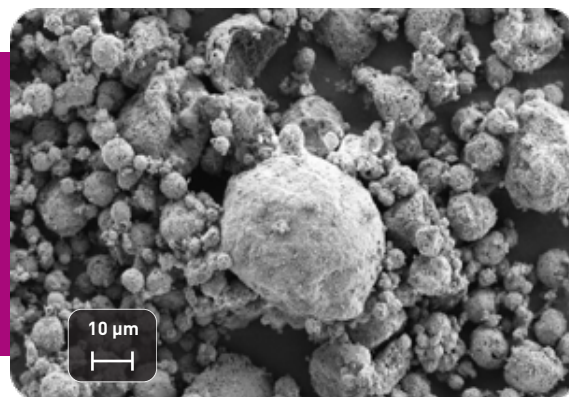


IBUvolt® LFP400



SEM of LFP400

CHEMICAL & PHYSICAL PROPERTIES

ITEM	UNIT	SPECIFICATION	TESTING METHOD
Fe	(wt.-%)	31.5 - 34.0	ICP-OES
Li		3.9 - 4.9	ICP-OES
P		17.8 - 19.8	ICP-OES
C		3.5 - 3.9	Combustion
Specific surface area (BET)	(m ² /g)	19 - 25	N ₂ Physisorption
Tapped density	(g/cm ³)	1.0 - 1.4	Tapped density tester
PSD, d10	(µm)	1 - 5	Laser diffraction
PSD, d50		9 - 13	Laser diffraction
PSD, d90		20 - 28	Laser diffraction
PSD, d99		≤ 53	Laser diffraction
Cu*	(ppm)	≤ 30	ICP-OES
Mn + Cr* + Ni + Mg + Ca + Zn		≤ 1070	ICP-OES
Na + K*		≤ 500	ICP-OES
S		≤ 1200	Combustion
Moisture	(ppm)	≤ 800	Coulometric, 200 °C
pH value	(-)	7.5 - 10.5	5 g in 100 ml water

* Below detection limit (Cu, Cr 30 ppm, K 100 ppm)

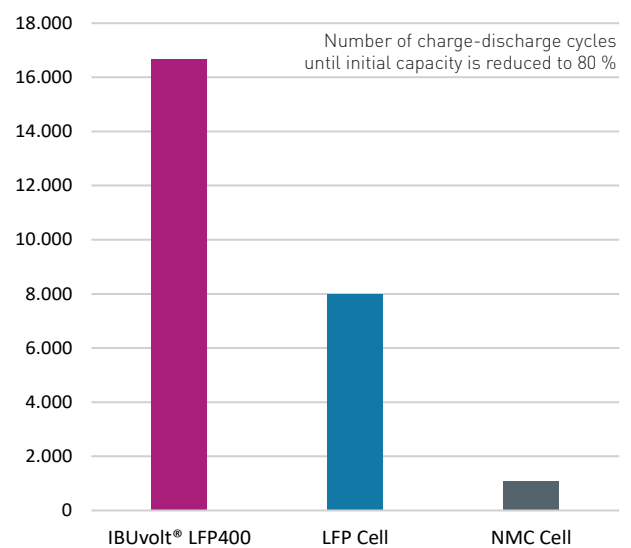
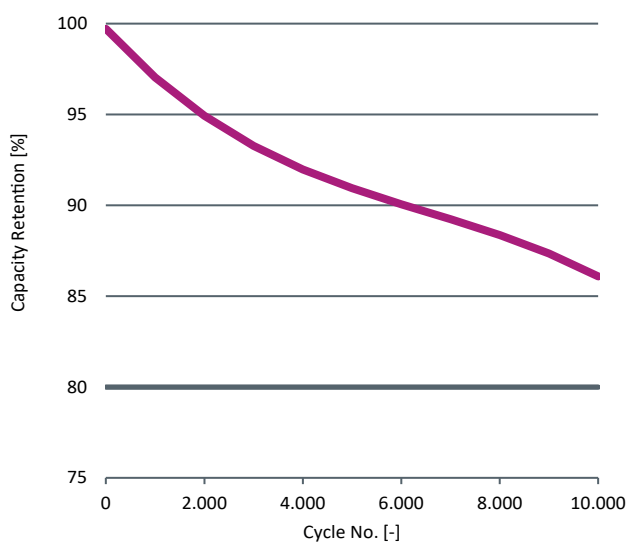
CAPACITY TESTS (COIN CELLS)

ITEM	UNIT	TYPICAL VALUE	SPECIFICATION
Specific capacity 0.1 C*	(mAh/g)	151	≥ 149
Coulomb efficiency 1st cycle	(%)	> 95.0	

* Half cells, 25 °C, 8 mg/cm², LiPF₆ EC/DMC/DEC, 2nd cycle discharge CC 4.2 - 2.7 V

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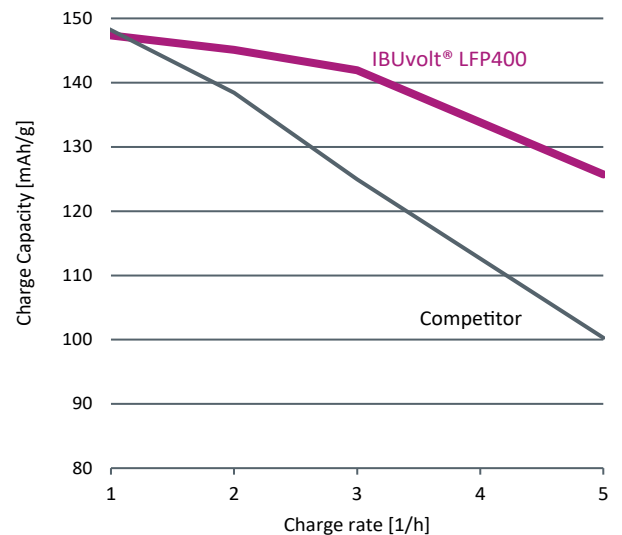
CYCLE LIFE (CYLINDRICAL CELLS)



Capacity retention after 10.000 charge-discharge cycles and comparison to commercial 18650 cells.
18650 cells, 2 C cycling (700 mAh), soft carbon anode, EC:EMC electrolyte.

ELECTROCHEMICAL CHARACTERIZATION (POUCH CELLS)

PARAMETER	CATHODE	ANODE
Composition	LFP: 95 wt.-% Carbon: 2 wt.-% PVDF: 3 wt.-%	Grahite: 97 wt.-% CMC: 2 wt.-% SBR: 1 wt.-%
Loading	3.0 mAh/cm ²	3.6 mAh/cm ²
Density	2.1 g/cm ³	1.5 g/cm ³
Cell capacity	500 mAh	



Overall better capacity retention at high charging rates compared to commercial reference material.