Experiment 5: Observing and Classifying Reactions

	Version 2
lame:	Date:
ab Partner:	Section:
Purpose	
Experimental Data and Equations	
Reactions and No Reactions	
1. Deionized water + of zinc granules.	
Reactants before combining	Observations After combining and mixing
Reacted?	Reaction type:
Molecular Equation (ME):	
Ionic Equation (IE):	
Net Ionic Equation (NIE):	

Reaction type: E: Structor's Signature M ammonium oxalate (the oxalate ion is C ₂ O ₄ ²) + 0.1 M calcium chloride. Observations Reactants before combining After combining and mixing eacted? Reaction type:	1 hydrochloric acid + zinc granules. Perfo	Observations
ME: E: MIE: nstructor's Signature 2 M ammonium oxalate (the oxalate ion is C ₂ O ₄ ²) + 0.1 M calcium chloride. Observations Reactants before combining After combining and mixing Reacted? Reaction type: ME: E: MIE:	Reactants before combining	After combining and mixing
ME: E: Instructor's Signature 2 M ammonium oxalate (the oxalate ion is C ₂ O ₄ ²) + 0.1 M calcium chloride. Observations Reactants before combining After combining and mixing Reacted? Reaction type: ME: E: NIE:		
ME: E: Instructor's Signature 2 M ammonium oxalate (the oxalate ion is C ₂ O ₄ ²) + 0.1 M calcium chloride. Observations Reactants before combining After combining and mixing Reacted? Reaction type: WE: E: WIE:		
ME: E: NIE: Instructor's Signature 2 M ammonium oxalate (the oxalate ion is C ₂ O ₄ ² -) + 0.1 M calcium chloride. Observations		
Instructor's Signature	Reacted?	Reaction type:
Instructor's Signature	ME:	
Instructor's Signature		
Instructor's Signature	E:	
nstructor's Signature	ure.	
22 M ammonium oxalate (the oxalate ion is C ₂ O ₄ ²⁻) + 0.1 M calcium chloride. Observations Reactants before combining After combining and mixing Reacted? Reaction type: ME: NIE:	NIE:	
22 M ammonium oxalate (the oxalate ion is C ₂ O ₄ ²⁻) + 0.1 M calcium chloride. Observations Reactants before combining After combining and mixing Reacted? Reaction type: ME: NIE:		
22 M ammonium oxalate (the oxalate ion is C ₂ O ₄ ²⁻) + 0.1 M calcium chloride. Observations Reactants before combining After combining and mixing Reacted? Reaction type: ME: NIE:	Instructor's Signature	
Reactants before combining After combining and mixing	mstructor s signature	
Observations Reactants before combining After combining and mixing	motification of displacement	
Reactants before combining After combining and mixing	mod detail 5 signature	
Observations Reactants before combining After combining and mixing	iistractor 3 Signature	
Observations Reactants before combining Reacted? Reaction type: HE: HE:	iisti detor 3 Signature	
Observations Reactants before combining Reacted? Reacted? Reaction type: ME: WIE:	instructor 3 Signature	
Reacted? Reaction type: ME: E: NIE:		
ME: E: NIE:	2 M ammonium oxalate (the oxalate ion is	s $C_2O_4^{2-}$) + 0.1 M calcium chloride. Observations
ME: IIE:	2 M ammonium oxalate (the oxalate ion is	s $C_2O_4^{2-}$) + 0.1 M calcium chloride. Observations
ME: E: NIE:	2 M ammonium oxalate (the oxalate ion is	s $C_2O_4^{2-}$) + 0.1 M calcium chloride. Observations
ME: E: NIE:	2 M ammonium oxalate (the oxalate ion is	s $C_2O_4^{2-}$) + 0.1 M calcium chloride. Observations
ME: NIE:	.2 M ammonium oxalate (the oxalate ion is	s $C_2O_4^{2-}$) + 0.1 M calcium chloride. Observations
ME: NIE:	.2 M ammonium oxalate (the oxalate ion is	s $C_2O_4^{2-}$) + 0.1 M calcium chloride. Observations
E: NIE:	2 M ammonium oxalate (the oxalate ion is Reactants before combining	$S C_2O_4^{2-}$) + 0.1 M calcium chloride. Observations After combining and mixing
NIE:	.2 M ammonium oxalate (the oxalate ion is Reactants before combining	$S C_2O_4^{2-}$) + 0.1 M calcium chloride. Observations After combining and mixing
NIE:	.2 M ammonium oxalate (the oxalate ion is	$S C_2O_4^{2-}$) + 0.1 M calcium chloride. Observations After combining and mixing
	.2 M ammonium oxalate (the oxalate ion is Reactants before combining Reacted? ME:	$S C_2O_4^{2-}$) + 0.1 M calcium chloride. Observations After combining and mixing
	.2 M ammonium oxalate (the oxalate ion is Reactants before combining Reacted? ME:	$S C_2O_4^{2-}$) + 0.1 M calcium chloride. Observations After combining and mixing
	.2 M ammonium oxalate (the oxalate ion is Reactants before combining Reacted? ME:	$S C_2O_4^{2-}$) + 0.1 M calcium chloride. Observations After combining and mixing
	.2 M ammonium oxalate (the oxalate ion is Reactants before combining Reacted? ME:	$S C_2O_4^{2-}$) + 0.1 M calcium chloride. Observations After combining and mixing

