Printables by JOSEF PRUSA

Simple Parametric Scoop

Calipee

VIEW IN BROWSER

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Summary

Simple parametric scoop you can easily modify.

0.87 hrs	8 pcs	0.20 mm	0.40 mm	PLA PET	9 g	Prusa MINI / MINI+

Household > Kitchen

Tags: powdercup parametric scoop creatine protein fusion360

Simple parametric scoop which you can adjust for you own needs.

Files

You can find the .f3d file for parametric adjustments in the Fusion360 directory.

The STL directory contains multiple version of the scoop with different sizes. For the easiest, dirty, way to get your required size if its not available, just scale the 10 ml version to your needs (or let me know in the comments).

The print directory one folder for PLA and one for PETG which contain GCODES for the most popular versions sliced for printing on a Prusa Mini.

Please see the 3mf project file with recommend settings. If you want to use the settings but a different size of the scoop just import it and select “Only use configuration” when prompted.

Parameters

The most important parameters are marked as favorites. To access them in Fusion360 click Modify → Change Parameter.

Name	Unit	Expression	Value	Comments
WallThickness	cm	0.2 cm	0.20	set thickness of the wall of the sphere
HolderThickness	cm	0.2 cm	0.20	set thickness of the handle
HolderLength	cm	5 cm	5.00	set length of the handle, has to be at least as long as half of diameter of the outer sphere; set to 0 if you dont want a handle
RequiredVolume		0	0	required Volume of the Scoop, set to 0 if you want to use density and required weight of the substance, Volume in cm^3 (ml
Density		0	0	set WeightOfSubstance to a set to 0 if you want to use measured Weight and Volume, set WantedWeightOfSubstance to value and requiredVolume to 0 if you want to use this, density g/cm^3 of the substance
WantedWeightOfSubs...		5	5	set Density to a value and requiredVolume to 0 if you want to use this, given in g (grams), mass the scoop should be able to contain at least
measuredWeight		3.2	3.2	set Density to 0 if you want to use it, mass in g
measuredVolume		8.333333	8.333...	set Density to 0 if you want to use it, Volume in cm^3 (ml)

There are options to set the size of the scoop.

1 - You know the required Volume

Just set the RequiredVolume parameter to your desired value.

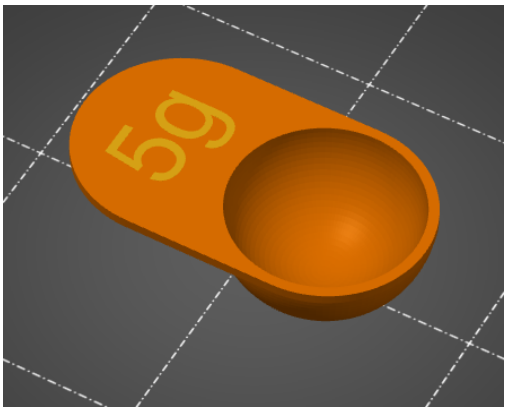
2 - You don't know the required Volume

If you **know** the weight and volume of a specific amount of the substance (which you can find out using a measuring cup for example) enter the values in measuredWeight (g) and measuredVolume (ml).
Set RequiredVolume to 0.
In the next step set how many grams the scoop of your substance the scoop should be able to contain in the WantedWeigthOfSubstance parameter.

The size of the scoop will be calculated using your given parameters.

You may also adjust the Wallthickness, Holderthickness and HolderLength using the parameters.

Printing



Please look at the provided .3mf file for recommended settings.

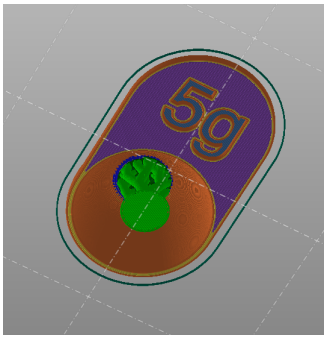
Filament

Should be printable in PLA but it would probably being better when using PETG if it will be in contact with liquids.
Please note that 3D printed objects in general are not food-safe. Use at your own risk.

> The print itself will never be food-grade for one simple reason – FFF 3D printing produces objects containing gaps between the layers. These gaps can become the breeding ground for the growth of **bacteria and fungi**, which can cause an illness.

Read this post for more information.

Supports



I recommend printing upside down and adding support to the highest point of the dome but it **may** also work without them.

Settings

You might want to add a text with the amount of grams the scoop fits as shown in the picture. I recommend using the build-in text tool in Prusa

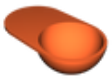
Slicer.
If you are using the provided .3mf file you can just adjust the text or use it as an example.

Please consider liking, commenting and/or posting a make if you enjoyed this model :)

If you have any questions or feedback please let me know in the comments.

Model files

STL 4 files



simplescoop5g.stl

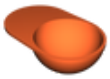
Fits 5g of creatin, Volume about 8.333 ml

scoop5ml.stl

Scoop with volume of 5 ml

scoop10ml.stl

Scoop with volume of 10 ml



scoop20ml.stl

Scoop with volume of 20 ml

Fusion360 1 file

simplescoop-5g.f3d

click Modify → Change Parameter

simplescoop5g.3mf

recommended settings, 8.3ml version

Print files

PETG

4 files

simplescoop5g_04n_02mm_petg_mini_52m.gcode

PET | 0.40 mm | 0.20 mm | 0.87 hrs | 9 g | Prusa MINI / MINI+

~8.3 ml Volume

simplescoop5ml_04n_02mm_petg_mini_37m.gcode

PET | 0.40 mm | 0.20 mm | 0.62 hrs | 6 g | Prusa MINI / MINI+

5 ml Volume

simplescoop10ml_04n_02mm_petg_mini_47m.gcode

PET | 0.40 mm | 0.20 mm | 0.78 hrs | 8 g | Prusa MINI / MINI+

10 ml Volume

simplescoop20ml_04n_02mm_petg_mini_1h7m.gcode

PET | 0.40 mm | 0.20 mm | 1.11 hrs | 12 g | Prusa MINI / MINI+

20 ml Volume

PLA

4 files

simplescoop5g_04n_02mm_pla_mini_50m.gcode

PLA | 0.40 mm | 0.20 mm | 0.83 hrs | 9 g | Prusa MINI / MINI+

~8.3 ml Volume

simplescoop5ml_04n_02mm_pla_mini_35m.gcode

PLA 0.40 mm 0.20 mm 0.58 hrs 6 g Prusa MINI / MINI+

5 ml Volume

simplescoop10ml_04n_02mm_pla_mini_44m.gcode

PLA 0.40 mm 0.20 mm 0.74 hrs 8 g Prusa MINI / MINI+

10 ml Volume

simplescoop20ml_04n_02mm_pla_mini_1h3m.gcode

PLA 0.40 mm 0.20 mm 1.05 hrs 11 g Prusa MINI / MINI+

20 ml Volume

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