

# Active, Controlled, and Intelligent Packaging for Foods and Beverages

Market Research Report | 2023-07-04 | 175 pages | BCC Research

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### Report description:

Description

Report Scope:

The report analyses the global active, controlled, intelligent packaging market for food and beverage based on segmentation of type and application. These segmentations are further analyzed at the global and regional levels.

The base year considered for analysis is 2022, and the market estimates and forecasts are given from 2023 to 2028. The market estimates are only provided in terms of revenue (U.S dollars, millions).

The scope for the active, controlled, intelligent packaging market for food and beverage is segmented into - Active packaging -

- Oxygen scavengers -
- Oxygen scavenger sachets.
- Oxygen scavengers/absorbers included in package and oxygen scavenger films.
- Oxygen scavengers/absorbers added to foods.

#### Moisture controllers -

- Moisture control technology during packaging.
- Desiccant packages with combined moisture/mildew protection and desiccant sachets.
- Moisture control liners and lids.

# Ethylene absorbers -

- Ethylene absorbing filters and liners.

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- Ethylene filtration systems.
- Ethylene absorbing sachets.

#### Edible films -

- Whey and other protein-based edible films.
- Pectin-based edible films.
- Edible polymer films.
- Polysaccharide edible films.
- Cellulose ether-based edible films.
- Gellan gum-based edible films.

### Antimicrobial agents -

- Molecular attachment chemistry (non-migrating).
- Barrier/laminate (non-migrating).
- Antimicrobial additives added during packaging (migrating).
- Packaging components with surface and sub-surface migration.

### Carbon dioxide scavengers/emitters.

Ethanol emitters.

Self-venting films.

Microwave susceptors.

Temperature control packaging.

### Controlled packaging -

- Modified atmosphere packaging.
- Gas flushing.
- Permeable/barrier films.
- Compensated vacuum.

### Controlled atmosphere packaging -

- Static CAP.
- Flushed CAP.

#### Aseptic packaging.

# Retort packaging -

- Pouch-based retort packaging.
- Rolled stock retort packaging.
- Lidding type retort packaging.

### Sous-vide packaging -

- Sous-vide for fully cooked foods.
- Sous-vide for raw foods.
- Sous-vide for partially cooked foods.

# Biodegradable polymers/biopolymers -

- Partially degradable biocomposites.

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- Complete oxidative/hydrolytic biodegradable.
- Compostable biocomposites.

Intelligent packaging -

- Radio frequency identification packaging.
- Passive tag packaging.
- Semi-active tag packaging.
- Active tag packaging.

Time/temperature indicators (TTIs) -

- TTIs for use with other technology.
- TTIs for supply chain.
- TTIs for food.

Freshness indicators -

- Encoded supply chain indicators.
- Encoded inventory indicators/others.
- Freshness stickers.

Electronic article surveillance -

- Real-time locating systems.
- Direct part marking.
- RFDC-based EAS.
- Bar code-based EAS.

Electronic shelf label system.

ESL for inventory control -

- ESL for product information.
- ESL with other technologies.

Hybrid and interactive packaging -

- Hybrid packaging.
- Interactive packaging.
- Transparent packaging.

Market applications are segmented into -

- Food.
- Beverages.

### Report Includes:

- 60 tables and 12 additional tables
- An up-to-date overview and industry analysis of the global markets for active, controlled, and intelligent packaging of various foods and beverages
- Analyses of the global market trends, with historic revenue data (sales figures) for 2022, estimates for 2023, forecasts for 2024, and projections of compound annual growth rates (CAGRs) through 2028
- Estimation of the actual market size and revenue forecast for the global active, controlled, and intelligent packaging market for

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food and beverages, and their corresponding market share analysis based on the type of packaging and sub-packaging, application, and region

- Discussion of the major growth drivers, industry-specific challenges and regulatory aspects that will shape the market for active, controlled, intelligent packaging for food and beverage applications as a basis for projecting demand in the next few years (2023-2028)
- Review of recent industry structure for active, controlled, intelligent packaging in food and beverage applications, along with technology innovation, value chain analysis, competitive environment, and latest developments
- Discussion of viable technology drivers through a holistic review of various platform technologies for new and existing applications of intelligent packaging in food and beverage markets
- A look at the product categorizations, individual product definitions and performance metrics, and costs and benefits associated with various packaging products
- Identification of the major stakeholders and analysis of the competitive landscape based on recent developments and segmental revenues
- Descriptive company profiles of the leading global players of the industry, including 3M, Amcor PLC, DOW, Mitsubishi Gas Chemical Co. Inc. and Tetra Pak

**Executive Summary** 

Summary:

Active, controlled and intelligent packaging describes packaging types that use technologies to perform tasks that go beyond product storage. This packaging is embedded with technology that can provide or sense information or change the internal atmosphere near the product.

Growing consumer requirements for fresh food and packaged consumables with a long shelf life, along with lifestyle changes that demand ready-to-eat and easy-to-cook food, are promoting the growth of the food and beverage packaging industry. This study aims to provide an overview of the current and future global market for food and beverage packaging.

Reasons for Doing This Study:

Growing consumer requirements for fresh food and packaged consumables with a long shelf life, along with lifestyle changes that demand ready-to-eat and easy-to-cook food, are promoting the growth of the food and beverage packaging industry. Advanced packaging solutions have seen innovative approaches, such as developing packaging incorporating antimicrobial materials derived from microorganisms, plants and animals. Environmentally friendly lignocellulose-based films and wood-fiber-based packaging cater to environmentally conscious consumers. The food and beverage packaging market offers diverse packaging technologies to meet the consumer demand for freshness, longer shelf life and high-quality packaged consumables. The market trend toward ready-to-eat, easy-to-cook and microwavable products, along with lifestyle changes, has resulted in innovative packaging methods, such as active, intelligent, controlled and advanced packaging. This study aims to provide an overview of the current and future global market for food and beverage packaging.

As the use of active, controlled, intelligent packaging products expands to create new fields of application, information regarding the active, controlled, intelligent packaging market and regional market trends becomes more valuable. This information can assist companies in identifying opportunities for process and productivity improvements, as well as new product development, resulting in a positive impact on future market growth. The increasing number of conferences and growth in government investments and R&D spending, along with increasing competition and evolving technologies, are giving the market a new direction.

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CHECKPOINT SYSTEMS

CROWN HOLDINGS INC.

DOW

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