Progress Report 8

Tissue Sample Preparation Device for Biochemical Analysis

Team Members:
Sara Alford (Team Leader)
Christine Koranda (Communications Rep.)
Carla Maas (BWIG)
Ryan Roth (BSAC)

Client:
Jeff Ross and Charles Tessier
University of Wisconsin - Medical School
Department of Oncology

Advisor: Paul Thompson

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Problem Statement: To design a device that completes the preparation process done manually to prep a tissue sample for biochemical analysis. The device should freeze the tissue (with liquid nitrogen), and grind it to a powder. Sample should be easily collected.

Restatement of Team and Individual Goals:
Team:
1. Complete design notebooks and turn in to BME office.

Carla:
1. Rebuild or fix circuit on small board
2. Operate prototype with circuit and batteries or 9V DC adaptor

Christine:
1. Make minor corrections to AutoCAD drawings in response to questions from the ME machinist

Ryan:

Sara:
1. Determine the dimensions and shape of insulating chamber
2. Research sealants needed during construction of insulating chamber

Summary of Accomplishments:
1. EXPO Description rewritten
2. Grinding Head machined
3. Bill consulted with the machining of the grinding chamber
Team and Individual Goals for Next Week:

Team:
1. EXPO Display Work
2. Determine hours each of us at display for EXPO

Carla:
1. Find and order elbow fitting and ball-socket joint for mount
2. Reassemble or fix smaller version of circuit
3. Get batteries for the circuit (9V total, add in series) unless I hear otherwise that Ryan has DC adapter
4. Write up electrical info for final paper
5. Reassemble prototype (solder solenoid valve into circuitry and plug, also safety ground)

Christine:
1. Pick up grinding chamber on Friday

Ryan:

Sara:
1. Determine the dimensions and shape of insulating chamber
2. Trip to Home Depot or Menards to get a sealant.

Project Schedule:
Week 1: Group chose same project, client was contacted.
Week 2: Divided tasks, patent proposal, prototype work
Week 3: Patent, EXPO proposal, prototype working, chamber design
Week 4: Patent Meeting, Chamber Design, Circuit Timer
Week 5: Drawing for head and chamber, Circuit Timer
Week 6: Presentation, Drawings for chamber, circuit building
Week 7: Midsemester Presentation Given, Design Notebooks Turned In.
Week 8: Spring Break, Machining Parts.

Difficulties:

Weekly Hours:
Christine: 1 hour
Carla: 1 hour
Ryan: ? hour
Sara: 1 hour

Total Hours:
Christine: 29 hours
Carla: 32 hours
Ryan: 17.5 hours
Sara: 25 hours