

Chem 114 Experiment: The Extraction of Casein from Milk

Name: _____ Date: _____ Section: _____

Part 1: Data and results. Complete the given tables with significant figures and units, where applicable.

1. Write the balanced chemical reaction for the precipitation of casein from milk.

Isolation of Casein

made up data

		Show Your Work Here.	Value
1	Mass of casein and weigh tray		1.450 g
2	Mass of empty weigh tray		0.350
3	Mass of casein {L1} - {L2}		
4	Volume of milk		39.9 ml
5	Mass-volume % of casein in milk (eq 3)		
6	Mass of protein in a serving of milk (on bottle)		8g
7	Volume of milk per serving (on bottle)		240 ml
8	Mass-volume % of protein in milk (eq 5)		
9	Color of isolated casein		yellowish white
10	Physical state of isolated casein (solid, liquid, or gas)		solid

Biuret Test

violet - peptide bond, blue - no protein peptide bond

	Item	Amino acid, Protein, or Neither?	Initial Appearance of Item	Final Appearance of Item/Solution	Conclusion (Peptide Bond or not?)
11	0.5 M Copper(II) sulfate (aq)				
12	Milk	protein	white	purple	yes
13	Glycine	amino acid	clear colorless	blue	no
14	Deionized water		colorless	blue	
15	Silk		white fiber	purple	
16	Cotton		"	blue	
17	Wool		"	purple	
18	Your casein		yellowish	purple	

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watch glass

Complete the next page as well.