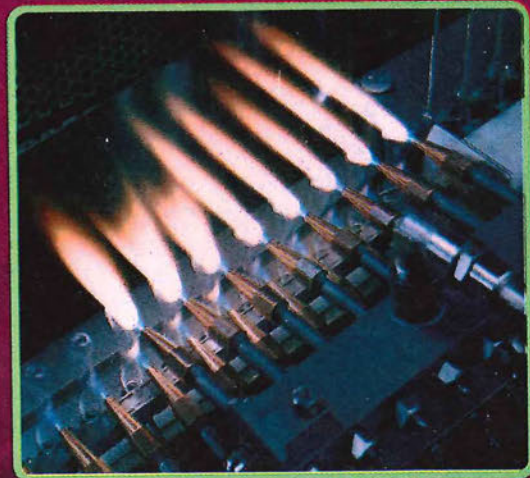
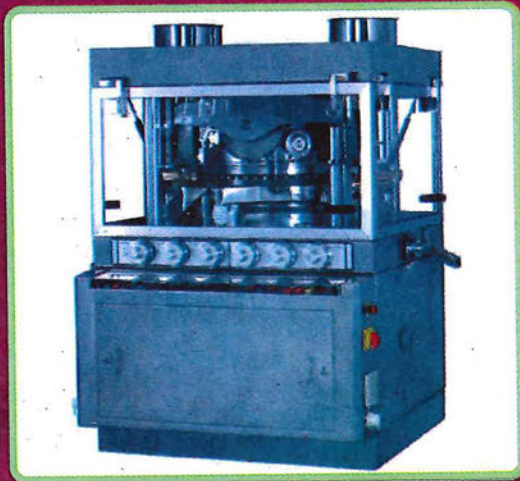


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PHARMACEUTICAL TECHNOLOGY

Volume I



RSR MURTHY
ASHUTOSH KAR



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PHARMACEUTICAL TECHNOLOGY Volume I

RSR Murthy

Director and Head, Department of Pharmaceutics,
ISF College of Pharmacy,
Moga (**Punjab**)
Former

Professor, Govt. College of Pharmacy, Bangalore
Professor, College of Pharmacy, New Delhi (DIPSAR)
Professor, The MS University of Baroda

Ashutosh Kar

Former

Professor, School of Pharmacy, Addis Ababa University
Addis Ababa (**Ethiopia**)
Dean, Chairman & Professor, Faculty of Pharmaceutical Sciences
Guru Jambheshwar University, Hisar (**India**)
Professor, School of Pharmacy, Al-Arab Medical University
Benghazi (**Libya**)
Professor, College of Pharmacy, University of Delhi
Delhi (**India**)
Professor & Head, Department of Pharmaceutical Chemistry
Faculty of Pharmaceutical Sciences, University of Nigeria
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BRANCHES

- **Bangalore** 37/10, 8th Cross (Near Hanuman Temple), Azad Nagar, Chamarajpet, Bangalore-560 018
Tel.: (080) 26756823, Telefax: 26756820, **E-mail: bangalore@newagepublishers.com**
- **Chennai** 26, Damodaran Street, T. Nagar, Chennai-600 017
Tel.: (044) 24353401, Telefax: 24351463, **E-mail: chennai@newagepublishers.com**
- **Cochin** CC-39/1016, Carrier Station Road, Ernakulam South, Cochin-682 016
Tel.: (0484) 2377004, Telefax: 4051303, **E-mail: cochin@newagepublishers.com**
- **Guwahati** Hemsan Complex, Mohd. Shah Road, Paltan Bazar, Near Starline Hotel, Guwahati-781 008
Tel.: (0361) 2513881, Telefax: 2543669, **E-mail: guwahati@newagepublishers.com**
- **Hyderabad** 105, 1st Floor, Madhiray Kaveri Tower, 3-2-19, Azam Jahi Road, Nimboliadda, Hyderabad-500 027
Tel.: (040) 24652456, Telefax: 24652457, **E-mail: hyderabad@newagepublishers.com**
- **Kolkata** RDB Chambers (Formerly Lotus Cinema) 106A, 1st Floor, S.N. Banerjee Road, Kolkata-700 014
Tel.: (033) 22273773, Telefax: 22275247, **E-mail: kolkata@newagepublishers.com**
- **Lucknow** 16-A, Jopling Road, Lucknow-226 001
Tel.: (0522) 2209578, 4045297, Telefax: 2204098, **E-mail: lucknow@newagepublishers.com**
- **Mumbai** 142C, Victor House, Ground Floor, N.M. Joshi Marg, Lower Parel, Mumbai-400 013
Tel.: (022) 24927869, Telefax: 24915415, **E-mail: mumbai@newagepublishers.com**
- **New Delhi** 22, Golden House, Daryaganj, New Delhi-110 002
Tel.: (011) 23262368, 23262370, Telefax: 43551305, **E-mail: sales@newagepublishers.com**

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CHAPTER

1

LIQUID DOSAGE FORMS

1. INTRODUCTION

Compared to conventional tablets and capsules, oral liquid dosage forms including solutions, syrups, suspensions, elixirs, and concentrates offer unique advantages to many patients. For example, liquids may provide better patient compliance for those with swallowing difficulties and better dosage control versus a fixed tablet dose. However, there are also a number of "challenges" surrounding the formulation and development of these forms. Hence, liquid dosage forms are generally formulated for use in geriatric and pediatric patients. But, this section of patients have been regarded as a small fraction of the overall population, pharmaceutical companies often develop oral liquid formulations out of necessity rather than responding to a patient need. However, there are potential advantages of oral liquid dosage forms, such as no dissolution time and rapid absorption from the stomach/intestines compared to tablets, which may be an important factor for pain-relieving drugs. Inherent in this benefit is the risk of reaching peak plasma levels too fast, which could be harmful. Finally, as the excipient technology advances, a controlled release profile in liquid dosage forms will likely become readily available.

Oral liquid dosage – forms includes solutions, syrups, suspensions, elixirs, and concentrates that offer better patient compliance for those with swallowing difficulties and better dosage control versus a fixed tablet dose. However, there are also a number of "challenges" in the formulation and development of these dosage forms.

It is the effective use of excipients, which allows formulators overcome these challenges.

2. FORMULATIONS OF LIQUIDS¹

Oral liquids are formulated as solutions, suspensions and emulsions depending on the nature of the active ingredient particularly solubility and stability. They are also designed as ready to use liquids and powders for reconstitution into liquid orals like syrups, solutions, suspensions and emulsions. Liquid formulation needs various excipients including

Pharmaceutically, Oral liquids are formulated as solutions, suspensions and emulsions depending on the nature of the active ingredient particularly solubility and stability.

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