	Observations
Reactants before combining	After combining and mixing
Reacted?	Reaction type:
ME:	
VIL.	
E:	
E.	
Aug	
NIE:	
	reaction several times for 10 - 15 minutes.
opper metal + 0.5 M silver nitrate. Observe	reaction several times for 10 - 15 minutes. Observations
	reaction several times for 10 - 15 minutes.
opper metal + 0.5 M silver nitrate. Observe	reaction several times for 10 - 15 minutes. Observations
opper metal + 0.5 M silver nitrate. Observe	reaction several times for 10 - 15 minutes. Observations
opper metal + 0.5 M silver nitrate. Observe	reaction several times for 10 - 15 minutes. Observations
opper metal + 0.5 M silver nitrate. Observe Reactants before combining	reaction several times for 10 - 15 minutes. Observations After combining and mixing
opper metal + 0.5 M silver nitrate. Observe Reactants before combining	reaction several times for 10 - 15 minutes. Observations
opper metal + 0.5 M silver nitrate. Observe Reactants before combining Reacted?	reaction several times for 10 - 15 minutes. Observations After combining and mixing
opper metal + 0.5 M silver nitrate. Observe Reactants before combining Reacted?	reaction several times for 10 - 15 minutes. Observations After combining and mixing
opper metal + 0.5 M silver nitrate. Observe Reactants before combining Reacted? ME:	reaction several times for 10 - 15 minutes. Observations After combining and mixing
opper metal + 0.5 M silver nitrate. Observe Reactants before combining Reacted? ME:	reaction several times for 10 - 15 minutes. Observations After combining and mixing
Reacted? ME:	reaction several times for 10 - 15 minutes. Observations After combining and mixing
opper metal + 0.5 M silver nitrate. Observe Reactants before combining Reacted? ME:	reaction several times for 10 - 15 minutes. Observations After combining and mixing

action type: temperature and pH before and after ions After combining and mixing
temperature and pH before and after
ions
Title combining and mixing
action type:
_
_

	() nitrate. Observations
Reactants before combining	After combining and mixing
Reacted?	Reaction type:
NAC.	
ME:	
15	
IE:	
NIE:	
equence of Reactions	
equence of Reactions 5.0 M sodium hydroxide dropwise + 0.1 M co	
5.0 M sodium hydroxide dropwise + 0.1 M co	Observations
5.0 M sodium hydroxide dropwise + 0.1 M co	Observations
5.0 M sodium hydroxide dropwise + 0.1 M co	Observations
5.0 M sodium hydroxide dropwise + 0.1 M co Reactants before combining	Observations After combining and mixing
5.0 M sodium hydroxide dropwise + 0.1 M co	Observations
Reactants before combining Reacted?	Observations After combining and mixing
5.0 M sodium hydroxide dropwise + 0.1 M co Reactants before combining	Observations After combining and mixing
Reactants before combining Reacted? ME:	Observations After combining and mixing
Reactants before combining Reacted?	Observations After combining and mixing
Reactants before combining Reacted? ME:	Observations After combining and mixing

trifuge the product from experiment 9. D	Observations
Reactants before combining	After combining and mixing
Reacted?	Reaction type:
ME:	
IE:	
NIE:	
	periment 10.
M hydrochloric acid + solid produced in ex	Observations
NIE: M hydrochloric acid + solid produced in ex Reactants before combining	
M hydrochloric acid + solid produced in ex	Observations
M hydrochloric acid + solid produced in ex	Observations
M hydrochloric acid + solid produced in ex Reactants before combining	Observations After combining and mixing
6 M hydrochloric acid + solid produced in ex	Observations
M hydrochloric acid + solid produced in ex Reactants before combining Reacted?	Observations After combining and mixing
M hydrochloric acid + solid produced in ex Reactants before combining Reacted? ME:	Observations After combining and mixing
M hydrochloric acid + solid produced in ex Reactants before combining Reacted?	Observations After combining and mixing
M hydrochloric acid + solid produced in ex Reactants before combining Reacted? ME:	Observations After combining and mixing