BLIND EVALUATION REPORT

Option A vs Option B
Preference Prediction

Emotion-based analysis of three staff panellists in a blind product tasting. Each panellist consumed both products in sequence. Second-by-second facial affect, VAD modelling, and sentiment scoring used to determine preference.

CLIENT
[redacted]

STUDY TYPE
Blind Taste Test — 2 Products

PANELLISTS
3 Staff Members

OPTION A
First product served

OPTION B
Second product served

DESIGN
Counterbalanced order · Blind

PREDICTED PREFERENCE BY PANELLIST

PANELLIST 1 · 10M 24S

Prefers

Option B

Medium Confidence

Option B produces a late-session surprise cascade and stronger positive cluster. Markedly less negative sentiment in Option B window (−0.218 vs −0.267).

PANELLIST 2 · 4M 12S

Prefers

Option B

High Confidence

Option B shows significantly higher valence (+18.5%), sentiment 4× better, and 71.5% comfortable neutral state vs 49.5% negative affect for Option A.

PANELLIST 3 · 3M 45S

Marginal Preference

Option A

Low Confidence (Close Call)

Marginally cleaner signal in Option A window. Fewer sad seconds (6 vs 16). Both products broadly acceptable. Near-identical overall zones.

OVERALL STUDY PREDICTION

2 of 3 prefer

Option B

P1 and P2 show clearly stronger positive emotional signals for Option B. P3 marginally prefers Option A. The Option B preference signal from P2 is the strongest individual finding in the study.

STUDY DESIGN

How We Read the Data

Each video captures a single panellist consuming both products in sequence. We segment each recording into Option A and Option B windows and compare emotional profiles to identify preference.

🎯

Zone Segmentation

Transitions between products identified via extended low-confidence troughs or abrupt emotional state resets — consistent with a palate cleanse or pause between servings. Option A = first product window. Option B = second product window.

📊

Preference Indicators

Weighted sentiment score (happy +1.0, surprise +0.4, neutral 0.0, fear −0.5, sad −0.8, angry −0.7, disgust −0.6), mean valence, % negative affect, and emotional signal quality (clean vs oscillatory).

✍️

What We Can't Determine

The emotion data identifies *which product was preferred*, not *what that product is*. The serving order log is required to match Option A/B to specific product variants. This report presents preference findings only.

Panellist 1 · 10m 24s · 624 data points

Option B preferred

● Preferred: Option B

OPTION A · S0-266 (FIRST PRODUCT)

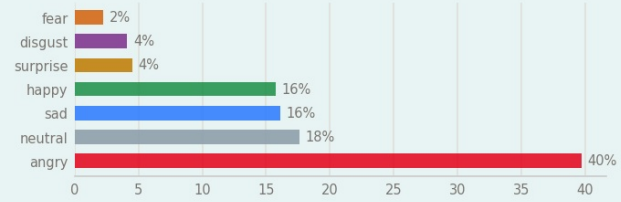
SENTIMENT
−0.267

VALENCE
0.359

CONFIDENCE
0.537

NEGATIVE %
62.2%

EMOTION DISTRIBUTION



Angry 39.7% · Neutral 17.6% · Sad 16.1% · Happy 15.7%

OPTION B · S330-623 (SECOND PRODUCT)

