Product Optimization

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OBJECTIVES

- Previous research indicated that firmer pasta and a meatier sauce are positive drivers for this product.
- The R&D team wants to optimize this product and decides to take a systematic approach to manipulate the two key components: sauce and pasta. Key questions are:
  - Are there any differences in acceptance:
    - Due to the **New Meatier Sauce**?
    - Due to the **New Firmer Pasta**?
  - Between the two factors, which one is more important?
  - Are there any **interactions** between the two factors: sauce and pasta?
  - Which formulation is best and is it an **improvement over current**?

Product Optimization
EXECUTION

- **PRODUCTS:** 2 x 2 DOE, 4 samples total
- **CONSUMER TEST:** N=80 consumers, sequential monadic evaluation of all 4 samples, blind presentation, random/balanced order.
- **Design of Experiment (DOE):**

SAUCE	PASTA: Current	PASTA: New 30% Firmer
Current	1	2
New 30% more meat	3	4

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RESULTS

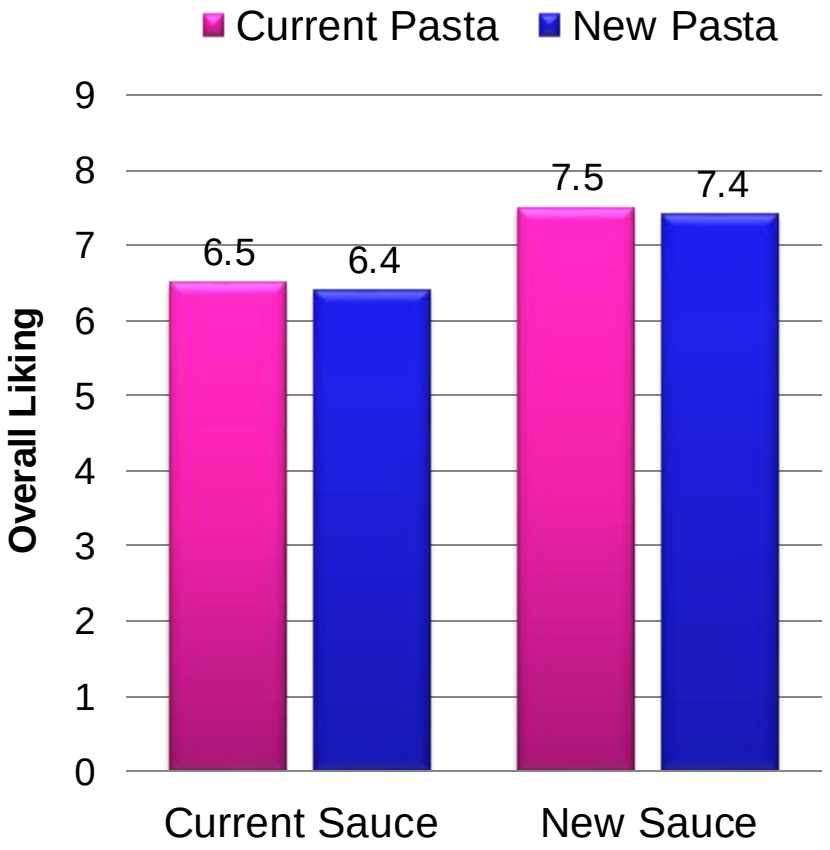
Overall Liking, p=0.001

New Sauce-Current Pasta	7.5	A
New Sauce-New Pasta	7.4	A
Current Sauce-Current Pasta	6.5	B
Current Sauce-New Pasta	6.4	B

No significant interaction between Sauce and Pasta types.

SIGNIFICANT MAIN EFFECT: sauce type. Between the two sauces, the new sauce was rated significantly higher compared to the current sauce.

No significant effect due to pasta type.



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RECOMMENDATIONS

- The new meatier sauce had a significant positive effect on consumer acceptance:
  - The new sauce, regardless of the pasta type, drove a 1 point increase in overall liking.
- The new firmer pasta did not have a significant effect on consumer liking.
- Overall, either formulation with the **new meatier sauce** is a significant improvement over the current product.
- *If the new pasta represents a significant operational or cost benefit further testing is recommended in order to ensure no erosion of consumers' liking.*