Risks & Operational Costs

- Penalties may be imposed for noncompliance with state ingredient transparency laws.³
- Inventory carrying costs run generally between 20% – 30% of the cost of the actual inventory.⁵
- This includes capital cost, storage space cost, handling cost, and inventory risk cost.⁶

Current Market Trends & Drivers

- Increased demand for ingredient transparency driven by both consumers and states.
- Increasing State Regulatory Compliance. Recent NY and CA laws enacted with MN, OR, and MD pending³
- Material costs are rated #2 in overall top market challenges for manufacturers. Price reduction pressures are also in the top 5 market challenges for manufacturers.⁴
Case Studies in Lean Manufacturing

DOW Chemical

- Began implementing lean manufacturing 1998
- Average age of inventory for agricultural chemicals lowered by 10%
- Employee productivity has increased by more than 8% per year.
- Revenue growth, cost reductions, and asset utilization from Six Sigma/lean manufacturing totaled $1.5 billion in EBIT within 4 years of implementation.

John Deere

- Implemented lean manufacturing in 2003 to identify non-value added activities [waste] and eliminate them where possible.
- Reduced inventory by 28% in twelve months, saving millions in inventory carrying costs.
- Raw castings and finished parts inventory reduced from 40 days to 2 days of inventory.
- Since implementation, has achieved close to double digit productivity gains every year, at an average of 8-9%.

8 Wastes

The 8 Wastes are eight types of process obstacles that get in the way of providing value to the customer.

- **Defects**: Efforts caused by rework, scrap, and incorrect information.
- **Overproduction**: Production that is more than needed or before it is needed.
- **Waiting**: Wasted time waiting for the next step in a process.
- **Non-Utilized Talent**: Underutilizing people's talents, skills & knowledge.
- **Transportation**: Unnecessary movements of products & materials.
- **Inventory**: Excess products and materials not being processed.
- **Motion**: Unnecessary movements by people (e.g., walking).
- **Extra-Processing**: More work or higher quality than is required by the customer.

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« Only One Ingredient. »
A New Way: ONE Ingredient Disinfection

- NUGEN® 1ID disinfectant is only ONE ingredient – ONE ingredient means:
  - Shift from 5 or more ingredients to ONE, lowering COGS and increasing margins.
  - Less waste, saving the manufacturer money.
  - Less inventory carrying costs, eliminating the need for additional ingredient inventory.
  - Manufacturer can sell more product by decreasing the customer’s cost. Sell more product = make more money.
  - Faster manufacturing, reducing mixing times and cost as only one ingredient is required.
  - Lower end use costs for the customer, with hospital disinfection at only 474 ppm of active.

Features and Benefits

<table>
<thead>
<tr>
<th>Product Feature</th>
<th>Customer Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>One ingredient – Carboquat H&lt;sup&gt;®&lt;/sup&gt;</td>
<td>- Saves on inert raw material costs</td>
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<tr>
<td></td>
<td>- Reduces manufacturing cost &amp; complexity</td>
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<tr>
<td>Less harsh chemicals</td>
<td>- Easier transparency</td>
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<tr>
<td></td>
<td>- Improved safety profile</td>
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<tr>
<td></td>
<td>- Cleaner labels</td>
</tr>
<tr>
<td>16 pathogen claims</td>
<td>- Disinfection against a variety of pathogens at an economical price point</td>
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<tr>
<td>Multiple application methods</td>
<td>- Mop ’N’ Bucket and spray</td>
</tr>
<tr>
<td>1:32 and 1:64 dilutions</td>
<td>- Economical cost-in-use for end users</td>
</tr>
</tbody>
</table>
Label Claims

**NUGEN® 1ID Efficacy Claims**

**Disinfection**
Contact time: 10 minutes – Soil Load: 5%

**Bacterial claims**
- Enterobacter aerogenes
- Escherichia coli
- Klebsiella pneumonia
- Pseudomonas aeruginosa
- Salmonella enterica
- Serratia marcescens
- Shigella flexneri
- Shigella sonnei
- Staphylococcus aureus
- Methicillin Resistant Staphylococcus aureus [MRSA]
- Staphylococcus epidermidis
- Streptococcus pyogenes [Strep]

**Viral Claims**
- Herpes Simplex Type 1 [Herpes]
- HIV-1
- Influenza A/Hong Kong [Influenza]

**Fungi**
- Trichophyton interdigitale [Athlete’s Foot]

Application Areas
- Institutional & Industrial (I&I)
- Janitorial
- Consumer

Regulatory Status

<table>
<thead>
<tr>
<th>Formulation Name</th>
<th>EPA Registration</th>
</tr>
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<tbody>
<tr>
<td>NUGEN® 1ID-32</td>
<td>6836-386</td>
</tr>
<tr>
<td>NUGEN® 1ID-64</td>
<td>6836-387</td>
</tr>
</tbody>
</table>

See EPA label and SDS for specifics on use sites and PPE requirements.

« The single ingredient disinfecting solution. »