Food Safety Products


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**Table of Contents**

**EXECUTIVE SUMMARY**

**MARKET ENVIRONMENT**

- General ........................................... 4
- Macroeconomic Outlook ..................... 4
- Demographic Trends ............................. 8
- Consumer Spending ............................ 11
- Food Industry Overview ...................... 15
- Agriculture Outlook ......................... 17
  - Crop Production ................................ 20
  - Fresh Produce .................................. 21
  - Livestock & Poultry .......................... 24
- Food Processing Industry Outlook ....... 26
  - Meat ........................................... 28
  - Beverages ..................................... 31
  - Dairy Products ............................... 34
  - Processed Food ............................... 37
  - Poultry & Eggs ................................ 39
  - Seafood ....................................... 42
- Fresh Prepared Food ......................... 44
- Other Food ..................................... 45
- Food Trade ..................................... 47
  - Imports ....................................... 49
  - Exports ....................................... 51
- Food Distribution Trends............... 52
- Commodity Distribution .................... 53
- Wholesale Distribution ..................... 54
- Retail Distribution ........................... 55
- Retail Sales .................................... 56
- Foodservice Industry Overview ........... 59
- Food Safety Services Outlook ............ 62
- Historical Market Trends .................. 64
- Food-Related Illness Trends ............... 67
- Regulatory Issues ............................. 70
- International Activity & Foreign Trade ... 76

**TECHNOLOGY OVERVIEW**

- General ........................................... 80
- Disinfection ..................................... 81
- Diagnostics ..................................... 84
- Disposable Gloves .......................... 87
- Smart Labels & Tags ......................... 87
- Other ............................................ 90

**PRODUCTS**

- General ........................................... 93
- Disinfection Products ........................ 95
- Disinfectants & Sanitizers ............... 96
  - Quat ........................................ 99
  - Phenol ...................................... 101
  - Iodophor .................................... 103

**INDUSTRY STRUCTURE**

- General ........................................... 222
- Industry Composition ....................... 223
- Market Share .................................. 226
  - Diagnostic Products ......................... 231
  - Disinfectants & Sanitizers ............... 232
  - Disinfection Equipment .................... 233

**MARKETS**

- General ........................................... 178
- Food Processing Plants .................... 181
- Meat ........................................... 185
- Dairy Products ................................ 187
- Beverages ..................................... 190
- Poultry & Eggs ................................ 192
- Processed Food ............................... 195
- Seafood ....................................... 197
- Fresh Prepared Food ......................... 199
- Other Food Processing ...................... 201
- Other Markets ................................ 203
  - Foodservice Establishments .............. 204
  - Farms ........................................ 207
  - Crops & Produce ............................. 209
  - Livestock ................................... 212
  - Retail, Wholesale, & Distribution ....... 215
  - Government ................................ 219

**COMPANY PROFILES**

- Albemarle Corporation ...................... 246
- Aliflex USA ..................................... 248
- Avery Dennison ............................... 250
- Avure Technologies ......................... 251
- BarrierSafe Solutions International ...... 252
- Barry-Wehmiller Companies ................ 254
- Becton, Dickinson and Company .......... 257
- Bio-Rad Laboratories ....................... 258
- BioControl Systems ......................... 260
- bioMerieux SA ................................ 262
- Birko Corporation ............................ 265
- CDC Software International .............. 267
- Charm Sciences ............................... 269
- Danaher Corporation ....................... 272
- Datamars SA ................................... 275
- DayMark Safety Systems .................... 276
- DuPont (EI) de Nemours ..................... 279
- Ecolab Incorporated ........................ 282
- EnviroLogix Incorporated .................. 285
- HighJump Software ......................... 287
- Hygiena LLC .................................. 288
- IDEXX Laboratories ......................... 290
- Intelleflex Corporation ..................... 292
- John Bean Technologies ..................... 294
- Life Technologies ............................ 295
- Lilly (Eli) and Company ..................... 298
- Merck KGaA ................................... 300
- MICREOS BV ................................ 302
- Neogen Corporation ......................... 303
- Purfresh Incorporated ....................... 307
- FuriCore plc ................................. 308
- R-Biopharm AG ................................ 310
- Roche Holding ............................... 312
- Rochester Midland ......................... 313
- Sealed Air ..................................... 316
- SPX Corporation .............................. 318
- Sterilflex Corporation ...................... 320
- Strategic Diagnostics ....................... 321
- Tetra Laval International .................. 325
- Thermo Fisher Scientific ................... 329
- 3M Company .................................. 331
- Tradex International ....................... 335
- TÜV SÜD ...................................... 336

- Additional Companies in the Food Safety Products Industry ................. 337

**Acquisitions & Divestitures** ........................................ 234
**Competitive Strategies** ........................................ 238
**Marketing & Distribution** ...................................... 240
**Cooperative Agreements** ...................................... 242
## Executives Summary

1. Summary Table

## Market Environment

1. Macroeconomic Indicators
2. Population & Households
3. Personal Consumption Expenditures

## Chpt US Food Distribution Industry Flowchart

## Products

1. Food Safety Product
   - Demand by Type
   - Market, 2001-2011
   - Food-Related Pathogens

## Markets

1. Food Safety Product
   - Demand by Market
   - Market, 2011
Solid gains will be driven in part by increased public awareness of food safety following recent outbreaks of foodborne illnesses, as well as by stricter controls on food processing.

