

Abstract

Single-serve coffee machines have gained popularity in recent years for ease of use, but that leads to billions of disposable coffee pods being thrown into landfills each year. While reusable pods are available, they are incompatible with many machines and are made of hard plastic, making them difficult to clean. The Go Clean Cup is a reusable single-serve coffee pod that is flexible and eversible for easy cleaning and will be universally compatible.

User Reviews and Problem Analysis

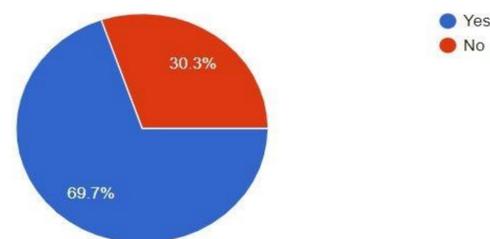


The figures above show a disposable single-serve coffee pod (left) and a reusable single-serve coffee pod (right).

Disposable pods cause too much waste, but reusable pods also have many issues. User reviews for the Keurig® brand reusable coffee pod include that it is not compatible with many machines, even Keurig® machines, there are too many pieces that make it confusing, and it is too complicated to switch pods. With so many people using single-serve coffee machines regularly, there needs to be an environmentally-friendly single-serve option that is easy to clean and works in any machine.

Do you use a keurig?

152 responses



The figure above is a chart of survey responses showing the percentage of people who use single-serve coffee machines.

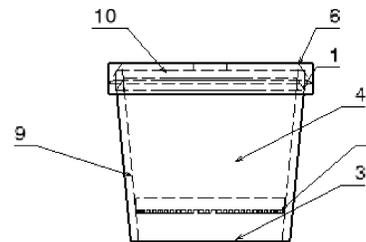
The Go Clean Cup

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Design

The Go Clean Cup is a flexible reusable coffee pod that can be everted for easy cleaning. The lid and walls of the cup are made of silicone, or another flexible material. The mesh at the bottom is made of either metal, or silicone. There is a lip at the top of the cup for the lid to click onto. The lid has a hole in the top so that the water can run through the cup for a perfectly brewed cup of coffee. This design is currently patent-pending.



The figure above is the design of the Go Clean cup with the lid on.

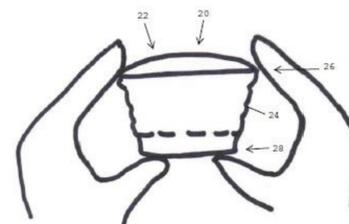


FIG. 2B

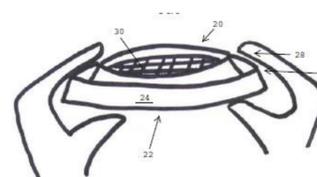


FIG. 2C

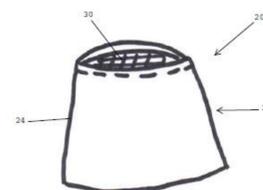


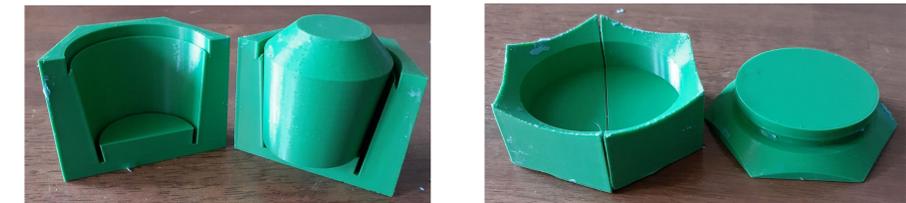
FIG. 2D

The figure above depicts how the cup can be everted.

Prototypes



The figure above is the first prototype of the Go Clean Cup.



The figure above shows the mold used to make the second prototype of the Go Clean Cup.



The figure above is the second prototype of the Go Clean Cup.

Up Next

- Make the bottom out of silicone and use laser drilling to drill the mesh.
- Continuing to refine the measurements to ensure universal compatibility.

References

User Reviews, "My K-Cup Reusable Coffee Filter," Keurig, 2020. [Online]. Available: <https://www.keurig.com/Accessories/My-K-Cup%20AE-Universal-Reusable-Coffee-Filter/p/universal-my-k-cup>. [Accessed 22 January 2019].

Acknowledgments

This project would not be possible without the support of my faculty advisor, Lisa Davids, or the support of the Office of Undergraduate Research.

Contact Me

If you have any questions, please feel free to contact me at vonderhl@my.erau.edu and I will be happy to answer them.