**Supplemental file 2**

Shell scripts (sh) for Raspberry Pi minicomputer

Microscope camera (see the **Table of Materials**) is coupled to USB port of minicomputer.

#program focus.sh

#!/bin/sh

NOW=0

NOW=$(date +%d%m%y%H%M)

while true; do

BEFORE=$NOW

NOW=$(date +%d%m%y%H%M)

webcam -F 10 -S 10 im1.jpg

fbi im1.jpg

done

#used to focus the filaments. Button must be pressed for new image.

#program 1minute.sh

#!/bin/sh

NOW=0

NOW=$(date +%d%m%y%H%M)

while true; do

BEFORE=$NOW

NOW=$(date +%d%m%y%H%M)

If [“$NOW” gt “$BEFORE” ]

then

fswebcam -F 30 -F 40 anyname\_$NOW.jpg

fi

done

#If the time increases by 1 min, a photograph is taken and stored as a file.