

CONTENTS

Chapter I:	PHYSICOCHEMICAL AND ANALYTICAL DESCRIPTION OF ALUMINUM AND ITS COMPOUNDS	1
	Occurrence in nature	1
	Physical and chemical properties of aluminum	3
	Compounds of aluminum	5
Chapter II:	CHEMICAL AND PHYSICOCHEMICAL METHODS FOR THE DETERMINATION OF ALUMINIUM	24
	Qualitative reactions given by aluminum ion	24
	Methods for the determination of aluminum	27
	Gravimetric methods	27
	Titrimetric methods	61
	Photometric methods	93
	Fluorimetric methods	139
	Polarographic methods	149
	Radioactivation methods	154
	Spectroscopic methods	155
	X-ray spectroscopy	176
	Other methods	177
Chapter III:	SEPARATION OF ALUMINUM FROM ACCOMPANYING ELEMENTS	178
	Precipitation by organic and inorganic reagents	178
	Methods based on the precipitation of aluminum	178
	Methods based on the precipitation of interfering elements	179
	Separations by extraction	183
	Chromatographic separation methods	194
	Separation on cation exchangers	194
	Separation on anion exchangers	198
	Other chromatographic separation methods	203
	Determination of interfering elements by electrolysis on a mercury cathode	205
	Other separation methods	207
Chapter IV:	DETERMINATION OF ALUMINUM IN NATURAL AND INDUSTRIAL SUBSTANCES	208
	Determination of aluminum in minerals, ores and industrial concentrates	208
	Determination of aluminum in soils, materials of organic origin, and water	222
	Determination of aluminum in metals and alloys	226

Chapter V: DETERMINATION OF IMPURITIES IN HIGH-PURITY ALUMINUM 245

BIBLIOGRAPHY 250

SUBJECT INDEX 297