>>**Entry Name: Tetrabromoaurate(*III*)(1–),** 9CI

CAS Registry Number: 14337-14-5
Related CAS Registry Numbers(s): 13005-38-4
$[AuBr_4]^{(-)}$

Molecular Formula: $AuBr_4^{(-)}$
Molecular Weight: 516.583
Accurate Mass: 512.719887
Percentage Composition: Au 38.13%; Br 61.87%

>>**Derivative:** K salt
Synonym(s): Potassium bromoaurate

CAS Registry Number: 14323-32-1
Molecular Formula: $AuBr_4K$
Molecular Weight: 555.681
Accurate Mass: 551.683594
Percentage Composition: Au 35.45%; Br 57.52%; K 7.04%
Source/Synthesis: Prepd. from KBr + Au + Br_2
Use/Importance: Commercially available
Physical Description: Reddish-purple cryst. Slowly absorbs water from the atm. to give the dihydrate
Melting Point: Mp 120 dec.°
Solubility: V. sol. H_2O, MeOH, EtOH
Aldrich: 39845-4

>>**Derivative:** H compd
Synonym(s): Bromoauric acid

CAS Registry Number: 17083-68-0
Molecular Formula: $AuBr_4H$
Molecular Weight: 517.59
Accurate Mass: 513.727712
Percentage Composition: Au 38.05%; Br 61.75%; H 0.19%
Source/Synthesis: Formed from $AuBr_3$ + aq. HBr
Physical Description: Very hygroscopic, dark red cryst. + $5H_2O$
Melting Point: Mp 80 dec.°
Solubility: V. sol. H_2O; sol. EtOH

>>**Derivative:** Tetrabutylammonium salt

CAS Registry Number: 17769-65-2
Source/Synthesis: Synth. from Au + Br_2 + Bu_4NBr
Physical Description: Deep maroon plates
Melting Point: Mp 165-167°

References:

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Faltens, M.O. *et al.*, *J. Chem. Phys.*, 1970, **53**, 4249, *(Mössbauer)*
Bosworth, Y.M. *et al.*, *Inorg. Chem.*, 1975, **14**, 170, *(Raman)*
Straehle, J. *et al.*, *Z. Anorg. Allg. Chem.*, 1979, **456**, 241, *(cryst struct, K salt)*
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