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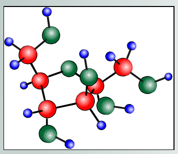

SPECIALTY EXCIPIENTS USA 1998

- VOLUME 1 -

ORAL SOLID DOSAGE FORM PRODUCTS

KLINE & COMPANY, INC.
OVERLOOK AT GREAT NOTCH
150 CLOVE ROAD
PO BOX 410
LITTLE FALLS, NJ 07424-0410
(973) 435-6262

Kline is pleased to announce the publication of *VOLUME 1 - ORAL SOLID DOSAGE FORM PRODUCTS* of the syndicated keystone analysis *SPECIALTY EXCIPIENTS USA 1998*, which provides a comprehensive analysis of this complex and fragmented market, including:

- Distinct and detailed analyses of five major specialty excipient categories and more than 25 individual products, as outlined in Table 1
- Industry dynamics, regulatory issues, and key trends, including an assessment of the business implications of these issues
- A detailed assessment of specialty excipient procurement practices of leading U.S. pharmaceutical companies
- Business profiles of more than 30 specialty excipient suppliers
- Overall business outlook and appraisal through 2003

Table 1

SPECIALTY EXCIPIENTS COVERED IN THIS REPORT

Specialty binders and fillers
- Dicalcium phosphate
- Cellulosics
  - Carboxymethyl cellulose
  - Ethyl cellulose
  - Hydroxypropylcellulose
  - Hydroxypropylmethyl cellulose
  - Methyl cellulose
  - Microcrystalline cellulose
- Directly compressible sucrose
- Lactose
- Polyols
  - Mannitol
  - Sorbitol
- Povidone
- Starches
  - Modified
  - Unmodified
- Xanthan gum
- Other
  - Alginates

Super disintegrants
- Croscarmellose
- Crospovidone
- Sodium starch glycolate (SSG)

Lubricants
- Magnesium stearate

Colorants
- FD&C dyes and lakes

Coatings
- Film coatings
  - Aqueous
  - Dispersions
  - Non-aqueous
- Modified (controlled) release dosage forms
  - Enteric coatings
  - Sustained release coatings
- Sugar coatings

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   - Specialty binders and fillers
   - Super disintegrants
   - Lubricants
   - Colorants
   - Coatings

   For each product category and individual product, as outlined in Table 1, the following information is provided:
   - Description of physical properties, grades, prices, and use levels
   - Estimated U.S. consumption in volume and value
   - Customer base
   - Supplier base
   - Channels of distribution
   - Outlook through 2003
   - Appraisal

5. SPECIALTY EXCIPIENT PROCUREMENT PRACTICES

   This chapter provides subscribers with a detailed assessment of specialty excipient procurement practices of leading U.S. pharmaceutical companies, including:
   - Key specialty excipient procurement criteria by Rx, over-the-counter (OTC), and generic formulated products
   - Key decision makers within pharmaceutical companies and the most effective strategies to approach these individuals by Rx, consumer, and generic business segments
   - Sensitivity to excipient pricing and the role of purchasing departments
   - Specialty excipient procurement practices of the following leading pharmaceutical companies, including:
     - Bayer Corporation
     - Bristol-Myers Squibb
     - Merck & Company
     - Novartis
     - Schering-Plough
     - Warner-Lambert
     - Zeneca Pharmaceuticals
   - Key specialty excipient supplier success factors
   - Channels of distribution and the role of distributors
   - Key market trends and developments
   - Future outlook

6. REGULATORY ISSUES

   This chapter provides subscribers with a detailed assessment of current and future regulatory issues that impact U.S. consumption of specialty excipients, including:
   - Background
   - Harmonization
   - Mutual recognition agreements
   - Pharmacopoeias and the process of monograph elaboration
   - Prospects for new chemical excipients
   - Regulatory issues yet to be resolved

