>>**Entry Name: Diamminedichloroplatinum(*II*),** 8CI

**CAS Registry Number:** 26035-31-4
$Pt(NH_3)_2Cl_2$

**Molecular Formula:** $Cl_2H_6N_2Pt$
**Molecular Weight:** 300.046
**Accurate Mass:** 298.955568
**Percentage Composition:** Cl 23.63%; H 2.02%; N 9.34%; Pt 65.02%
**General Statement:** Square planar

>>**Variant:** *cis*-form
**Synonym(s): Cisplatin,** BAN, INN, JAN, USAN**.** Peyrone's salt. Peyrone's chloride. Cisplatyl. Neoplatin. Platinex. Platinol. Platosin. *cis*-DDP. NSC 119875

**CAS Registry Number:** 15663-27-1

**Molecular Formula:** $Cl_2H_6N_2Pt$
**Molecular Weight:** 300.046
**Accurate Mass:** 298.955568
**Percentage Composition:** Cl 23.63%; H 2.02%; N 9.34%; Pt 65.02%
**Source/Synthesis:** Synth. from $[PtCl_4]^{2(-)}$ + $NH_3$(aq.)
**Biological Use/Importance:** Antineoplastic agent (first platinum anticancer drug). Emetic. Used in study of kinetics and mechanism (by hplc) of complex formn. and hydrol. products with purine nucleoside inosine in sl. acidic aq. solns.; gives further evidence for proposal that first hydrol. product is active intermed. in action of cisplatin
**Physical Description:** Yellow solid
**Development Status:** Approved 1988 (as Platinol, mixt. with Cyclophosphamide CZG78-T)
**Melting Point:** Mp 270 dec.°
**Solubility:** Sol. $H_2O$, DMF, DMSO
**Hazard & Toxicity:** Probable human carcinogen (IARC Group 2A). Toxic effects on kidneys, bone marrow and ears reported when used therapeutically. Nausea and vomiting are common side-effects, together with dose-related peripheral neuropathies. $LD_{50}$ (rat, orl) 25.8 mg/kg. $LD_{50}$ (rat, ivn) 8 mg/kg. Exp. carcinogen and teratogen. Mutagenic props.

**Aldrich:** 20407-2
**Fluka:** 33422
**Sigma:** P4394

>>**Variant:** *trans*-form
**Synonym(s):** Reiset's second chloride

**CAS Registry Number:** 14913-33-8
**Molecular Formula:** $Cl_2H_6N_2Pt$
**Molecular Weight:** 300.046
**Accurate Mass:** 298.955568
**Percentage Composition:** Cl 23.63%; H 2.02%; N 9.34%; Pt 65.02%
**Physical Description:** Pale yellow cryst.
**Melting Point:** Mp 270 dec.°
**Solubility:** Less sol. $H_2O$ than *cis*-form; sol. DMF, DMSO
**Hazard & Toxicity:** $LD_{50}$ (mus, ipr) 27 mg/kg. Mutagen

**Aldrich:** 22691-2
**Sigma:** P1525

**References:**