>>**Entry Name: Molybdate ($Mo_7O_{24}^{6(-)}$)**
Synonym(s): Paramolybdate. Hexa-μ_3-oxohexa-μ-oxododecaoxoheptamolybdate(6–). Heptamolybdate ($Mo_7O_{24}^{6(-)}$). 7-Molybdate(*VI*)

CAS Registry Number: 12274-10-1
$[Mo_7O_{24}]^{6(-)}$

Molecular Formula: $Mo_7O_{24}^{6(-)}$
Molecular Weight: 1055.566
Accurate Mass: 1069.215802
Percentage Composition: Mo 63.62%; O 36.38%

heteropolyanions of related formula, e.g. Molybdotellurate (Mo_6TeO_{24}) KPG45-Z

>>**Derivative:** Hexa-Na salt
Synonym(s): Sodium molybdate ($Na_6Mo_7O_{24}$). Sodium paramolybdate

CAS Registry Number: 12058-33-2
Molecular Formula: $Mo_7Na_6O_{24}$
Molecular Weight: 1193.504
Accurate Mass: 1207.154404
Percentage Composition: Mo 56.27%; Na 11.56%; O 32.17%
Physical Description: Cryst. + $14H_2O$

>>**Derivative:** Hexa-NH_4 salt
Synonym(s): Ammonium molybdate, USAN**.** Molypen

CAS Registry Number: 12027-67-7

Molecular Formula: $H_{24}Mo_7N_6O_{24}$
Molecular Weight: 1163.795
Accurate Mass: 1177.422046
Percentage Composition: H 2.08%; Mo 57.71%; N 7.22%; O 32.99%
Use/Importance: Source of H_2O-soluble Mo e.g. in prep. of catalysts
Physical Description: White cryst.
Solubility: V. sol. H_2O

Sigma: A2962

>>**Derivative:** Hexa-NH_4 salt, tetrahydrate
Synonym(s): Ammonium molybdate hexahydrate

CAS Registry Number: 12054-85-2
Molecular Formula: $H_{32}Mo_7N_6O_{28}$
Molecular Weight: 1235.856
Percentage Composition: H 2.61%; Mo 54.34%; N 6.80%; O 36.25%
Source/Synthesis: Synth. by cryst. from a soln. of MoO_3 in excess aq. NH_3 heated under reflux for >1 h
Physical Description: Yellowish to colourless monoclinic cryst.
Solubility: V. sol. H_2O
Other Data: Loses H_2O at 90°
Aldrich: 43134-6
Fluka: 9878
Sigma: M1019

>>**Derivative:** Hexakis-Ph_4P salt

CAS Registry Number: 135436-44-1
Physical Description: Colourless cryst. + 4 H_2O ($MeCN/Et_2O$)

References:

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