7. SUPPLIERS

   The following 22 companies are profiled in detail:
   - Archer Daniels Midland
   - Aqualon Company
   - BASF Corporation
   - Cerestar USA Inc.
   - Colorcon Inc.
   - Crompton & Knowles
   - Dow Chemical
   - FMC Corporation
   - Fuji Chemical Industries Inc.
   - Imperial Chemical Industries
   - International Specialty Products
   - Mallinckrodt Inc.
   - Monsanto Company
   - Penwest Pharmaceuticals Company
   - Pronova BioPolymer, Inc.
   - Rhodia Inc.
   - Röhm America
   - Roquette America
   - Shin-Etsu Chemical Company
   - SPI Polyols Inc.
   - Warner-Jenkinson Company, Inc.
   - ZetaPharm, Inc.

   For each company profiled, the following information is provided:
   - Background
   - Organization
   - Management and personnel
   - Sales and financial performance
   - Products
   - Sales and marketing strategy
   - Competitive position
   - Manufacturing capabilities
   - Research and development focus
   - Recent activities
   - Outlook
   - Appraisal

8. OTHER SUPPLIERS

   The following nine companies are also profiled:
   - Avebe America/Generichem Corporation
   - Budenheim/Gallard-Schlesinger Industries
   - Eastman Chemical
   - EM Industries
   - Foremost Farms USA Corporation
   - Grain Processing Corporation
   - Metsä Specialty Chemicals
   - SEPPIC Inc.
   - Takeda America Holdings Inc./Ming-Tai

APPENDIX
   - List of organizations interviewed

SPECIALTY EXCIPIENTS USA 1998

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ORAL SOLID DOSAGE FORM PRODUCTS

THE BUSINESS

U.S. consumption of specialty excipients for oral solid dosage form (OSDF) applications as defined by this report is estimated at $500 million in 1998. Specialty binders and fillers account for about 60% of total consumption and coatings account for a further 28%, as shown in Figure 1.

The supplier base for specialty excipients for OSDF applications is extremely fragmented with upward of 50 companies participating.
The majority of companies are focused on marketing a single excipient product chemistry or a range of excipients with similar functionality, for example, specialty binders and fillers or lubricants. No single supplier markets the whole gamut of specialty excipient product categories that are used by pharmaceutical companies.

This highly competitive market is being impacted by a variety of external and internal factors, as illustrated in Figure 2, resulting in opportunities for current and new excipient suppliers to this business.

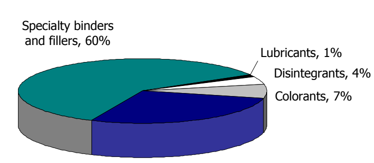
Specialty excipient suppliers are considering the strategic implications of many of these trends and issues on their U.S. businesses, including such questions as:

- **How can we compete successfully and profitably in the future U.S. market?**
- **How will customer expectations and purchasing criteria and practices change over the next five years?**
- **How will future government regulations impact the current product landscape and the development of new specialty excipients?**
- **What are the new growth opportunities for specialty excipients?**
- **How can we ensure that the specialty excipients market remains a value-added one?**
- **Should we market a broader excipient product range? Why?**
- **Is global harmonization possible? What will it mean for our business?**

Timely and accurate information is a key input requirement for consideration of many of the above issues. Kline's keystone analysis, ***SPECIALTY EXCIPIENTS USA 1998 - VOLUME 1 - ORAL SOLID DOSAGE FORM PRODUCTS***, will provide an in-depth analysis of this very complex market and will serve as a critical reference source to answer the industry's most challenging questions.

