This Freedonia industry study analyzes the $219 million US cannabis packaging market. It presents historical demand data for 2018 and forecasts for 2019 and 2024 by packaging type and container type. Cannabis retail sales are presented in terms of type and delivery format. Marijuana and hemp production volumes are also reported. The study provides analysis on industry competitors, including key cannabis packaging producers and distributors.

Table 2-1 | Cannabis Retail Sales by Consumer Product, 2018 – 2024 (billion dollars)

<table>
<thead>
<tr>
<th>Item</th>
<th>2018</th>
<th>2019</th>
<th>2024</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Marijuana-Based</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical</td>
<td></td>
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<td></td>
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<tr>
<td>Adult-Use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hemp-Based CBD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hemp Seed Oil</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1-1 | US Cannabis Packaging Market Trends

US Cannabis Packaging Market Trends

Key Trends Through 2024:
- Expanding legal access to marijuana & hemp-based CBD products will boost packaging needs.
- Cannabis producers will continue to seek custom packaging with high-quality graphics & an upscale image.
- Government regulations will continue to require specific labels & child-resistant packaging & closures.

Packaging Segments, 2019

<table>
<thead>
<tr>
<th>Packaging Type</th>
<th>Market Share</th>
</tr>
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<tbody>
<tr>
<td>Labels</td>
<td>14%</td>
</tr>
<tr>
<td>Caps &amp; Closures</td>
<td>9%</td>
</tr>
<tr>
<td>Shipping Containers</td>
<td>13%</td>
</tr>
<tr>
<td>Exit Packaging</td>
<td>56%</td>
</tr>
</tbody>
</table>

Top Container Types & Key Uses
- Jars (flower, topicals)
- Bottles (ingestible oils, tinctures, edibles)
- Folding Cartons (vaporizer cartridges, flower, pills & capsules, tinctures)
- Bags & Pouches (flower, edibles)
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<table>
<thead>
<tr>
<th>Item</th>
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<th>2019</th>
<th>2024</th>
<th>18-19</th>
<th>19-24</th>
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<tbody>
<tr>
<td>Cannabis Product Sales</td>
<td>$1.0B</td>
<td>$1.3B</td>
<td>$3.0B</td>
<td>20%</td>
<td>17%</td>
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<tr>
<td>Marijuana-Based</td>
<td>$0.6B</td>
<td>$0.8B</td>
<td>$1.5B</td>
<td>33%</td>
<td>22%</td>
</tr>
<tr>
<td>Medical</td>
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<td>$0.2B</td>
<td>100%</td>
<td>100%</td>
</tr>
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<td>Adult-Use</td>
<td>$0.3B</td>
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<td>$1.0B</td>
<td>67%</td>
<td>50%</td>
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<tr>
<td>Hemp-Based CBD</td>
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<td>$1.8B</td>
<td>57%</td>
<td>44%</td>
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<tr>
<td>Hemp Seed Oil</td>
<td>$0.3B</td>
<td>$0.5B</td>
<td>$1.0B</td>
<td>67%</td>
<td>50%</td>
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Source: The Freedonia Group
Table 3-4 | Cannabis-Infused Tincture (Drops & Sprays) Retail Sales, 2018 – 2024 (billion dollars)

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<td>% tinctures</td>
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<td>Tincture Retail Sales (bil $)</td>
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<td>Tincture Product Container Demand (mil $)</td>
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</tbody>
</table>

% Compound Annual Growth

Source: The Freedonia Group

Figure 4-1 | Key Packaging Trends & Opportunities

Key Packaging Trends & Opportunities

Opportunities for Cannabis Packaging Solutions

- Enhanced functionality
- Increased brand awareness
- Improved user experience
- Reduced costs

- Improved compliance for regulatory mandates
- Enhanced distribution strategies
- Improved product longevity

Key Trends Understanding Packaging & Labeling Requirements by State

Source: The Freedonia Group
Table 5.6 | Folding Cartons for Cannabis Products: Demand by Cannabis Delivery Format, 2018 – 2024  
(million dollars)

<table>
<thead>
<tr>
<th>Item</th>
<th>2018</th>
<th>2019</th>
<th>2024</th>
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<tr>
<td>Cannabis Product Container Demand</td>
<td>18.5</td>
<td>15.1</td>
<td>15.7</td>
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<td>6.6%</td>
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<tr>
<td>% folding cartons</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
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<tr>
<td>Folding Cartons Demand</td>
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<td>15.9</td>
<td>16.3</td>
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<td>Vaporizer Cartridges</td>
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<td>8.9%</td>
<td>8.9%</td>
<td>8.9%</td>
<td>8.9%</td>
</tr>
<tr>
<td>Flower</td>
<td>0.1%</td>
<td>0.1%</td>
<td>0.1%</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Pills &amp; Capsules</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.3%</td>
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<tr>
<td>Other Delivery Formats</td>
<td>0.8%</td>
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Source: The Freedonia Group

Table 5.3 | Selected Cooperative Agreements

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<th>Company</th>
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<th>Products Covered</th>
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<td>KushCo Holdings</td>
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