

Contents

Endorsement V

Preface VII

Chapter 1 Alkaloids 1

- 1.1 Nicotine from Tobacco 3
- 1.2 Caffeine from Green Tea and Green Coffee Beans 25
- 1.3 Theobromine from Cocoa Powder 39
- 1.4 Piperine from Black Pepper 53
- 1.5 Cytisine from Seeds of the Golden Chain Tree 65
- 1.6 Galanthamine from the Bulbs of Daffodils “Carlton” 83
- 1.7 Strychnine from Seeds of the Strychnine Tree 103

Chapter 2 Aromatic Compounds 129

- 2.1 Anethole from Ouzo, containing Anise Extract 131
- 2.2 Eugenol from Cloves 143
- 2.3 Chamazulene from German Chamomile Flowers 153
- 2.4 Tetrahydrocannabinol from Marijuana 169

Chapter 3 Dyestuffs and Coloured Compounds 189

- 3.1 Lawsone from Henna Leaves Powder 191
- 3.2 Curcumin from Turmeric 207
- 3.3 Brazileine from Pernambuco Wood 221
- 3.4 Indigo from Woad 241
- 3.5 Capsanthin from Sweet Pepper Powder 261

Chapter 4 Carbohydrates 283

- 4.1 Glucosamine from the shells of common shrimps 285
- 4.2 Lactose from Milk 303
- 4.3 Amygdalin from Bitter Almonds 319
- 4.4 Hesperidin from the Peel of Mandarin Oranges 335

Chapter 5 Terpenoids	357
5.1 Limonene	from Brazilian Sweet Orange Oil 359
5.2 Menthol	from Japanese Peppermint Oil 373
5.3 The Thujones	from Common Sage or Wormwood 389
5.4 Patchouli Alcohol	from Patchouli 409
5.5 Onocerin	from Spiny Restharrow Roots 427
5.6 Cnicin	from Blessed Thistle Leaves 443
5.7 Abietic Acid	from Colophony of Pine Trees 459
5.8 Betulinic Acid	from Plane-Tree Bark 481

Chapter 6 Miscellaneous	501
6.1 Shikimic Acid	from Star Aniseed 503
6.2 Aleuritic Acid	from Shellac 519

Answers to Questions and Translations 539

Answers Chapter 1 Alkaloids 539

1.1 Nicotine	539
1.2 Caffeine	541
1.3 Theobromine	544
1.4 Piperine	546
1.5 Cytisine	548
1.6 Galanthamine	552
1.7 Strychnine	554

Answers Chapter 2 Aromatic Compounds 558

2.1 Anethole	558
2.2 Eugenol	559
2.3 Chamazulene	561
2.4 Tetrahydrocannabinol	565

Answers Chapter 3 Dyestuffs and Coloured Compounds 569

3.1 Lawsone	569
3.2 Curcumin	571
3.3 Brazileine	574
3.4 Indigo	577
3.5 Capsanthin	580

Answers Chapter 4 Carbohydrates 583

4.1 Glucosamine	583
4.2 Lactose	585
4.3 Amygdalin	587
4.4 Hesperidin	588

Answers Chapter 5 Terpenoids 591

- 5.1 Limonene 591
- 5.2 Menthol 595
- 5.3 The Thujones 599
- 5.4 Patchouli Alcohol 602
- 5.5 Onocerin 605
- 5.6 Cnicin 607
- 5.7 Abietic Acid 610
- 5.8 Betulinic Acid 614

Answers Chapter 6 Miscellaneous 617

- 6.1 Shikimic Acid 617
- 6.2 Aleuritic Acid 618

Appendix 621

Index 622