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A new way for a new world

**PROJECT**

***Silica Gel Carryover & Filler (Cotton) Removal in Secondary Packing Process***

**Presenter :**

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## Overview : Silica Gel Carryover & Filler (Cotton) Removal for Secondary Packing Process

***The projects undertaken with a view to carry out optimum consumption of packing components at packing stage to yield final environmental & cost benefits***

| | | | | |
|---|---|---|---|---|
| ***SILICA GEL CARRYOVER*** | *Re-use of previous batch's leftover silica gel pouches* | *Silica Gel earlier discarded were used in packing of next batch* | *No Huge Investment for Implementation* | *Environment, Cost & Inventory Savings* |
| ***FILLER (COTTON) REMOVAL*** | *Cotton used as Filler in Bottle Packing along with tablets* | *Removal of Cotton as filler in Bottle Packing* | *Transportation Study performed & Regulatory Approval taken* | *Process Optimisation & Waste Elimination* |

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## SILICA GEL CARRYOVER PROJECT

**EARLIER PRACTICE**

***Batch A Packed*** — ***Leftover Silica Gel Pouches*** — ***Rejected & Discarded***

**CURRENT PRACTICE**

***Batch A Packed*** — ***Leftover Silica Gel Pouches*** — ***Used for Packing In Next Batch***

***Major Trigger***
Realisation of Waste Generation - Large amount of pouches rejected & discarded

***Uniqueness***
No huge investment – Small modification in SAP software

***Timeline***
*June 2020- March 2021*

***Major Milestones***
- Identification of Wastage
- Discussion with Stakeholders
- Alignment of Quality Assurance
- Realisation of Cost Benefits

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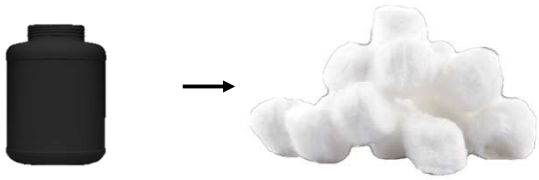
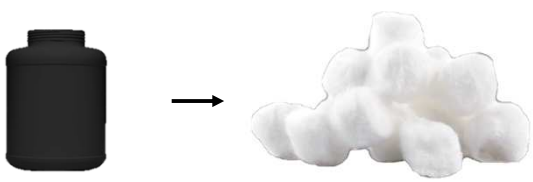
## FILLER (COTTON) REMOVAL PROJECT

**EARLIER PRACTICE**



***Bottle Packing*** — ***Cotton (Filler) Inserted in Bottle***

**CURRENT PRACTICE**



***Bottle Packing*** — ***Removal of Cotton for Final Packing***

***Major Trigger***
As a part of Environmental Sustainability initiatives, team generated this idea to eliminate cotton waste

***Uniqueness***
Reduction in NVA (Non value Added) Components gave impressible cost & environmental benefits

***Timeline***
*FY 21 - Ongoing ( 3 Products per Quarter )*

***Major Milestones***
- Identification of Problem
- Selection of Products
- Transportation Study
- Change Control
- Regulatory, Marketing & QA Approvals
- Final Implementation in Commercial Batches

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## Challenges Faced

**Regulatory & Approvals**

- *Change Control Initiation*
- *FMEA*
- *Stakeholders Alignment*
- *Approval from RA, Site QA and R&D*

**Final Implementation**

- *Documents Revision – BPR/BOM*
- *Implementation without Impact on monthly Plan*
- *Modification in SAP*
- *Training & Awareness to All about the Change*

**Study & Compilation**

- *Transportation Study done for every Product*
- *Compilation of Study Report*
- *Final Assessment of Results from Site QA*

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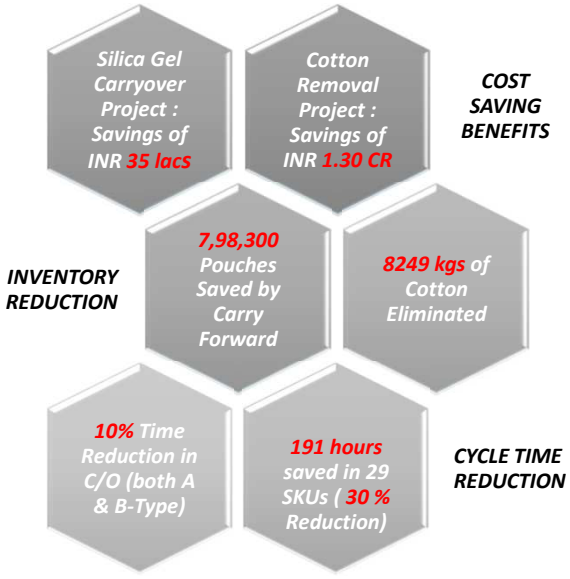
## Tangible Benefits / Year