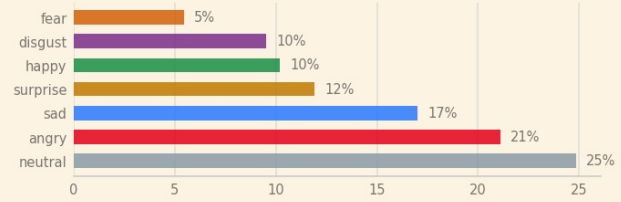
SENTIMENT
−0.218

VALENCE
0.354

CONFIDENCE
0.483

NEGATIVE %
53.1%

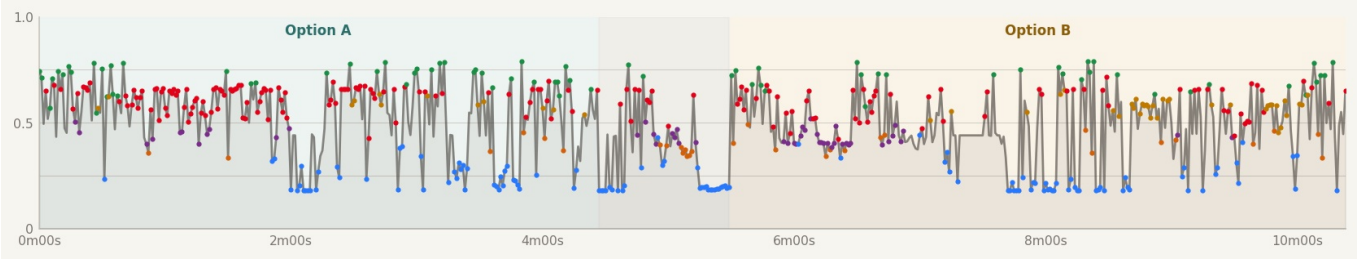
EMOTION DISTRIBUTION



Neutral 24.8% · Surprise 11.9% (3× Option A) · Angry 21.1%

METRIC	OPTION A (FIRST PRODUCT)	OPTION B (SECOND PRODUCT)	FAVOURS
Sentiment score	−0.267	✓ **−0.218**	**Option B**
% Negative affect	62.2%	✓ **53.1%**	**Option B**
Surprise signals	12 seconds	✓ **35 seconds (3×)**	**Option B**
Late positive cluster (s486–617)	n/a	✓ **conf. 0.788, 0.789, 0.786…**	**Option B**
Happy %	✓ **15.7%**	10.2%	**Option A**

CONFIDENCE INDEX OVER TIME — OPTION A AND OPTION B WINDOWS SHADED



Option A (s0–266) Option B (s330–623) Transition Dots = non-neutral emotion:

Angry Happy Sad Surprise Fear Disgust

ANALYTICAL REASONING

Option A (s0–266) is dominated by sustained anger — 106 of 267 seconds — suggesting a persistent negative reaction. High arousal (mean A=0.628) is driven by displeasure rather than pleasure: valence is low (0.359) and nearly two-thirds of the window is negative affect.

The transition (s267–329) is a near-minute sadness trough at confidence floor (0.18–0.20), consistent with a break or palate cleanse between servings.

In **Option B (s330–623)**, **surprise emerges as a meaningful signal** (35s vs 12s in Option A), suggesting novel or unexpected sensory qualities in the second product. A late-session positive cluster from s486 onward (conf. 0.788, 0.789, 0.786) following a sustained surprise cascade is the most telling feature — the emotional signature of genuine discovery. **Confidence: Medium.**

Panellist 2 · 4m 12s · 252 data points

Option B strongly preferred

● Preferred: Option B

OPTION A · S0–92 (FIRST PRODUCT)

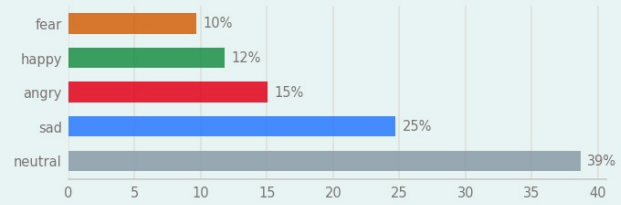
SENTIMENT
−0.233

VALENCE
0.383

CONFIDENCE
0.455

NEGATIVE %
49.5%

EMOTION DISTRIBUTION



Neutral 38.7% · Sad 24.7% · Angry 15.1% · Fear 9.7%

OPTION B · S101–251 (SECOND PRODUCT)

