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| **五、数据记录：**  组号： 18 ；姓名 高梓涛  **1、用比较法测量100℃时Fe和Al的比热容**  样品质量：  铜在100℃时的比热容为：  热电偶冷端温度：  样品由102℃（4.37mV）下降到98℃（4.18mV）所需要的时间（单位为S）   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | 次数  样品 | 1 | 2 | 3 | 4 | 5 | 平均值 | | Fe | 6.77 | 5.55 | 5.48 | 5.52 | 5.64 | 5.55 | | Cu | 5.78 | 5.05 | 5.39 | 5.15 | 5.55 | 5.38 | | A1 | 4.36 | 4.59 | 4.47 | 4.66 | 4.77 | 4.57 |   **2、测量Cu 的冷却规律**   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 温度mV | 8.20 | 7.20 | 6.30 | 5.30 | 4.50 | 3.50 | 3.00 | 2.45 | | 时间  S | 0 | 14.15 | 17.98 | 18.16 | 21.16 | 34.29 | 22.24 | 30.26 | | 温度mV | 2.20 | 2.05 | 1.85 | 1.55 | 1.45 | 1.30 | 1.15 | 1.00 | | 时间  S | 16.18 | 10.93 | 16.17 | 28.66 | 10.69 | 18.48 | 19.96 | 22.82 | |
| **六、数据处理**  **1.比热容计算公式:**  **由此公式计算得出Fe和Al的比热容分别为：**  **=0.109cal··**  **=0.257 cal··**  **由Fe比热容标准值为0.12 cal··，Al比热容标准值为0.23 cal··**  **可由公式：**  **计算得出Fe的百分比误差为：**  **==9.167%**  **Al的百分比误差为：**  **==11.739%**  **2.铜的冷却曲线**  **由温度和电压的转化公式：** |