

**Tier Determination**

Tier: \_\_\_\_\_

Tier 1: Teams with no violations of the rules \_\_\_\_\_

Tier 2: Teams with any violations of the rules – **write what the violations were on the back of this page** \_\_\_\_\_

Tier 3: Interference by a coach, parent or conversation with another team **DQ** \_\_\_\_\_

**Thermodynamics C**

San Diego Regional Science Olympiad – 2012

**School Name:** \_\_\_\_\_

**Team Name:** \_\_\_\_\_

**Student(s): 1.)** \_\_\_\_\_

**2.)** \_\_\_\_\_

<b>CONSTRUCTION QUALIFICATION - AT IMPOUND</b>	<b>Yes</b>
2 identical 250 ml Pyrex beakers – height $\approx$ 1.4 X diameter	
Device fits in 20.0 x 20.0 x 20.0 cm cube	
<b>Permitted materials:</b> wood, paper, cardboard, natural fibers, <b>organic</b> granular material, aluminum foil, fastening materials	
Fastening materials do NOT contribute to insulating properties <b>Prohibited materials:</b> foam (plastic, metal, expandable glue, etc.), plastic (except for fastening materials above), bubblewrap, glass, commercial insulation, etc.	
Hole directly above beaker in device $\geq$ 1.5 cm diameter	
Surface of hole < 5 cm above top lip of beaker	
There are no energy sources to keep water warm	
All parts of device are at or near room temperature at Impound.	
<b>OPERATING DEVICE</b>	
Eye protection #4 for participant(s) Chemical/Splash Protection Goggles (ANSI Z87)	
Students easily able to insert and remove beakers from device	
Hole remained open during competition	
Device can be taken apart for inspection of construction materials	
<b>PLOTS</b>	
Plot labeled with school and student(s) names	2 pts
Title of plot is appropriate; X and Y axes are labeled	2 pts
Units and axes increments are appropriate	2 pts
One point for each data plot on a graph – or # graphs	4 pts max

**Plot points:** = \_\_\_\_\_

10 pts max