


5 points

Experiment #9 – Grade Sheet

Student Number:

B 0 0

0 = ☐ 0 ☐ 0 ☐ 0 ☐ 0 ☐ 0
 1 = ☐ 1 ☐ 1 ☐ 1 ☐ 1 ☐ 1 ☐ 1
 2 = ☐ 2 ☐ 2 ☐ 2 ☐ 2 ☐ 2 ☐ 2
 3 = ☐ 3 ☐ 3 ☐ 3 ☐ 3 ☐ 3 ☐ 3
 4 = ☐ 4 ☐ 4 ☐ 4 ☐ 4 ☐ 4 ☐ 4
 5 = ☐ 5 ☐ 5 ☐ 5 ☐ 5 ☐ 5 ☐ 5
 6 = ☐ 6 ☐ 6 ☐ 6 ☐ 6 ☐ 6 ☐ 6
 7 = ☐ 7 ☐ 7 ☐ 7 ☐ 7 ☐ 7 ☐ 7
 8 = ☐ 8 ☐ 8 ☐ 8 ☐ 8 ☐ 8 ☐ 8
 9 = ☐ 9 ☐ 9 ☐ 9 ☐ 9 ☐ 9 ☐ 9

First Name:		Last Name:
Lab Section:		Locker #:
Marker Initials	TA USE ONLY	
	<input type="radio"/> L <input type="radio"/> ● <input type="radio"/> M <input type="radio"/> ●	

See bubbling instructions on the back of this page.

Unknown Set O P Q R S T U V W X Y Z
☐ O ☐ P ☐ Q ☐ R ☐ S ☐ T ☐ U ☐ V ☐ W ☐ X ☐ Y ☐ Z

Unknown	1	2	3	4	5	6	7	8
1		<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
2		<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
3			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
4				<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
5					<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
6						<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
7							<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
8								<input type="radio"/> Y <input type="radio"/> N

Compound	Unknown #								Identifying Precipitate										
CuSO ₄	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	<input type="radio"/> E	<input type="radio"/> F	<input type="radio"/> G	<input type="radio"/> H	<input type="radio"/> I	<input type="radio"/> J	<input type="radio"/> K
Cu(NO ₃) ₂	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	<input type="radio"/> E	<input type="radio"/> F	<input type="radio"/> G	<input type="radio"/> H	<input type="radio"/> I	<input type="radio"/> J	<input type="radio"/> K
BaCl ₂	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	<input type="radio"/> E	<input type="radio"/> F	<input type="radio"/> G	<input type="radio"/> H	<input type="radio"/> I	<input type="radio"/> J	<input type="radio"/> K
NaCl	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	<input type="radio"/> E	<input type="radio"/> F	<input type="radio"/> G	<input type="radio"/> H	<input type="radio"/> I	<input type="radio"/> J	<input type="radio"/> K
Na ₂ CO ₃	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	<input type="radio"/> E	<input type="radio"/> F	<input type="radio"/> G	<input type="radio"/> H	<input type="radio"/> I	<input type="radio"/> J	<input type="radio"/> K
(NH ₄) ₂ SO ₄	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	<input type="radio"/> E	<input type="radio"/> F	<input type="radio"/> G	<input type="radio"/> H	<input type="radio"/> I	<input type="radio"/> J	<input type="radio"/> K
ZnSO ₄	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	<input type="radio"/> E	<input type="radio"/> F	<input type="radio"/> G	<input type="radio"/> H	<input type="radio"/> I	<input type="radio"/> J	<input type="radio"/> K
Zn(NO ₃) ₂	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D	<input type="radio"/> E	<input type="radio"/> F	<input type="radio"/> G	<input type="radio"/> H	<input type="radio"/> I	<input type="radio"/> J	<input type="radio"/> K
	1	2	3	4	5	6	7	8	A	B	C	D	E	F	G	H	I	J	K

Identifying Precipitates

- | | | | |
|------------------------------------|----------------------|-----------------------|------------------------------|
| A. CuCO ₃ | D. NaNO ₃ | G. ZnCO ₃ | J. NaCl |
| B. Na ₂ SO ₄ | E. BaSO ₄ | H. NH ₄ Cl | K. No precipitate was formed |
| C. CuCl ₂ | F. ZnCl ₂ | I. BaCO ₃ | |

Bubbling information for data tables on Exp. 9 Grade Sheet

Raw Data Set:

Indicate which unknown combinations created a precipitate by filling in the appropriate bubble in the table provided. Fill in ☺ if a precipitate formed or ☹ if a precipitate did not form.

Unknown Identification and Identifying Precipitates

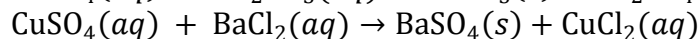
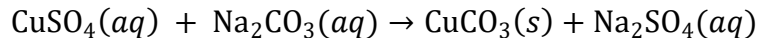
Identify unknown by bubbling in the correct unknown #.

Identify which precipitate was formed by bubbling in the correct letter from the “Identifying Precipitates” list. There may be more than one correct answer. Please choose **ONLY ONE** correct answer.

Example: Unknown Identification and Identifying Precipitates

A student determines from their raw data that Unknown # 2 is CuSO_4 and bubbled in “2” for the CuSO_4 unknown # entry in the data table.

A student determined that there are two possible precipitates that could form by combining a CuSO_4 solution with the remaining 7 solutions (their equations are written below).



In this case, there is more than one correct answer. The instructions state to choose **ONLY ONE** correct answer. In this example, the student has chosen BaSO_4 as their identifying precipitate and bubbled in “E” for the CuSO_4 identifying precipitate entry in the data table. (NOTE: If the student had chosen CuCO_3 as the identifying precipitate and bubbled in “A”, this would also be a correct solution.)

Compound	Unknown #	Identifying Precipitate
CuSO_4	① ● ③ ④ ⑤ ⑥ ⑦ ⑧	Ⓐ Ⓑ Ⓒ Ⓓ ● Ⓕ Ⓖ Ⓗ Ⓘ Ⓙ Ⓚ

Identifying Precipitates

- | | | | |
|------------------------------------|---------------------------|----------------------------------|-------------------------------------|
| A. CuCO_3 | D. NaNO_3 | G. ZnCO_3 | J. NaCl |
| B. Na_2SO_4 | E. BaSO_4 | H. NH_4Cl | K. No precipitate was formed |
| C. CuCl_2 | F. ZnCl_2 | I. BaCO_3 | |
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