



# Correction to: Quantifying the life-cycle health impacts of a cobalt-containing lithium-ion battery

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In our paper a minor error was present in Table S6 in the Supporting Information. There, the input amounts of crude cobalt hydroxide and ammonium bicarbonate to the unit process dataset for battery-grade cobalt sulfate production in China were mixed up. These inputs should be 1.1 kg of

crude cobalt hydroxide and 0.22 kg of ammonium bicarbonate, not the other way around. Table S6 in this correction is corrected accordingly, with the two corrected values highlighted in bold and italic. This error was not present in the life-cycle inventory modelling underpinning the results presented in the paper, and thus did not influence any other values or results in the paper.

The original article has been corrected.

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The online version of the original article can be found at <https://doi.org/10.1007/s11367-022-02084-3>.

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**Table S6** Unit process dataset for battery-grade cobalt sulfate production in China. CD = the DRC, CN = China, RoW = rest of world, GLO = global, U = linked to unit process datasets, SGCC = State Grid Corporation of China, ZJ = Zhejiang. Source: Dai et al. (2018).

Input flow	Flow type	Amount	Unit	Linked upstream process
Crude cobalt hydroxide, CD	Product flow	<i>1.1</i>	kg	Hydrometallurgical ore processing - CD (Table S5)
Ammonium bicarbonate	Product flow	<i>0.22</i>	kg	market for ammonium bicarbonate   ammonium bicarbonate   Cutoff, U - RoW
Hydrochloric acid, without water, in 30% solution state	Product flow	1.8	kg	market for hydrochloric acid, without water, in 30% solution state   hydrochloric acid, without water, in 30% solution state   Cutoff, U - RoW
Kerosene	Product flow	0.019	kg	market for kerosene   kerosene   Cutoff, U - RoW
Lime, hydraulic	Product flow	0.0076	kg	market for lime, hydraulic   lime, hydraulic   Cutoff, U - Row
Limestone, crushed, for mill	Product flow	0.023	kg	market for limestone, crushed, for mill   limestone, crushed, for mill   Cutoff, U - Row
Soda ash, dense	Product flow	0.034	kg	market for soda ash, dense   soda ash, dense   Cutoff, U - GLO
Sodium hydroxide, without water, in 50% solution state	Product flow	3.3	kg	market for sodium hydroxide, without water, in 50% solution state   sodium hydroxide, without water, in 50% solution state   Cutoff, U - GLO
Sodium metabisulfite	Product flow	0.030	kg	Production of metabisulfite (Table S7)
Sulfuric acid	Product flow	1.0	kg	market for sulfuric acid   sulfuric acid   Cutoff, U - RoW
Electricity, medium voltage	Product flow	1.2	kWh	market for electricity, medium voltage   electricity, medium voltage   Cutoff, U - SGCC
Heat, central or small-scale, natural gas	Product flow	1.2	MJ	market for heat, central or small-scale, natural gas   heat, central or small-scale, natural gas   Cutoff, U - RoW
Heat, from steam, in chemical industry	Product flow	7.7	MJ	market for heat, from steam, in chemical industry   heat, from steam, in chemical industry   Cutoff, U - RoW
Water, unspecified natural origin, CN	Elementary flow, resource, unspecified	0.019	m <sup>3</sup>	-
Output flow	Flow type	Amount	Unit	Linked downstream process
Battery-grade cobalt sulfate, CN-ZJ	Product flow	1	kg	-

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