CONTENTS

Page

Preface 7
General notices 10
Units of measurement 13

PHYSICAL METHODS

Measurement of mass 17
Determination of melting temperature, melting range, congealing point, boiling point, and boiling range 19
Determination of mass density and relative density 27
Determination of optical rotation and specific rotation 29
Determination of refractive index 32
Spectrophotometry in the visible and ultraviolet regions 33
Spectrophotometry in the infrared region 40
Atomic absorption spectrophotometry 43
Fluorescence spectrophotometry 45
Turbidimetry and nephelometry 49
Colour of liquids 50
Radiopharmaceuticals 52
Powder fineness and sieves 74

PHYSICOCHEMICAL METHODS

Chromatography 79
Determination of pH 95
Electrophoresis 98
Phase solubility analysis 102

CHEMICAL METHODS

General identification tests 111
Limit test for chlorides 115
Limit test for sulfates 116
Limit test for heavy metals 117
Limit test for iron 120
Limit test for arsenic 121
Sulfated ash 123
Oxygen flask method 123

Page

Complexometric titrations 126
Non-aqueous titration 129
Nitrite titration 133
Determination of water by the Karl Fischer method 134
Determination of methoxyl 135
Determination of nitrogen 136
Determination of iodine value 137
Determination of peroxides in fixed oils 138
Determination of saponification value 139
Determination of unsaponifiable matter 139
Determination of acid value 140

BIOLOGICAL METHODS

Microbiological assay of antibiotics 145
Sterility testing of antibiotics 151
Undue toxicity 154
Test for pyrogens 155
Test for histamine-like substances (vasodepressor substances) . . . 156

METHODS OF PHARMACOGNOSY

Determination of ash and acid-insoluble ash 161

MISCELLANEOUS

International chemical reference substances 165
Names, symbols, and relative atomic masses of elements 166
List of reagents, test solutions, and volumetric solutions 167

Index 215