**US demand to rise 7.3% annually through 2016**

Demand for food safety products in the US is forecast to increase 7.3 percent annually to $4.5 billion in 2016. Solid gains will be the result of increased public awareness following recent highly publicized multistate outbreaks of foodborne illnesses; the need to comply with stricter government controls; and industry initiatives that will provide a strong impetus for companies to improve their food safety practices. Additionally, growth will be driven by challenges arising from the increasingly global nature of the food supply, which adds complexity and the potential for the introduction of new pathogens from different regions. Other factors will include accelerated food and beverage production relative to that of the 2006-2011 performance and an improved outlook for foodservice revenues following weaker performance in the recession-impacted 2006-2011 period.

**Smart labels and tags, software and tracking to be fastest growing types**

Among major food safety product segments, smart labels and tags, and software and tracking systems are expected to experience the fastest gains, reflecting a heightened emphasis on traceability in the food supply chain. Smart label and tag demand will be boosted by traceability advantages along with expanded usage in food packaging to reduce losses in perishable foods. Opportunities will also exist in the livestock market as a result of the need for improved traceability of animals to their point of origin. The latter is crucial in the event of animal disease outbreaks. Gains for software and tracking systems will be supported by increased US Food and Drug Administration recordkeeping requirements that will drive further investment by food manufacturers in such systems. Above average growth is also expected for diagnostic products based on increased testing requirements following passage of the Food Safety Modernization Act along with heightened emphasis on testing for possible contamination in order to raise consumer confidence following outbreaks of foodborne illness. Growth will also be aided by the continued migration toward rapid diagnostic tests, which are expensive.

**Food processing plants to remain largest market**

Food processing plants encompass the largest market by far, accounting for 60 percent of total food safety product demand in the US in 2011. Meat applications account for the largest share of demand in this segment since raw meat is easily contaminated during slaughter and subsequent processing, necessitating extensive food safety measures. Robust growth is anticipated for diagnostic products in meat applications based on stricter government controls.
MARKETS

Food Processing Plants

Demand for food safety products in food processing plants is projected to advance 7.1 percent per year to $2.7 billion in 2016. Growth will reflect continued industry focus on food safety as a primary concern. Growth will be relatively broad-based, with the fastest growth in the seafood, fresh prepared food, and beverage segments. From a product perspective, advances in disinfectants and sanitizers, equipment, and diagnostic products will be the primary growth drivers, accounting for 75 percent of food safety product demand gains in food processing plants between 2011 and 2016.

Food processing plants represent by far the largest market for food safety products, accounting for 60 percent of the total in 2011, split roughly evenly between the meat industry and the rest of the food processing sector. Raw meat is easily contaminated during slaughter and subsequent processing, necessitating extensive food safety measures. Poultry, eggs, and seafood face similar issues, compounded by the high volume of individual items that are processed.

Other sizable markets include dairy products, beverages, and processed foods. The fresh prepared food market sustained the fastest growth between 2001 and 2011, helped by trends toward convenience-oriented refrigerated food options. However, fresh prepared food will remain a relatively small market through the forecast period.

Food processing plants consume a wide range of food safety products, and demand is not uniform across all industries. The different submarkets each present unique food safety issues, which can cause demand to vary significantly. The greatest demand is for disinfection products, followed by diagnostic products. Disinfection and diagnostic products tend to go hand-in-hand, as diagnostic products are often used to verify that disinfection has occurred.

### TABLE V-13

<table>
<thead>
<tr>
<th>Item</th>
<th>2001</th>
<th>2006</th>
<th>2011</th>
<th>2016</th>
<th>2021</th>
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<tr>
<td>Number of Farms (000)</td>
<td>2149</td>
<td>2179</td>
<td>2200</td>
<td>2200</td>
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<tr>
<td>$ food safety/farm</td>
<td>56</td>
<td>83</td>
<td>129</td>
<td>202</td>
<td>302</td>
</tr>
<tr>
<td>Farm Production Expenses (bil $)</td>
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<td>232.7</td>
<td>320.0</td>
<td>342.0</td>
<td>379.0</td>
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<td>0.62</td>
<td>0.78</td>
<td>0.88</td>
<td>1.30</td>
<td>1.75</td>
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<td>Farm Market</td>
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<tr>
<td>By Application:</td>
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<tr>
<td>Crops &amp; Produce</td>
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<tr>
<td>Livestock</td>
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<tr>
<td>By Product:</td>
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<tr>
<td>Diagnostic Products</td>
<td></td>
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<tr>
<td>Disinfection Products</td>
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<tr>
<td>Software &amp; Tracking Systems</td>
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<tr>
<td>Other</td>
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<tr>
<td>% farm</td>
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<tr>
<td>Food Safety Product Demand</td>
<td></td>
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</tr>
</tbody>
</table>