- *Cycle Time Reduction due to elimination of cotton (filler) from primary packing process*
- *Changeover Time Reduction due to elimination of Pouch Discarding & Counting activity*
- *Reduction in usage of utilities due to cycle time reduction – Compressed Air, Chilled Water, Energy and Steam*
- *Inventory Reduction*
- *Material Storage & Handling Costs*

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## Intangible Benefits

1. *Conservation of Natural Resources : Cotton*
2. *Reduction in Vehicular Emissions due to Transport for Material*
3. *Effective Utilisation of Manpower due to elimination of Redundant Activities*
4. *Reduction in Waste Generation : Silica Gel*
5. *Storage Space Optimisation for Inventory*
6. *Ease of Operations & Handling*

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## Replication Potential

- *The above projects can be replicated successfully in many FMCG or Pharmaceutical industries which involve large amount of packing components*
- *It can be also successfully implemented in industries which are extensively involved in packaging & exports*
- *Industries can replicate the same through following steps :*
  - *Identify the Non Value Added (NVA) Elements in their process*
  - *Focus on Waste Generation*
  - *Find eco-friendly alternatives for current process without impacting the process*
  - *Focus on Conservation of Natural Resources*
  - *Small Modifications in the Process*

**Notable Achievement :** The Filler (Cotton) Removal Project has already been taken up for implementation by other manufacturing plants of Glenmark. Additionally, initiative has been taken to remove the filler at the filing stage (R&D) only, before it comes for commercial implementation to plant

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## Achieving National Benchmark / Standard

- First of its kind Project in the Pharmaceutical Industry
- No Calibrated National Benchmark observed for the same
- Savings achieved as per cost for cotton & silica gel component

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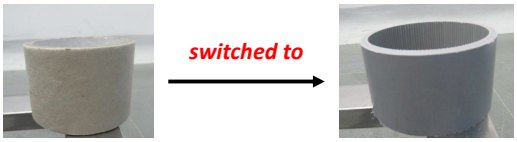
## REDUCE, RE-USE & RECYCLE OF LABEL CORE

***TRIGGER :***
As an effort towards minimisation of waste & recycling of material, Warehouse team came up with this idea

***UNIQUENESS :***
This project involves all three attributes of
**Reduce** – the use of new paper core
**Re-use** – the old plastic paper core
**Recycle** – eliminate waste & recycle load

***TIMELINE :***
*Jan 2021 onwards*

***MILESTONES :***




- *Identification of Wastage while PM Dispensing*
- *Dispensing of Packing Material involves :*
  - *Dispensing of part quantity from larger label rolls procured from vendor*
  - *New Label Cores were used for dispensing in small part quantities*
  - *After usage, the paper label cores were destroyed & discarded adding to bio-waste generation*
- *New alternative was evaluated i.e. re-use of plastic label core for dispensing instead of paper label core*

**Benefits :**
- Implementation of re-use of plastic label core instead of paper label core lead to annual savings of INR **1.63 Lacs** (approximating to 15500 Nos of Label Cores)
- Conservation of Natural Resource, Paper Savings, Reduced Deforestation for Paper, Reduced Air Pollution

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## Priority Plans

**+1 year**

- *Implementation of Filler (Cotton) Removal & Silica Gel Carryover in all other Products as per plan*
- *Identification of other NVAs to eliminate & create a positive impact*

**+2 Year**

- *Discussion with R&D to identify proposals to make the Packing Components more lean*
- *Identification of opportunities that are currently generating waste & are proving hazard to the environment*

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## Major Learning

- ***Simple Modification in Process*** *can lead to huge savings i.e. Silica Gel Carryover*
- *Evaluating the need of certain components in the current process & eliminating if possible*
- *Classification of* ***NVAs*** *at every step is very important*
- *Environmental benefits can go hand-in-hand with* ***Cost benefits*** *&* ***Process Optimisation*** *( Cycle Time Reduction )*

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## Top Ten Best Practices

- Reuse of RO Reject & AHU condensate for Cooling Tower & Rest Room
- 90 % Recycling of Hazardous waste generated
- Periodic Energy Audit
- Reuse of Polybag
- Steam Condensate Recovery
- Double side printing /Paper less LMS
- In-house Nursery to grow sapling
- Use of Energy Efficient Equipment
- Use of high pressure cleaning Machine
- 100 % reuse of ETP treated water for gardening

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