Contents

Preface	7
Introduction	g
Basic Terms	9
Minerals	10
Material Structure of Minerals	10
System of Mineral Classification	10
Origin of Minerals	11
Magmatic Formation of Minerals	11
Mineral Formation Caused by Weathering	12
Mineral Formation Caused by Chemico-Sedimentary Processes	12
Minerals and Rocks of Biological Origin	12
Metamorphic Mineral Formation	13
External Form of Minerals	13
Crystals	13
Crystal Symmetry	14
Appearance and Development of Crystals	14
Aggregates	17
Growth of Twin Crystals	17
Crystal Faces	18
Pseudomorphs	18
Physical Properties of Minerals	18
Specific Gravity	19
Properties of Cohesion	19
Hardness	19
Cleavage	21
Fracture	21
Other Physical Properties Dependent upon Cohesion	22
Colour	22
Streak	23
Lustre	24

Transparency	24
Refraction of Light	24
Luminescence	25
Heat Conductivity	25
Magnetism	25
Chemical Properties of Minerals	25
Identification of Minerals	26
Process of Mineral Identification	26
Examples of Mineral Identification	27
Practical Advice for Collectors	28
Where are Minerals to be Found?	29
Collecting Equipment	29
Field Work	31
Preserving and Labelling Collected Specimens	32
Notes to the Identification Tables	33
Abbreviations	34
Minerals (Identification Tables and Plates)	35
Precious Stones	164
Treatment of Precious Stones — Cutting Form	165
Imitations and Synthetic Precious Stones	165
Identification of Precious Stones	166
Rocks	168
Classification of Rocks	168
Structure and Texture of Rocks	170
Identification of Rocks	170
Precious Stones and Rocks (Identification Tables and Plates)	171
Identification Tables according to Physical Properties	188
Index of Minerals	198
General Index	202
Locations of Minerals	203
List of Reference Books	208