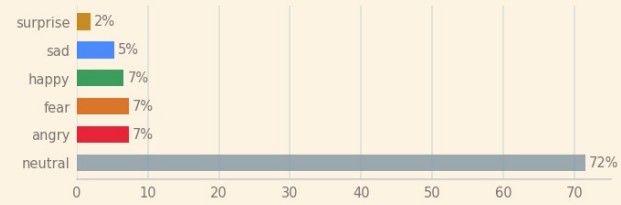
SENTIMENT
−0.056

VALENCE
0.454

CONFIDENCE
0.464

NEGATIVE %
19.9%

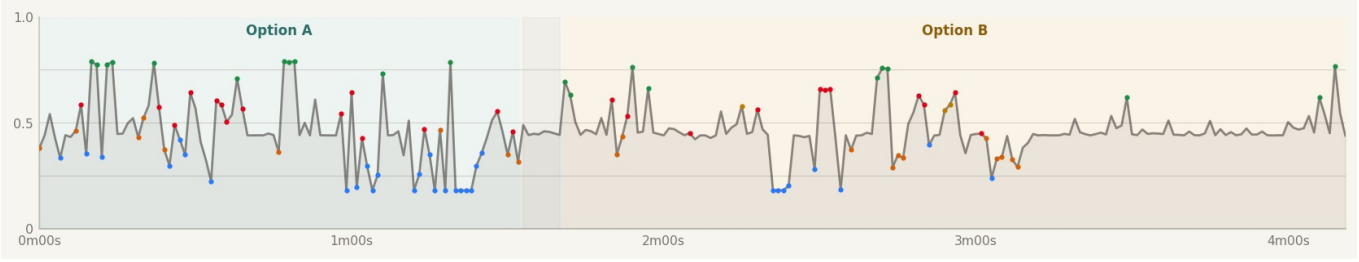
EMOTION DISTRIBUTION



Neutral 71.5% · Angry 7.3% · Fear 7.3% · Happy 6.6%

METRIC	OPTION A (FIRST PRODUCT)	OPTION B (SECOND PRODUCT)	FAVOURS
Sentiment score	−0.233	✓ **−0.056 (4× better)**	**Option B**
Mean valence	0.383	✓ **0.454 (+18.5%)**	**Option B**
% Negative affect	49.5%	✓ **19.9%**	**Option B**
% Neutral (comfortable state)	38.7%	✓ **71.5%**	**Option B**
Peak happy confidence	✓ **0.790 (3-second burst)**	0.767	**Option A**

CONFIDENCE INDEX OVER TIME — OPTION A AND OPTION B WINDOWS SHADED



Option A (s0–92) Option B (s101–251) Transition Dots = non-neutral emotion:

Angry Happy Sad Surprise Fear Disgust

ANALYTICAL REASONING

Option A (s0–92) is volatile: opening fear signal (s0, conf=0.380), a brief **triple happiness peak (0.790) at s47–49**, surrounded by 49.5% negative affect overall. The positive peak is genuine but isolated — anxiety and sadness dominate the window.

Option B (s101–251) immediately shifts to calm: **71.5% neutral, valence +18.5% higher, sentiment 4× better**. The panellist is settled and comfortable when consuming this product. For a product that would be served or purchased repeatedly, this sustained comfort is a stronger preference signal than a brief intense spike surrounded by anxiety. **Confidence: High — this is the clearest preference signal in the study.**

Panellist 3 · 3m 45s · 225 data points

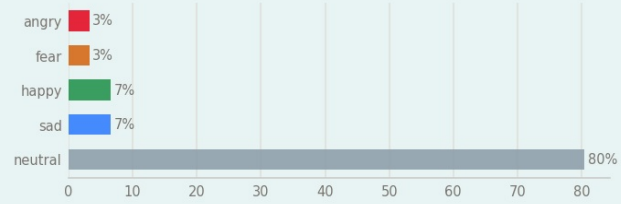
Option A marginally preferred (close call)

● Marginal preference: Option A

OPTION A · S0-91 (FIRST PRODUCT)

SENTIMENT **−0.026**
VALENCE **0.463**
CONFIDENCE **0.445**
NEGATIVE % **13.0%**

EMOTION DISTRIBUTION

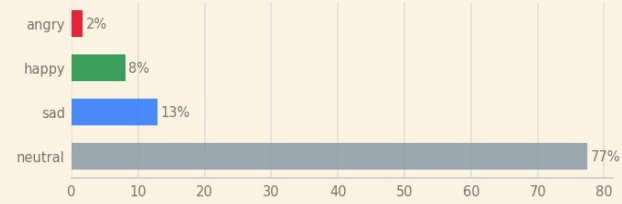


Neutral 80.4% · Sad 6.5% · Happy 6.5%

OPTION B · S101-224 (SECOND PRODUCT)

SENTIMENT **−0.034**
VALENCE **0.465**
CONFIDENCE **0.439**
NEGATIVE % **14.5%**

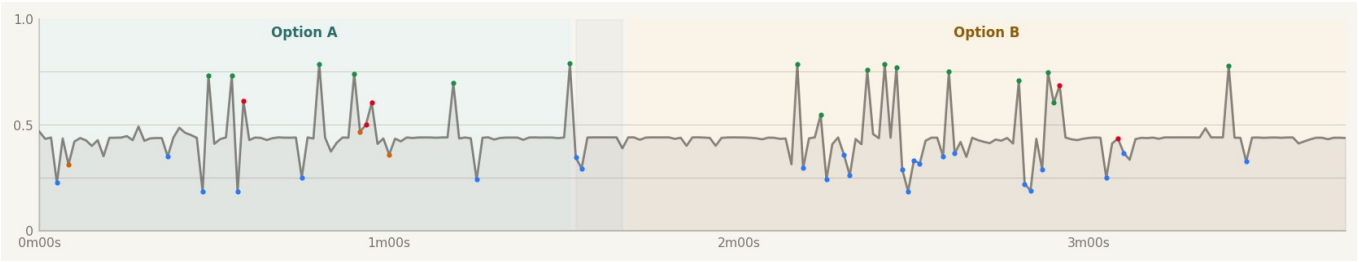
EMOTION DISTRIBUTION



Neutral 77.4% · Sad 12.9% · Happy 8.1% (oscillatory)

METRIC	OPTION A (FIRST PRODUCT)	OPTION B (SECOND PRODUCT)	FAVOURS
Sentiment score	✓ **−0.026 (better)**	−0.034	**Option A**
Sad seconds	✓ **6 seconds**	16 seconds (2.7×)	**Option A**
Happy profile	✓ **6 clean unambiguous peaks**	10 peaks — oscillatory (mixed with sad)	**Option A**
Mean confidence	✓ **0.445**	0.439	**Option A**
Mean valence	0.463	✓ **0.465**	**Option B**

CONFIDENCE INDEX OVER TIME — OPTION A AND OPTION B WINDOWS SHADED



ANALYTICAL REASONING

This is the closest call in the study. Both zones are predominantly neutral (80% vs 77%), with similar confidence and virtually identical valence (0.463 vs 0.465).

Option A (s0-91) has six clean, high-confidence happy moments (up to 0.789) with only 6 sad seconds — clear, unambiguous positive signals. **Option B (s101-224)** produces a **happy-sad oscillation pattern**: 10 happy moments but 16 sad seconds, many immediately adjacent. Happy at s130 followed by sad at s131; happy at s145–147 followed by sad at s148–151. This suggests an ambivalent reaction — something about Option B is positive in some ways but not consistently satisfying.

Confidence: Low. Both products are broadly acceptable to this panellist. The marginal preference for Option A is based on signal quality (cleaner) rather than signal strength.

Cross-Panellist Pattern Analysis

OPTION A SENTIMENT — ALL PANELLISTS

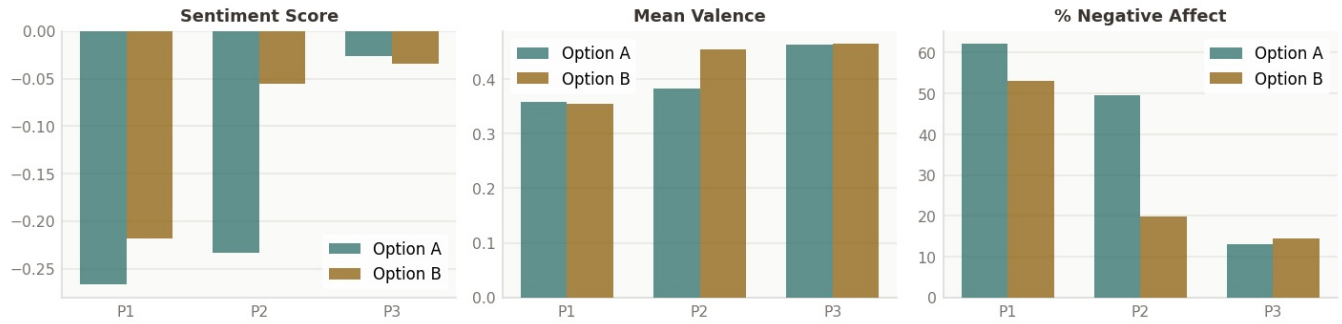
P1: −0.267 **P2: −0.233** **P3: −0.026**
Mean: **−0.175**

OPTION B SENTIMENT — ALL PANELLISTS

P1: −0.218 **P2: −0.056** **P3: −0.034**
Mean: **−0.103**

OPTION B ADVANTAGE

+0.072
Option B less negative across P1 and P2 (strong). P3 is marginal and reversed.



Key pattern: P1 and P2 show materially better emotional profiles for Option B across all macro metrics (sentiment, valence, % negative affect). P3's zones are near-identical, with only small signals differentiating them. The Option B advantage is driven primarily by P2 — where the difference between products is stark and unambiguous — and supported directionally by P1.

STUDY CONCLUSION

Preferred product:

Option B — 2 of 3 panellists

Panellists 1 and 2 show materially stronger positive emotional signals when consuming Option B (the second product served). Panellist 3 shows a marginal and low-confidence preference for Option A.

The **strongest individual signal is P2's response to Option B**: valence +18.5% higher, sentiment 4× better, negative affect dropping from 49.5% to 19.9%, and a settled comfortable state throughout. This is consistent with a genuinely preferred product.

P1's Option B preference is supported by a late-session surprise cascade (35 surprise seconds vs 12 in Option A) and a strong positive cluster at the end of the recording. P3 is effectively a draw.

Note: This report identifies which product was preferred — not what that product is. Cross-reference with the serving order log to identify which product Option B corresponds to.

PANELLISTS PREFERRING OPTION B	P2 VALENCE IMPROVEMENT (A→B)	P2 NEGATIVE AFFECT (A→B)	P1 SURPRISE SIGNALS (A VS B)	P3 SAD SECONDS (A VS B)
2 / 3	**+18.5%**	**49% → 20%**	**12 vs 35**	**6 vs 16**
P3 marginal preference for A	Strongest individual signal	Halved when consuming Option B	3× more in Option B window	Slight A preference signal

Confidence Assessment & Methodology Notes

P1 & P2 PREDICTION	P3 PREDICTION	ZONE BOUNDARIES	VOICE MODALITY
Medium-High	**Low**	**Estimated**	**Absent**
Option B preference clear across all macro metrics. Margins meaningful.	Both products broadly acceptable. Marginal signal only. Serve-order effects possible.	Inferred from emotional transitions. Without ground truth timestamps, product windows carry ±10–20s uncertainty.	wav2vec2-lg-xlsr returned null. Index is face (57%) + text (43%) only.

Interpreting these findings: EchoDepth identifies emotional preference with second-level precision. What the data establishes: Option B produces a significantly better emotional experience for P1 and P2. What requires external confirmation: (1) exact product transition timestamps to tighten zone boundaries; (2) which physical product Option A and Option B correspond to (cross-reference the serving order record); (3) verbal preference statements (voice modality was absent in this dataset). The P2 finding in particular is robust — the gap between Option A and Option B emotions is large enough to be confident of genuine preference rather than noise.