**Heat transfer mechanisms - Report**

**Students’ names and number:**

**PRE-LAB QUESTIONS:**

Which mechanism will you study with your experiment? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Which cup (control or test) do you predict will better keep the water warm? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**PROCEDURE:**

* First the control cup is filled with hot water and the thermometer is inserted through a hole in the lid until its tip reaches approximately the center of the cup.
* Once the water reaches a temperature of 85°C, measure the water’s temperature every minute for 20 minutes.
* Repeat the procedure with the test cup, using the same volume of hot water and the thermometer inserted in the same way as before.

**RESULTS:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| t / min | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Tcontrol / °C | 85 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ttest / °C | 85 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**POST-LAB QUESTIONS:**

Which cup (control or test) better kept the water warm? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Which cup (control or test) requires less resources to be made (more environmentally friendly)?

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Which cup (control or test) is cheaper to produce? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_