Pharmacy Stock Bottle Recycling

Introduction
Pharmacies offer a unique grocery store waste reduction opportunity since their discards are divided nearly evenly between stock bottles and recyclable paper and their actual pharmacy generated non-recyclable waste is negligible.

Consequently, as part of “greening in-store grocery operations,” many pharmacists are not only recycling paper but also making the switch from disposing of large volumes of stock bottles to setting up dedicated pharmacy stock bottle recycling collection bins.

The following hands on operational guidelines were acquired by studying Pharmacy Stock Bottle Recycling Programs in Stop and Shop Supermarkets (a division of Ahold Delhaize). Their contribution to moving stock bottle recycling forward is truly appreciated!

Why Recycle Pharmacy Stock Bottles?

<table>
<thead>
<tr>
<th>POTENTIAL REVENUE</th>
<th>Pharmacy stock bottles are very marketable material and highly sought after by plastic reclaimers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO INCREMENTAL LABOR COSTS</td>
<td>Pharmacies can recycle stock bottles (HDPE #2) without additional labor cost.</td>
</tr>
<tr>
<td>“ZERO WASTE”</td>
<td>Pharmacy waste is divided nearly evenly between stock bottles and paper. Consequently, a pharmacy stock bottle recycling program, coupled with a paper recycling program, can enable a pharmacy to reach 99 – 100% “zero waste” status.</td>
</tr>
<tr>
<td>WASTE HAULING &amp; DISPOSAL SAVINGS</td>
<td>Light, yet bulky stock bottles cause store waste compactors to fill up frequently. Recycling stock bottles reduces store trash costs by reducing frequency of trash hauls thus resulting in an important cost saving measure.</td>
</tr>
</tbody>
</table>

The table below outlines the positive financial impact a program can realize.

<table>
<thead>
<tr>
<th>Stock Bottle Volume</th>
<th>Small Pharmacy (500 – 1,000 scripts weekly)</th>
<th>Medium Pharmacy (1,000 – 2,000 scripts weekly)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Disposal Cost Savings*</td>
<td>$25</td>
<td>$50</td>
</tr>
<tr>
<td>Annual Haul Cost Savings*</td>
<td>75</td>
<td>150</td>
</tr>
<tr>
<td>Total Annual Cost Savings: 1 Pharmacy</td>
<td>$100</td>
<td>$200</td>
</tr>
<tr>
<td>50 Pharmacies</td>
<td>$5,000</td>
<td>$10,000</td>
</tr>
<tr>
<td>100 Pharmacies</td>
<td>$10,000</td>
<td>$20,000</td>
</tr>
</tbody>
</table>

*Assumptions – An average bag of stock bottles weighs approximately 20 pounds. Using an average per store compactor haul cost of $150.
What Types of Plastics are Stock Bottles?
Typically, pharmacy stock bottles are manufactured from High Density Polyethylene (HDPE#2) and stock bottles caps from polypropylene (PP#5). Given that stock bottles and caps are of two different resins, they usually need to be separate from each other in order to be recycled. In grocery chains recycling PP #5 rigid pails and buckets from Fresh Departments, caps can be recycled by placing them in a separate bag and putting that bag in a PP #5 pail or bucket.

Easy, Simple Steps to Recycling Pharmacy Stock Bottles

1. Set up collection bin with liner bag
   a. Purchase collection bin from supplier.
   b. Select liner bag which is long enough to prevent slipping into bin when filled and clear to allow for inspection of contents.
   c. Consider two bins in high volume work areas.

2. Develop cap removal/handling protocol (either recycle separately w/#5 PP pails or dispose)

3. Post “Pharmacy Stock Bottle Recycling” Sign (download here)

Stock Bottles Only

- ✔ Shake each bottle to empty ❌ No Caps
- ✔ HDPE #2 only ❌ No Waste
- ✔ Leave paper labels on ❌ No Vials

How to Recycle Grocery Rigid Plastics

Pharmacy shelves hold highly recyclable plastic

Valuable #2 HDPE plastic stock bottles

Stock bottles and caps are different plastic resins

Simple set for stock bottle collection

Compact, space saving bin collecting stock bottles

Watermelon box of bagged stock bottles

Box of stock bottles ready for shipment

recyclegroceryplastics.org

4. Train pharmacy associates on “How to Recycle” stock bottles.

5. Remove and place filled bags of stock bottles in designated back of store area.

6. Ship collected pharmacy stock bottles to market.
   • Single stream - co-mingled with other recyclable material from grocery store
   • Segregated for local recycler - usually filled plastic bags stockpiled until pick up
   • Aggregated at Distribution/Recycling Center
     • Ship bagged stock bottles to market along with baled plastics
     • Baled together with other grocery rigid plastics

recyclegroceryplastics.org
Following is a case study which provides an excellent overview of a successful grocery pharmacy stock bottle recycling program.