Figure 1

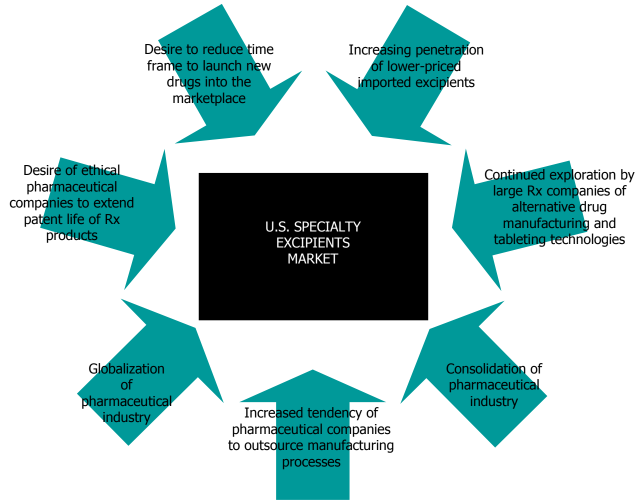
ESTIMATED U.S. CONSUMPTION OF SPECIALTY EXCIPIENTS FOR OSDF APPLICATIONS BY PRODUCT CATEGORY, 1998



TOTAL: $500 Million

Figure 2

SELECTED KEY FACTORS IMPACTING
THE U.S. SPECIALTY EXCIPIENT MARKET FOR OSDF APPLICATIONS, 1998



THE REPORT

Sustained viability and profitability in such a competitive and dynamic industry demands accurate and timely information. This study will provide the critical market and competitive intelligence necessary to formulate effective strategic and business plans, for suppliers that are already participating in this market as well as those that are contemplating market entry. This foundation of information and insight will help facilitate the efficient allocation of financial, marketing, and manufacturing resources necessary for future business development, as shown in Figure 3.

RESEARCH METHODOLOGY

Kline's research approach places the greatest emphasis on primary research to ensure that the foundation of business intelligence and insight is accurate and current. This report is based on a series of interviews with more than 120 persons at 100 organizations throughout the United States, including consumers, distributors, regulatory agencies, suppliers, and trade associations. All interviews were made during the period from June 1998 to March 1999. A schedule of interviews is provided below:

Type of organization	Number of organizations interviewed	Number of persons interviewed
Excipient manufacturers	41	58
End users	43	50
Distributors	10	12
Regulatory/environmental agencies	3	5
Other	3	3
Total	100	128

This report also draws on:
(1) suppliers' product literature;
(2) a search of recent trade and technical literature; (3) an analysis of statistical data from government, trade associations, and industry;
and (4) nonconfidential data from Kline's library and files.

SUBSCRIPTION TERMS AND PRIVILEGES

SPECIALTY EXCIPIENTS USA 1998 - VOLUME 1 - ORAL SOLID DOSAGE FORM PRODUCTS is available only by subscription. In order to maximize the usefulness to each subscriber, the following privileges and services will be made available:

- **One day of consultation with members of the survey team at Kline's offices in Little Falls, NJ, to be used at the client's discretion within three months of receipt of the report**
- **Access to the original call reports (except where information was provided on a confidential basis)**
- **Three copies of the report**

Details regarding subscription options and rates are described in the attached subscription agreement. To subscribe now, please complete the enclosed subscription agreement and forward it to any of our offices. To obtain further information or more details regarding the study, please contact us at any of our global locations listed on the back cover.

QUALIFICATIONS

Established in 1959, Kline & Company is recognized around the world as one of the leading business consulting firms that specializes in the chemical industry. The company helps management solve practical problems in marketing strategies,

Figure 3

SPECIALTY EXCIPIENTS USA 1998 VOLUME 1
ORAL SOLID DOSAGE FORM PRODUCTS
STUDY VALUE TO SUBSCRIBERS

acquisition and divestiture programs, and the appraisal of new technology. It provides clients with facts, forecasts, and recommended solutions to business problems, based solidly on the realities of the market as well as modern strategic principles.

The company has developed an in-depth, multidisciplinary expertise in specialty excipients by tracking and analyzing the U.S. market for pharmaceuticals and pharmaceutical ingredients, actives, and specialty excipients for more than 20 years.

