



>>Entry Name: **Iron(III) bromide (FeBr₃)**

Synonym(s): Ferric bromide

CAS Registry Number: 10031-26-2

FeBr₃

Molecular Formula: Br₃Fe

Molecular Weight: 295.559

Accurate Mass: 292.749947

Percentage Composition: Br 81.10%; Fe 18.90%

Source/Synthesis: Synth. from FeBr₂ + Br₂ at elevated temp. or from Fe + Br₂

Use/Importance: Forms adducts with a wide range of ligands. Lewis acid catalyst similar to Iron(III) chloride [HPN21-R](#). Bromination catalyst, e.g. in Friedel Crafts reactions

Physical Description: Red-brown cryst. Deliquescent. Dec. to iron(II) with ease at >120°

Solubility: Sol. H₂O, EtOH, Et₂O, AcOH

Other Data: Subl. with dec. on heating

Aldrich: 21788-3

>>**Derivative:** Hexahydrate

Synonym(s): Ferric bromide hexahydrate

Source/Synthesis: Obt. by recryst. of FeBr₃ from H₂O <49°

Physical Description: Dark green cryst.

Melting Point: Mp 27°

Solubility: V. sol. H₂O, EtOH, Et₂O

References:

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Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **3**, 1643, (synth)

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