

UNIT 1
MODULE 1: FUNDAMENTALS IN CHEMISTRY (cont'd)

SPECIFIC OBJECTIVES	EXPLANATORY NOTES	SUGGESTED PRACTICAL ACTIVITIES
3. <u>The Mole Concept</u> Students should be able to: 3.1. apply Avogadro's law; 3.2. define the mole; 3.3. define the term 'molar mass'; 3.4. write balanced molecular and ionic equations; 3.5. perform calculations based on the mole concept; 3.6. apply the mole concept to molecular and ionic equations; 3.7. calculate empirical and molecular formulae; 3.8. perform titrimetric analyses; and, 3.9. use results from titrimetric analyses to calculate: (a) mole ratios; (b) molar concentration; and, (c) mass concentration.	Perform calculations involving molar volumes. Relate to masses of substances, volumes of gases, volumes and concentrations of solutions. Combustion data; absolute masses or relative abundances of elements.	Conduct acid/base titrations and redox titrations. (dichromate (VI)), hydrogen peroxide, iodide thiosulfate, manganate (VII); mean (consecutive accurate values within 0.10 cm³ of each other), significant figures.