

**TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING  
IEC 61960-3:2017, Edition 1.0**

**Secondary cells and batteries containing alkaline or other non-acid electrolytes –  
Secondary lithium cells and batteries for portable applications –  
Part 3: Prismatic and cylindrical lithium secondary cells, and batteries made from them**

**PROVISIONAL**

“R” Required  
 “S” May be subcontracted, see OD 2012  
 “SPTL” Specialized Facility, see IECEE 02-2  
 “W” Witness testing in the categories “MED” and “MEAS”  
 “3PPS” Three Phase Power Supply required

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
7	Electrical tests (General)	Electric load.	R
		DC power supply.	R
		Temperature recorder.	R
		Oven.	R
		Timer.	R
7.3.1	Discharge performance at 20 °C	Multimeter.	R
		Electric load.	R
		Timer.	R
		Temperature recorder.	R
		Oven.	R
7.3.2	Discharge performance at -20 °C	Multimeter.	R

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
		Oven.	R
		Electric load.	R
		Timer.	R
		Temperature Recorder.	R
7.3.3	High rate discharge performance at 20 °C	Multimeter.	R
		Electric load.	R
		Timer.	R
		Temperature recorder.	R
		Oven.	R
7.4	Charge retention and recovery	Multimeter.	R
		Electric load.	R
		Timer.	R
		Temperature recorder.	R
		Oven.	R
7.5	Charge recovery after long term storage	Multimeter.	R
		Oven.	R
		Electric load.	R
		Timer.	R
		Temperature recorder.	R
7.6.2	Endurance in cycles at a rate of 0.2 I <sub>t</sub> A	Multimeter.	R
		Electric load.	R
		DC power supply.	R
		Timer.	R
		Temperature recorder.	R
7.6.3	Endurance in cycles at a rate of 0.5 I <sub>t</sub> A	Multimeter.	R

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
		Electric load.	R
		DC power supply.	R
		Timer.	R
		Temperature recorder.	R
7.7.2	Measurement of the internal AC resistance	Internal resistance meter.	R
7.7.3	Measurement of the internal DC resistance	Electric load.	R
		Timer.	R
		Multimeter.	R
7.8	Electric discharge	ESD Simulator.	S