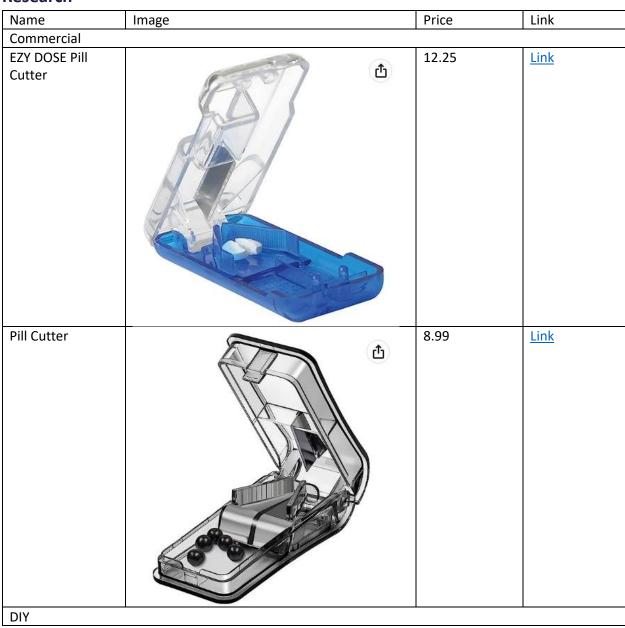


Introduction

The pill slicer is an easy to use device that slices a pill into two. This device is intended for users that need to cut pills into two and have difficulty doing so without crushing the pill.

Research





DIY Multiple Pill Splitter	N/A	Link
Homemade Pill Splitter	N/A	<u>Link</u>

Requirements

Goals

G01	Device must be able to easily slice a pill
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Functional Requirements

F01	Device must use a replaceable slicing device
F02	Device must be safe and difficult to injure yourself with.

Constraints

C01	Design must be entirely 3D printed
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Conceptual Design

Initial design was found on myminifactory.com by user Aliaksei Petsiuk @apetsiuk - MyMiniFactory

Prototyping

After inspecting the files for the first version, it was found that there was no blade or method of slicing the pill mentioned in the original device posting. A version was designed that uses a standard disposable safety razor blade.

v1.0 | March 2023 Pill Slicer DESIGN RATIONALE



Testing

After the first print of the updated design, it was found that the overhangs were too steep for most printers, leading to poor surface quality.

Detailed Design

A final version was designed with better overhangs that are more printable and reduced print time by an hour.

Opportunities for Improvement

More safety features could be added in addition to the blade fence to improve the safety of the device.