

Orbital Shaker DIYBio

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VIEW IN BROWSER

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Summary

This is an orbital shaker with a modular design that employs simple electronics which require minimal soldering skills...

Learning > Chemistry & Biology

Tags: lab shaker labequipment diybio earthshaker
orbitalshaker

This is an orbital shaker with a modular design that employs simple electronics which require minimal soldering skills to assemble. The removable tray has an array of M5 holes into which special mounts can be screwed. Mounts for 125ml and 250ml Erlenmeyer flasks, as well as that for a 125ml tissue culture flask are included.

I used a 100 RPM motor, but other speeds are available if you need something a little faster. The motor controller allows the speed to be continuously varied as needed.

Required materials:

608 bearings (<http://a.co/d/4amTGEh>)

Round switch (<http://a.co/d/1Q6Gje3>)

DC power socket (<http://a.co/d/je82XnS>)

DC power supply (<http://tinyurl.com/ybst994h>)

Motor (<http://a.co/d/emwWsed>)

PWM voltage controller (<http://tinyurl.com/y9uactyg>)

Rubber feet (<http://a.co/d/dkqb9gr>)

M5 screws

M4 screws

M3 screws (socket head cap) to reinforce arms

In all, it costs about \$55, including filament.

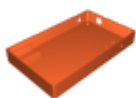
You can see a video of it in action here: <https://youtu.be/67lwxifAp34>

This was designed in Fusion 360 and the design may be downloaded from <https://a360.co/2MAueWt>

The design was inspired by <https://www.thingiverse.com/thing:2983846>

Category: Biology

Model files



orbital_shaker_body.stl



arm_motor.stl



250_ml_flask_holder.stl



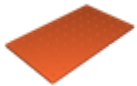
erlenmeyer_250ml_mount.stl



orbital_shaker_cover.stl



erlenmeyer_125ml_mount.stl



orbital_shaker_tray.stl



orbital_shaker_cradle.stl



arm_bearing.stl

[Find source .stl files on Thingiverse.com](https://www.thingiverse.com)

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