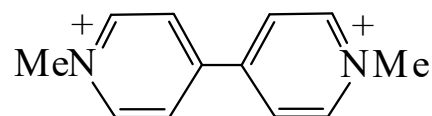




>>Entry Name: 1,1'-Dimethyl-4,4'-bipyridinium(2+), 9Cl, 8Cl

ENTRY UNDER REVIEW

Synonym(s): *N,N'*-Dimethyl-4,4'-bipyridyl(2+). Paraquat, ANSI, BSI, ISO, JMAF, WSSA. MV(2+)



CAS Registry Number: 4685-14-7

Type of Compound Code(s): WG0500

Molecular Formula: $C_{12}H_{14}N_2^{2(+)}$

Molecular Weight: 186.256

Accurate Mass: 186.115698

Percentage Composition: C 77.38%; H 7.58%; N 15.04%

Use/Importance: Herbicide; electron-transfer agent

>>Derivative: Dichloride

Synonym(s): Paraquat dichloride. *N,N'*-Dimethylviologen. Methyl viologen. Dextrone X. Gramoxone. Esgram

CAS Registry Number: 1910-42-5

Type of Compound Code(s): PS8000 WG0500

Molecular Formula: $C_{12}H_{14}Cl_2N_2$

Molecular Weight: 257.161

Accurate Mass: 256.053402

Percentage Composition: C 56.05%; H 5.49%; Cl 27.57%; N 10.89%

Use/Importance: Constit. of numerous proprietary herbicides e.g. Weedol. Used as dil. AcOH soln. as redox indicator (reduced form is blue)

Physical Description: V. air-sensitive needles (MeOH/Me₂CO)

Melting Point: Mp 300 approx. dec.°

Solubility: V. sol. H₂O; sl. sol. MeOH, EtOH; insol. nonpolar solvs.

Hazard & Toxicity: OES: long-term 0.1 mg m⁻³ (respirable dust). Conc. commercial formulations irritate skin, eyes and mucous membranes, and can injure eyes by direct contact. Many fatalities are associated with ingestion of 20% w/v solns., with death delayed for up to 2-3 weeks. Effects of ingestion incl. oesophageal ulceration, severe gastrointestinal effects, and damage to kidneys, liver, lungs and pancreas. The lung is a particular target organ for paraquat. LD₅₀ (rat, orl) 57 mg/kg. LD₅₀ (rat, skn) 80 mg/kg. Exp. reprod. and teratogenic effects

Aldrich: 85617-7

Fluka: 39690

Sigma: M2254

>>Derivative: Bismethylsulfate

CAS Registry Number: 2074-50-2

Molecular Formula: $C_{14}H_{20}N_2O_8S_2$

Molecular Weight: 408.453

Accurate Mass: 408.066108

Percentage Composition: C 41.17%; H 4.94%; N 6.86%; O 31.34%; S 15.70%

Use/Importance: Formerly-used commercial form of Paraquat

Melting Point: Mp 300 approx. dec.°

References: