



**Test on Ice Chest Performance**

**Description:** The purpose of this report is to compare the efficiency of three commercially available ice chests. The three ice chests selected were:

1. The Icey-Tek 70 Quart Cooler
2. The Frigid Rigid 65 quart cooler
3. The Igloo 72 Quart Marine Cooler



All of the coolers were maintained in the same environmental conditions prior to and throughout the duration of the test. On the first day of the experiment, each of the coolers was filled with 60 pounds of cube ice purchased at a local convenience store. The coolers were kept outside in the sun for about 9-10 hours each day and in a secured warehouse in the evening.

Once each day, the ice chests were drained and the water was weighed. This method allows us to verify the efficiency of each unit by determining the amount of ice that melted each day. In other words, the more water in a given time, the less efficient the unit is. Additionally, each cooler was opened for a few seconds to see how much ice remained. The four-day results of this test are detailed in the chart below.

| <b>Melting Rate</b> |                   |                                    |                             |                          |
|---------------------|-------------------|------------------------------------|-----------------------------|--------------------------|
| <b>Date</b>         | <b>Hi/Lo Temp</b> | <b>Frigid Rigid<br/>H2O Wt.</b>    | <b>Icey-Tek<br/>H2O Wt.</b> | <b>Igloo<br/>H2O Wt.</b> |
| 24-May              | 87/73 F           | Loaded at 2:30 PM 60 lbs. ice each |                             |                          |
| 25-May              | 88/73 F           | 5.59 lbs                           | 12.75 lbs                   | 11.65 lbs                |
| 26-May              | 87/70 F           | 6.72 lbs                           | 13.05 lbs                   | 13.72 lbs                |
| 27-May              | 88/70 F           | 6.34 lbs                           | 12.84 lbs                   | 11.16 lbs                |
| 28-May              | 88/72 F           | 6.10 lbs                           | 11.20 lbs                   | 11.70 lbs                |
| <b>TOTAL</b>        |                   | <u>24.75 lbs</u>                   | <u>49.48 lbs</u>            | <u>48.23 lbs</u>         |

**Conclusion:** When Frigid Rigid is tested against two leading competitors, Icey-Tek and Igloo, we found that Frigid Rigid was more than 200% more efficient in the same environmental conditions.

**Additional Observations:** In this test, the melting data was gathered from May 24 through May 28, 2005. Enough data was available after five days to determine the efficiency of each ice chest in the test. The ice chests were monitored after May 28 to see how long it would take for all of the ice to melt. By May 28 (total of 4 days) all of the ice had melted in the Igloo and Icey-Tek ice chests. The Frigid Rigid continued to maintain ice until June 3 (total of 10 days). This observation further confirms the accuracy of this test.

Test on Ice Chest Performance  
(For internal use only)

Description: The purpose of this test was to see which of three coolers had the highest efficiency under the same conditions. The three ice chests that were tested were:

1. An Igloo 56 quart with cup holders purchased on 5/4/02 at K-Mart.
2. A 45 quart Frigid Rigid that was produced on 5/3/02
3. An EvaKool model B-45 that was purchased on 5/3/02 from Birdsall Marine.















Seven-pound bags of ice cubes were purchased from a local convenience store. The cubes were poured out of the bags into each ice chest. Six seven-pound bags were put into each ice chest for a total of 42 pounds of ice in each one. The ice chests were transported back to the testing location.

degrees during the hottest part of the day to 74 degrees at night. The test was started on 5/7/02 and concluded on 5/10/02.

All three ice chests were put on the same rolling table, as shown above. During the day, they were put in a parking lot in the direct sunlight. In the evening they were put inside a warehouse. Temperatures during the test ranged from 96

During the tests the ice chests were opened once a day to take photographs to document the ice loss, see photos below. Also, each day the water was drained from the ice chest and weighed, which documented the amount of ice that had melted. The date and times of the weighting are shown in the chart below:

| MELTING RATE IN GRAMS |              |          |          | Frigid Rigid   | EvaKool   | Igloo   |
|-----------------------|--------------|----------|----------|--|---|---|
| Time                  | Frigid Rigid | EvaKool  | Igloo    |  |  |  |
| 5/7/02 1640           | 222.6        | 311.9    | 553.9    |  |  |  |
| 5/8/02 0700           | 1504.7       | 2145.7   | 2795.2   |  |  |  |
| 5/8/02 1620           | 1038.7       | 1615.4   | 2516.7   |  |  |  |
| 5/9/02 0745           | 1757.7       | 2537.0   | 2922.1   |  |   |   |
| 5/9/02 1845           | 1430.3       | 2023.1   | 2824.7   |  |   |   |
| 5/10/02 0700          | 1370.7       | 1883.9   | 2136.1   |  |   |   |
| Total                 | 7,324.7      | 10,517.0 | 13,748.7 |  |   |   |

**Conclusion:** In identical conditions the Frigid Rigid out performed the EvaKool by 44% & out performed the Igloo by 88%.