**Pharmacy Stock Bottle Recycling Success Study**

**Why it was Pharmacy Stock Bottle Recycling started?**

- With support from the Association of Plastics Recyclers (APR), identified recycling/waste reduction opportunities.
- Initially tested in two districts - approximately 30 pharmacies
  - Developed signage, collection system, training resources, and logistics.
  - Determined recycling stock bottles reduced more than 50% of pharmacy waste.
- After testing in some pharmacies, decided to formalize program to all 300+ pharmacies.
- Now stock bottle recycling is part of zero waste strategy, along with cardboard, film, paper, food waste.

**When it was started?**

- In the early 2000's.

**How it works?**

1. Pharmacy associates collect stock bottles separately in special bin lined with clear bags.
   - Full bags, weighing 15-25#, are staged with other recyclables for return to Distribution Center.
2. Distribution/Return Center associates prepare bottles for market
   - Full bags of bottles from stores are placed in recycling bins.
   - Bins weighing 75-125# are loaded onto market-supplied trailers (with baled film).
3. Recycler/Reclaimer processes bottles
   - Plastic resin - #2 HDPE & #5 PP are highly sought after recyclable plastics by end markets
   - Items made from recycled stock bottles include automotive parts, caps and totes.

**Suggestions for Others in Industry**

“Stop and Shop pharmacists proudly support recycling as an important part of corporate zero waste efforts and recognize the added value of keeping stock bottles out of our waste stream. Separating stock bottles is easy, takes little space, and makes sense - helping our environment and business.”

— Christine Gallagher,
Manager Responsible Retailing & Healthy Living

recyclegroceryplastics.org
Pharmacy Plastic Bottle Recycling FAQs

Q. Why is it important reason to recycle stock bottles?
A. Stock bottles represent a very recyclable item which is over 50% of pharmacy waste (paper the
other 50%). In addition they are an important feedstock for US plastic recyclers.

Q. How does recycling benefit pharmacy and store?
A. By recycling stock bottles and paper, pharmacies can move to being “waste-free”, help eliminate
store waste, reduce costs and positively impact the environment.

Q. Can customer’ vials be mixed/recycled with Stock bottles?
A. No. Plastic vials, although recyclable, require special handling and must NEVER be mixed with
recycled stock bottles.

Q. What happens to stock bottles after they leave the pharmacy?
A. Stock bottles are recycled usually using one of the following methods:
   - Single stream - co-mingled with other recyclable material from grocery store
   - Segregated for local recycler - usually collected in plastic bags until pick up
   - Aggregated at Distribution/Recycling Center
     - Ship bagged stock bottles to market along with baled plastics
     - Baled together with other grocery rigid plastics

Q. What do recyclers do with the stock bottles?
A. Truckload quantities of recyclable stock bottles are shipped to “plastic reclaimers” who process
bottles into “recycled resin” which is used to make new plastic packaging and products such as
auto parts, shampoo bottles, etc.

Q. What do we do with bottle “caps?”
A. If your company recycles caps, place them in a separate bag with other recyclable #5 PP, or
place them in trash, if no recycling is available.

Q. Can labels and any folded instructions be left on stock bottles, when recycling?
A. Folded instructions should be removed, paper labels may remain on the bottles.

Q. Does the Pharmacy Department financially benefit from recycling?
A. By recycling ALL stock bottles and paper, pharmacy can become virtually waste free, which helps
lower total store waste costs.

Q. How important is it that EVERY BOTTLE is emptied before recycling?
A. Very important! Medications left in bottles can cause recyclers to reject taking bottles.

Q. Is it important to keep from mixing trash or food residuals with recycled stock bottles?
A. Each bag of recycled bottles should be inspected to remove any trash before shipping.