

NATIONAL UNIVERSITY OF SINGAPORE  
FACULTY OF SCIENCE


**Experiment-Based Risk Assessment Form**

Name of Department	Chemistry	Location of Lab	S7-04
Name of Laboratory	Advanced Chemistry Teaching Lab	Name of PI (lecturer-in-charge)	Dr. Chng Yong Sheng
Name of Lab Officer	Leng Zhi Jin, Wong Ling Rong	Name of Activity/Experiment	CM5176 GIST (Sem 1) Complexometric Titration of Copper

Hazard Identification				Risk Evaluation & Control						
No	Description / Details of Steps in Activity	Hazard(s)	Possible Accident(s) or ill Health, and Persons-at-Risk	Existing Risk Control (Mitigation)	Severity	Likelihood (probability)	Risk Level	Additional Risk Control	Person Responsible	By (Date)
1	In either an Erlenmeyer flask or a beaker, the CuSO <sub>4</sub> solution (exactly 25 mL) is diluted with 20-25 mL of deionized water	CuSO <sub>4</sub> solution: Toxic	Harmful if swallowed or inhaled	No eating or drinking in lab, use in fume hood	2	1	2			
		CuSO <sub>4</sub> solution: Irritant	Irritating to eyes and skin	Wear gloves, safety glasses, long pants, covered shoes and lab coat	1	1	1			
2	To this add dropwise 12% ammonia, (1-3 mL) using a plastic dropper	12 % NH <sub>3</sub> solution: Toxic	Harmful if swallowed or inhaled	No eating or drinking in lab, use in fume hood	2	1	2			
		12 % NH <sub>3</sub> solution: Irritant	Irritant to nose, eyes and skin	Use in fume hood, Wear gloves, safety glasses, long pants, covered shoes and lab coat	2	1	2			
3	Titrate with 0.1 mol/L EDTA solution (50 mL)	EDTA Solution: Toxic	Harmful if swallowed or inhaled	No eating or drinking in lab, use in fume hood	2	1	2			
		EDTA Solution: Irritant	Irritating to eyes and skin	Wear gloves, safety glasses, long pants, covered shoes and lab coat	2	1	2			
		Broken glassware	Cuts from broken glassware	Check glassware before using, handle glassware appropriately, secure burette with clamp,	2	1	2			

**Conducted By**


Name Dr. Chng Yong Sheng

Signature 

Date 1/6/2022

**Approved By**

Name Assoc Prof Yeo Boon Siang

Signature 

Approval date 1-Jun-22

Next Revision date 31-May-25  
(Maximum 3 years)