeup of the cells, but also on conditions of use such as temperature and pattern. Following recommended use, maintenance, and storage procedures will maximize the chemistry's advantages, minimize the disadvantages, and provide for optimal battery performance and cycle life.

Battery Overview

| | |
|----------------------|------------|
| Cycle Life (approx.) | 300 to 500 |
| Environmental Impact | Low |
| Energy Density | High |

Li-Ion batteries are used in the SKC AirChek[®] TOUCH, AirChek Essential, AirChek Essential+, AirChek Connect, AirChek XR5000, Pocket Pump[®] TOUCH, Leland Legacy[®], and QuickTake[®] 30 Sample Pumps; and in the SKC NoiseCHEK Personal Noise Dosimeter. These batteries allow more powerful pumps to perform for longer run times.

Characteristics:

- High energy density
- Low discharge rate
- Lower weight, higher voltage
- Shorter shelf-life
- Temperature sensitive - do not short-circuit or destroy/dispose of by fire
- Subject to special packing and shipping regulations. See *Technical Note SKC Publication 1921*.

Maintenance:

- SKC Li-Ion pump batteries must be charged using SKC-approved single and 5-station Li-Ion battery chargers.
- The SKC NoiseCHEK Li-Ion polymer batteries must be charged using the SKC NoiseCHEK 1- and 5-unit Charging Docks Cat. Nos. 701-002 and 701-003, respectively.
- Charge battery completely upon receipt.
- Charge before use.*
- Charge every 2 months if in storage.
- Ideal storage temperature is 70 F (21 C); higher temperatures increase the rate of self-discharge.

* *AirChek TOUCH, AirChek Essential, AirChek Essential+, AirChek Connect, Pocket Pump TOUCH, AirChek XR5000, and NoiseCHEK battery packs (intrinsically safe models Cat. Nos. 701-001S, 701-00NBS, and 701-001NBVAS) contain protective circuitry to meet intrinsic safety requirements. This additional circuitry may slowly discharge the battery pack. For optimum performance, always charge battery packs before use.*

Testing and Shipment:

Rechargeable Li-Ion batteries for use with SKC sample pumps and NoiseCHEK noise dosimeter have been tested in accordance with the UN Manual and are proven to meet requirements of each test in the *UN Manual of Tests and Criteria*, Part III, subsection 38.3. The batteries are rated below 100 watt-hours (Wh). Consult with your carrier for information on Lithium Battery Shipping Regulations for UN 3480 and/or UN 3481 or visit SKC's website for more information.

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