### CHART VI-2

**FOOD SAFETY DIAGNOSTIC PRODUCT MARKET SHARE**

($850 million, 2011)

- Other: 43.5%
- 3M: 5.3%
- 5.9%
- 6.5%
- 6.5%
- 7.1%
BioControl Systems Incorporated
12822 Southeast 32nd Street, Suite 100
Bellevue, WA  98005
425-603-1123
http://www.biocontrolsys.com

Annual Sales:  $50 million (estimated)
Employment:  210 (estimated)

Key Products:  pathogen detection systems and hygiene monitoring test systems

BioControl Systems is a worldwide producer of industrial microbiology testing products. The privately held company primarily serves the food testing market.

The Company is involved in the food safety industry via the production of pathogen detection systems and hygiene monitoring products. These products include rapid pathogen tests sold under the 1-2 TEST, ASSURANCE, TRANSIA, VIP, and SIMPLATE brand names. The 1-2 TEST product is a single-use, simple rapid method test for Salmonella. BioControl Systems’ ASSURANCE tests are available in Enzyme ImmunoAssay (EIA) or Genetic Detection System (GDS) types. The ASSURANCE EIA tests use antibody-antigen assay technology to detect foodborne pathogens in product and environmental samples. For example, the ASSURANCE EIA test for E. coli O157: H7 can have results for beef within 10 hours, and results for other foods such as dairy, poultry, fruits, and nuts in 20 hours. The ASSURANCE EIA products are also available to test for Salmonella and Listeria. ASSURANCE GDS tests combine molecular detection technology with food microbiology to provide faster results and increased accuracy when testing for such pathogens as Salmonella, Listeria spp., Listeria

“Through 2016, demand for diagnostic products in food safety applications is forecast to climb 7.9 percent per year to $1.2 billion. Projected increases in the frequency of food plant inspections (following several highly publicized cases of foodborne illness outbreaks in the country and stricter food safety regulations) will raise demand for diagnostic testing products. In addition, market value growth will be fueled by ...”
--Section IV, pg. 128
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**Other Studies**

**World Food Safety Products**
World food safety product demand will rise 8.4 percent yearly to $18 billion in 2016. Disinfectants and sanitizers will remain the top segment, while diagnostic testing products and other products such as smart labels and tags lead gains. The US will remain the largest national market, but the fastest growth will occur in developing regions. This study analyzes the $12.1 billion global food safety product industry, with forecasts for 2016 and 2021 by product, market, world region and for 38 countries. The study also evaluates company market share and profiles industry players.

#2969 November 2012 $6100

**World Industrial & Institutional Cleaning Chemicals**
World demand for industrial and institutional (I&I) cleaning chemicals will rise 4.7 percent yearly to $44.4 billion in 2016. North America and Western Europe will remain dominant but developing regions will grow faster. Disinfectants and sanitizers will benefit from use in fast growing health care and food processing markets. This study analyzes the $35.3 billion world I&I cleaning chemical industry, with forecasts for 2016 and 2021 by product, market, world region and for 18 countries. The study also evaluates company market share and profiles key industry participants.

#2943 October 2012 $6100

**In Vitro Diagnostics**
US demand for in vitro diagnostic (IVD) products will rise 6.1 percent annually to $24.7 billion in 2016. Molecular diagnostic products will grow the fastest due to their advantages in the detection of infectious diseases, tumors and genetic disorders. Hospital labs will continue to comprise the largest and most diverse market. This study analyzes the $18.4 billion US IVD products industry, with forecasts for 2016 and 2021 by type, application and market. The study also considers market environment factors, evaluates company market share and profiles industry players.

#2923 July 2012 $5100

**Industrial & Institutional Cleaning Chemicals**
Demand in the US for industrial and institutional (I&I) cleaning chemicals will increase 3.7 percent per year to $11 billion in 2016. Disinfectants and sanitizers and hand cleaners will be the fastest growing products. The manufacturing market will lead gains, driven by the food and beverage processing and fabricated metals processing segments. This study analyzes the $9.3 billion US I&I cleaning chemical industry, with forecasts for 2016 and 2021 by product, market and raw material. The study also evaluates company market share and profiles industry players.

#2916 July 2012 $5100

**Disposable Medical Supplies**
US disposable medical supplies demand will rise 4.3 percent yearly to $46.7 billion in 2016. Syringes and inhalers, IV and urinary catheters, hemodialysis bloodlines, peritoneal dialysis kits, tissue sealants, biological wound dressings, Class IV garments and textiles, and blood glucose test strips will be among the fastest growing products. This study analyzes the $37.8 billion US disposable medical supplies industry, with forecasts for 2016 and 2021 by product, market and material. The study also evaluates company market share and profiles industry players.

#2853 March 2012 $5100

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