

PROF. DR. SELEN BİLGE KOÇAK
CHM356 INORGANIC CHEMISTRY LABORATORY

EXPERIMENT NUMBER	3
THE NAME OF THE EXPERIMENT	MERCURY(II) ACETATE
FORMULA	$Hg(CH_3COO)_2$

EXPERIMENTAL PROCEDURE

5 g of sodium chloride is dissolved in 30 mL of hot water. 5 g of mercury(II) chloride is added to this solution. 50 mL of 5% NaOH is dropped slowly onto the hot solution. The yellow precipitated mercury(II) oxide (HgO) is filtered and washed with hot water. The precipitate is dissolved in a beaker by treatment with 5 mL of hot concentrated acetic acid. Then, the solution is left to crystallize. After the crystals are filtered, they are washed with chloroform and dried in the air.

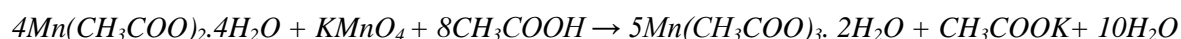
QUESTIONS

1. Write the electronic formula of the compound.
2. Why is NaCl used in the experiment?
3. Write and balance the chemical equation.

Working rate: 1/5

EXPERIMENT NUMBER	4
THE NAME OF THE EXPERIMENT	MANGANESE(III) ACETATE
FORMULA	$Mn(CH_3COO)_3 \cdot 2H_2O$

REACTION EQUATION



EXPERIMENTAL PROCEDURE

19.6 g (80 mmole) of $Mn(CH_3COO)_2 \cdot 4H_2O$ is dissolved in 200 mL of acetic acid by heating., 3.1 g (20 mmole) of $KMnO_4$ is slowly added to this solution using the tip of the spatula (by the way, it is necessary to be careful since the reaction is severe). After the added $KMnO_4$ is completely dissolved, 3mL of water is put into the solution and left to crystallize. If there is no crystallization after one day, the edge of the beaker is itched with a glass stir rod. The crystals formed are recrystallized from acetic acid. Excess water in crystallization should be avoided.

QUESTIONS

1. Write the electron configuration of Mn and Mn(III).
2. Why is the experiment carried out in an acetic acid medium?
3. What is the reason for not adding too much water for crystallization?
4. Write the decomposition reaction of Mn(III) ion in water.

Working rate: 1/6

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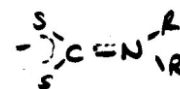
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GENERAL INFORMATION

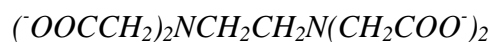
Nomenclature of Inorganic Compounds

Negative ligands

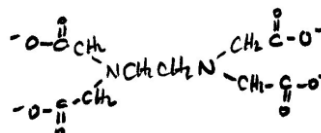
F^-	Fluoro
Cl^-	Chloro
Br^-	Bromo
I^-	Iodo
O^{2-}	Oxo
O_2^{2-}	Peroxo
S^{2-}	Thio
SH^-	Mercapto
H^-	Hydrido
OH^-	Hydroxo
CH_3COO^-	Acetato
NH_2^-	Amido
NH^{2-}	İmido
N^{3-}	Azido
NO_3^-	Nitrato
NO_2^-	Nitro
ONO^-	Nitrito
SO_4^{2-}	Sulfato
ClO_3^-	Chlorato
ClO_2^-	Chlorito
$H_2NCH_2COO^-$	Glisinato
SO_3^{2-}	Sulfito
$S_2O_3^{2-}$	Thiyosulfato
CN^-	Cyano
NC^-	İsocyano
SCN^-	İsothiocyanato
CO_3^{2-}	Carbonato
$C_2O_4^{2-}$	Oxalato
$NHOH^-$	Hydroksilamido
$(CH_3)_2N^-$	Dimethylamido
$S_2CNR_2^-$	Dialkyldithiocarbamato (dte)



Acetylacetonato (acac)



Ethylenediaminetetraacetato (EDTA)



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Neutral ligands

H_2O

CO

CS

NO

O_2

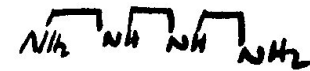
PR_3

$H_2NCH_2CH_2NH_2$

$H_2NCH_2CH_2NHCH_2CH_2NH_2$

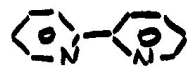


$H_2NCH_2CH_2NHCH_2CH_2NHCH_2CH_2NH_2$

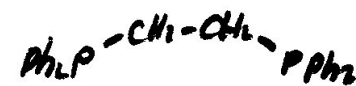


C_5H_5N

$C_5H_4N-C_5H_4N$



$(C_6H_5)_2PCH_2CH_2P(C_6H_5)_2$



NH_3

N_2

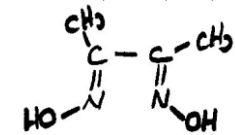
H_2

CH_3NH_2

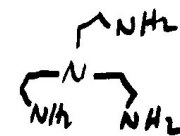
$C_{12}H_8N_2$



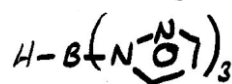
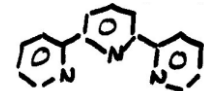
$HONC(CH_3)-C(CH_3)NOH$



$N(C_2H_5NH_2)_3$



$C_5H_4N-C_5H_3N-C_5H_4N$



Positive ligands

NO^+

$NH_2NH_3^+$

O_2^+

Aqua

Carbonyl

Thiocarbonyl

Nitrocyl

Dioxygene

Trialkylphosphine

Ethylenediamine (en)

Diethylenediamine (dien)

Triethylenediamine (tren)

Pyridine (py)

2,2'-Bipyridine (bipy)

1,2-Bis(diphenylphosphino)ethane (dppe)

Ammine

Dinitrojen

Dihidrojen

Methylamine

1,10-Phenanthroline (phen)

Dimethylglyoxime (DMG)

β,β',β'' -Triaminotriethylamine (tren)

Terpyridine (terpy)

Pirazolilborat

Nitronium

Hydrazinium

Dioxygenyl