>>**Entry Name: Cobaltate ($CoO_2^{(-)}$),** 10CI

$[CoO_2]^{(-)}$

Molecular Formula: $CoO_2^{(-)}$
Molecular Weight: 90.932
Accurate Mass: 90.923028
Percentage Composition: Co 64.81%; O 35.19%
General Statement: Edge shared CoO_6 layer lattice; $M^{(+)}$ between layers
Source/Synthesis: Salts obt. by heating mixt. of oxides or $[Co(NH_3)_6]^{3(+)}$ + MOH (aq.)

>>**Derivative:** Li salt
Synonym(s): Lithium cobalt oxide ($LiCoO_2$)

CAS Registry Number: 12190-79-3
Molecular Formula: $CoLiO_2$
Molecular Weight: 97.873
Accurate Mass: 97.939031
Percentage Composition: Co 60.21%; Li 7.09%; O 32.69%
Use/Importance: Rapid $Li^{(+)}$ diffusion gives use as rechargeable battery cathodes
Other Data: Most studied $MCoO_2$ compd.

>>**Derivative:** Na salt
Synonym(s): Sodium cobalt oxide ($NaCoO_2$)

CAS Registry Number: 37216-69-6
Molecular Formula: $CoNaO_2$
Molecular Weight: 113.922
Accurate Mass: 113.912795
Percentage Composition: Co 51.73%; Na 20.18%; O 28.09%
Use/Importance: Some use as battery material
Other Data: Semiconductor. Can be Na deficient down to $Na_{0.46}$

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