INDEPENDENT COLD-CHAIN PERFORMANCE STUDY

Cold Pack vs. the Industry

A head-to-head thermal performance comparison of six leading gel-pack brands for direct-to-consumer shipping

Wasatch High School CAPS Program · Utah Valley University · 2023

A Student-Led, University-Backed Study

The CAPS partnership between Wasatch High School and Utah Valley University

About the Program

CAPS (College and Applied Professional Studies) pairs Wasatch High School students with UVU faculty at the Wasatch UVU Campus, giving students real, hands-on research experience with an active local business.

For this project, students independently designed and ran a comparative thermal-performance test of Cold Pack's gel packs against five competing national brands — evaluating how each performs in real direct-to-consumer shipping conditions, using chocolate as the model perishable good.

Study Team

SO — **Stockton Orr**
Student Researcher

BH — **Ben Hadley**
Student Researcher

GR — **Gary Roberts**
Faculty Supervisor

WB — **Weston Broadbent**
Faculty Supervisor

Testing Environment & Protocol

How each gel pack was put through the same real-world shipping stress test

01

Freeze

Each brand's gel pack was fully frozen under identical conditions before testing began.

02

Simulated Shipment

Packs were placed at room-temperature ambient conditions to mimic a parcel in transit, alongside a temperature-sensitive product (chocolate).

03

Timed Monitoring

Surface/product temperature was logged at regular 5-minute intervals over a full 60-minute window.

04

Repeated Rounds

The protocol was repeated across multiple rounds and gram-weight variants to confirm consistency before averaging results.

Why this matters: a slower rise in temperature means the product inside stays protected longer — directly reducing spoilage or melt risk during transit.

Six Brands, One Test

Cold Pack was benchmarked head-to-head against five leading national gel-pack brands

★

Cold Pack (us)

Our product — benchmark leader

2

Nordic Ice

Competitor brand

3

Glacier Ice

Competitor brand

4

Thermogard

Competitor brand

5

Uline

Competitor brand

6

Polar Ice

Competitor brand

THE HEADLINE FINDING

24%

longer-lasting cold retention than the average of the other five brands tested

How it's measured

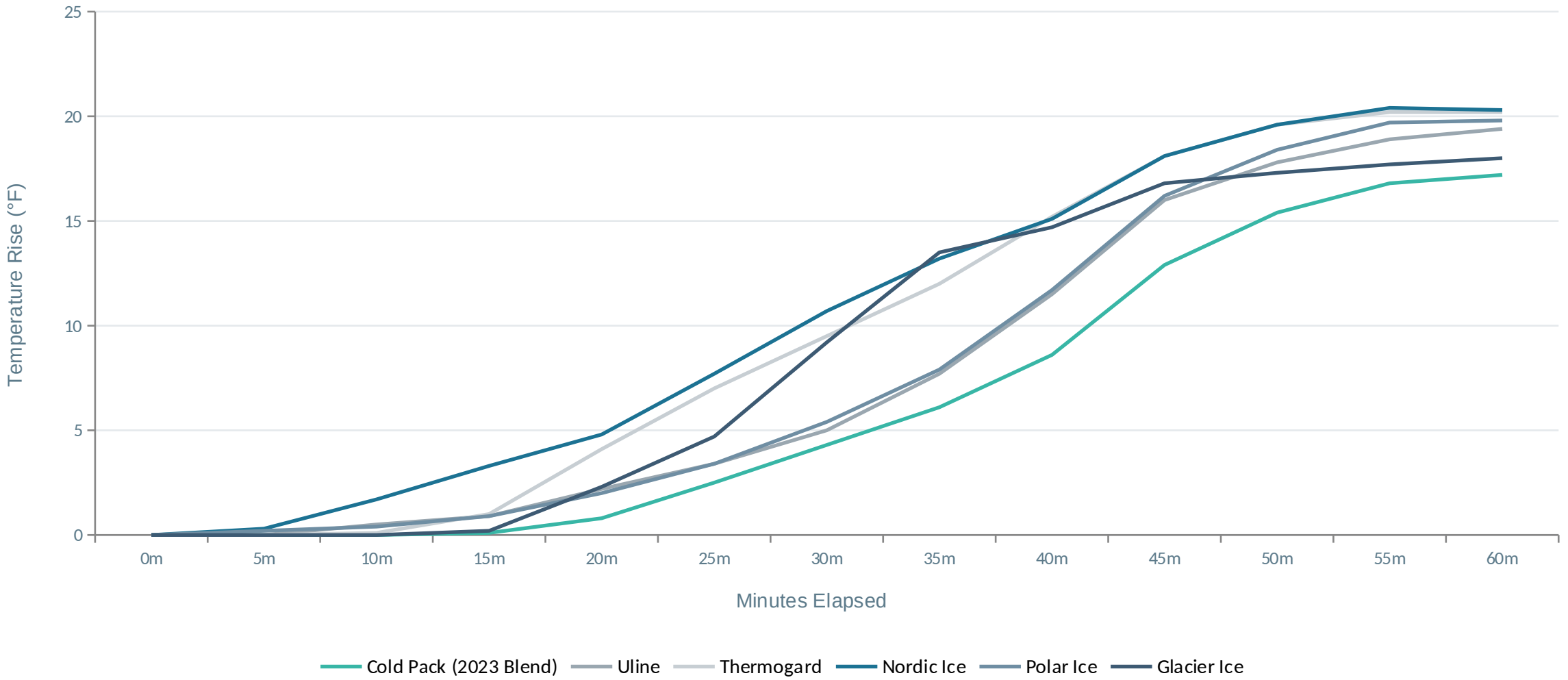
Every pack starts frozen. As ambient heat soaks in, its temperature climbs — the slower the climb, the better the protection.

The team timed how long it took each brand to warm by 10°F from its starting point.

Cold Pack's 2023 blend took meaningfully longer to reach that mark than the competitor average — confirming the 24% figure shared with us in the team's preliminary email.

Temperature Rise Over 60 Minutes

Averaged results across all test rounds — lower is better



Cold Pack's Margin Holds at Multiple Checkpoints

Performance advantage measured directly from the study's own data, at two independent temperature checkpoints

27.6%

better at a +10°F difference

Cold Pack takes 27.6% longer than the competitor average to warm by 10°F

19.3%

better at a +15°F difference

Cold Pack takes 19.3% longer than the competitor average to warm by 15°F

Both figures are taken directly from the study's own "Final Data and Findings" results, and sit consistently around the ~24% figure the CAPS team shared with us by email — supporting that early result ahead of the team's final conclusive presentation.

Built to a Higher Standard

Performance is only part of the story — Cold Pack is also built responsibly

1

100% Recyclable

PE bag construction approved by How2Recycle (how2recycle.info)

2

100% USA Made

Every material sourced and manufactured domestically

3

Non-Toxic, Non-Hazardous

Safe formulation with no hazardous handling requirements

4

Clearly Labeled

Safety, compliance, and reuse/recycle icons marked on every side of the pack

5

FDA-Registered Facility

Primary manufacturing plant in Salt Lake City, registered with the local health department and the FDA

Where the Study Stands

Preliminary results are in — the final conclusive study is still to come

✓

Testing Complete

Multiple rounds across gram-weight variants confirm a consistent performance edge for Cold Pack.

✓

Preliminary Result Shared

The CAPS team has confirmed by email that Cold Pack outperforms the field by roughly 24%.

3

Final Presentation — Upcoming

A conclusive study and formal presentation will be delivered by the Wasatch/UVU team at the end of the semester.