MEDNET

Model Exchange & Development of Nursing & Engineering Technologies

Brain Model

MEDNET File: Brain.stl

Description

Using 3D Slicer, a CT scan or MRI can be used to make a 3D model of the brain. The 3D model is then printed using PLA filament.

Features

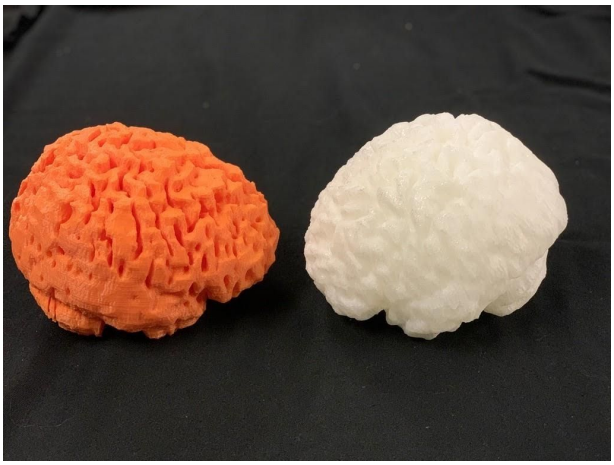
The brain model was created by using 3D slicers semiautomatic segmentation tool, which enables one to take Dicom data and create a detailed brain model. The brain model was printed using PLA filament. We also 3D modeled and printed Multiple Sclerosis lesions using the same process.

Development Information

Materials needed: PLA filament and silicone
Finished dimensions: 5”x 6.5”4.75”
PLA filament ≈ 0.72 of a roll
Silicone ≈ unknown
Production time ≈ 72 hrs
Approximate materials cost: $18.00 (PLA) $??.?? (Silicone)

Instructions for Use

3D slicer is a free program that enables you to select parts of the image you would like to created a 3D model out of. Once you have created a 3D model you can print the model. Different brains can be printed to show different illnesses that affect the brain.



Material Procurement Information

Filament: Hatchbox Filament 1.75mm - $22.99/roll (prices vary per color)
https://www.amazon.com/HATCHBOX-3D-Filament-Dimensional-Accuracy/dp/B00J0ECR5I/ref=sr_1_4?crid=2GJUX43SIM4TP&dchild=1&keywords=pla+filament+1.75mm&qid=1590077168&sprefix=pla+filament%2Caps%2C178&sr=8-4

*citations: Fogle, M. Brain Model. MED-NET. Retrieved from uahmednet.org..