



>>Entry Name: Tribromide(1-)

ENTRY UNDER REVIEW

CAS Registry Number: 14522-80-6

$[\text{Br}-\text{Br}-\text{Br}]^{(-)}$

Molecular Formula: $\text{Br}_3^{(-)}$

Molecular Weight: 239.712

Accurate Mass: 236.815008

Percentage Composition: Br 100.00%

Use/Importance: Used on polymer support as brominating agent

Physical Description: Forms red salts

Solubility: Dissociates in H_2O

Other Data: Linear symmetrical in $\text{Me}_3\text{NH}^{(+)}$ salt. Br-Br 253 pm

>>Derivative: Cs salt

Source/Synthesis: Synth. from conc. aq. CsBr and Br_2

Other Data: Unsymmetrical anion, isostructural with CsI_3

>>Derivative: Tetrabromophosphonium salt

Molecular Formula: Br_7P

Molecular Weight: 590.302

Accurate Mass: 583.542114

Percentage Composition: Br 94.75%; P 5.25%

Source/Synthesis: Synth. from Cs_2 , PBr_5 and Br_2

Physical Description: V. hygroscopic flat red needles

Other Data: Loses bromine readily unless kept in soln. or sealed glass tube. Unsymmetrical anion: Br-Br 291, 239; angle BrBrBr 177.3°

>>Derivative: Me_4N salt

CAS Registry Number: 15625-56-6

Source/Synthesis: Synth. from Me_4NBr and Br_2 in HOAc

Physical Description: Red-orange cryst.

Melting Point: Mp 118-118.5°

Other Data: Symmetrical anion: Br-Br 253 pm

Fluka: 87744

>>Derivative: Et_4N salt

CAS Registry Number: 6735-55-3

>>Derivative: Tetrabutylammonium salt

CAS Registry Number: 38932-80-8

Source/Synthesis: Synth. from Bu_4NBr and Br_2

Physical Description: Light orange cryst.

Melting Point: Mp 71-73°

Aldrich: 30159-0

Fluka: 86902

>>Derivative: Benzyltrimethylammonium salt

CAS Registry Number: 111865-47-5

Use/Importance: Brominating agent for org. compds.

Aldrich: 37642-6

Fluka: 14002

References: