



>>Entry Name: **Iron(II,III) oxide (Fe₃O₄)**

Synonym(s): Triiron tetroxide. Iron(II) iron(III) oxide. Ferrosoferric oxide. Ferroferric oxide. Black iron oxide

CAS Registry Number: 1317-61-9

Fe₃O₄

Molecular Formula: Fe₃O₄

Molecular Weight: 231.539

Accurate Mass: 231.784477

Percentage Composition: Fe 72.36%; O 27.64%

by Fe(II)

Use/Importance: Pigment, polishing compd., used in electronics industry for eg. magnetic tape coatings

Physical Description: Black cubic cryst., or red-black powder

Solubility: Insol. H₂O; sol. conc. acid; insol. alcohols

Other Data: Dec. at 1538° to Fe₂O₃. Ferromagnetic; becomes antiferromagnetic at 119K. Single cryst. prepd. by skull melting

Aldrich: 31006-9

>>Variant: Mineral-form

Synonym(s): Magnetite

CAS Registry Number: 1309-38-2

Molecular Formula: Fe₃O₄

Molecular Weight: 231.539

Accurate Mass: 231.784477

Percentage Composition: Fe 72.36%; O 27.64%

Source/Synthesis: Abundant and widespread ore

Physical Description: Iron black, grey-black, opaque cryst. or solid

References:

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