Under the aegis of its Fine and Specialty Chemicals practice, Kline has leveraged its substantial expertise in fine and specialty chemicals into a leadership position in providing consulting services to this industry, especially the pharmaceutical sector. In this arena, Kline has collaborated with clients on a global basis to assist them in:

- **Characterizing and quantifying markets and niche segments of pharmaceutical raw materials**
- **Identifying and evaluating potential growth and diversification opportunities, along with such themes as market/product/technological synergies and the ability to capture additional value through downstream expansion**
- **Determining the attractiveness and viability of stepping out beyond current businesses into new sectors, including an assessment of leverageable skills and competencies, cultural fit, skill and infrastructure gaps, and the likelihood of success**
- **The development and implementation of pragmatic business strategies to better position client firms for continued viability and prosperity as a supplier of specialty raw materials to the pharmaceutical industry**

The *keystone* upon which Kline has built its consulting practice in pharmaceutical actives, excipients, and intermediates is the aggregate expertise that results from the firm's detailed knowledge of the markets, products, technologies, and suppliers comprising the global business, as well as an intimate understanding of the characteristics, culture, and capabilities that a leader needs to succeed in this business. Kline's knowledge spans the industry from fine chemicals and pharmaceutical intermediates to bulk actives and specialty excipients.

The Fine and Specialty Chemicals practice of Kline leverages the synergies that exist with the company's international consulting practice dedicated to the pharmaceutical and healthcare industries. This practice assists client companies that manufacture and/or market pharmaceuticals to develop pragmatic business strategies and tactics that reflect the dynamics associated with key industry issues, including healthcare reform, managed care, consolidation, and value extraction. Kline has an in-depth understanding of the markets for pharmaceutical products in both prescription and over-the-counter (OTC) segments, as well as managed care, medical device, and diagnostic businesses.

SUBSCRIPTION AGREEMENT

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Please enter our subscription to your new survey *SPECIALTY EXCIPIENTS USA 1998 - VOLUME 1 - ORAL SOLID DOSAGE FORM PRODUCTS*, as described in your brochure of this title. This subscription includes three copies of the finished report and one day of consultation time at Kline's Little Falls, NJ, headquarters with a member of the survey team, within three months of subscribing to the report. Additional copies of the report are available for a nominal fee.

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THE KLINE GROUP

USA

KLINE & COMPANY, INC.
OVERLOOK AT GREAT NOTCH
150 CLOVE ROAD
PO BOX 410
LITTLE FALLS, NJ 07424-0410
TEL: (973) 435-6262
FAX: (973) 435-6291
E-mail: consult@klinegroup.com

AUSTRALIA

ETONWOOD ASIA PACIFIC PTY. LTD.
LEVEL 1, 123 CAMBERWELL ROAD
EAST HAWTHORN, VICTORIA, 3123
AUSTRALIA
TEL: (61-3) 9859-7250
FAX: (61-3) 9859-7251
E-mail: ewrivrns@ozemail.com.au

EUROPE

KLINE EUROPE, S.A.
1 AVENUE GRIBAUMONT
B-1150 BRUSSELS
BELGIUM
TEL: (32-2) 770-4740
FAX: (32-2) 770-9440
E-mail: consult@kline-europe.com

SINGAPORE

ETONWOOD PTE. LTD.
22A DUXTON HILL
SINGAPORE 089605
TEL: (65) 221-3922
FAX: (65) 221-2205
E-mail: ewalogan@mbox3.singnet.com.sg

JAPAN

DIAMOND INSTITUTE OF MANAGEMENT, INC.
3-5-2, AKASAKA
MINATO-KU
TOKYO 107-0052
JAPAN
TEL: (81-3) 3560-2141
FAX: (81-3) 3584-4424
E-mail: JDQ04663@nifty.ne.jp

BRAZIL

FACTOR DE SOLUÇÀO
AV. SAO GABRIEL, 333 - CJ. 112
ITAIM BIBI - SAO PAULO - SP
01435-001 BRAZIL
TEL: (55-11) 30790829
(55-11) 31672055
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FAX: (55-11) 30796197
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