

A Study on Optimizing Functional Oats and Quinoa Cookies: The Role of Fiber in Enhancing Texture, Taste, and Sensory Acceptance of Rebaudioside-A Sweetened formulation

Supplementary Data

Supplementary Table S1: Ingredient list used in the preparation of the three cookie varieties.

| Ingredients | SuC | StC | InStC |
|----------------------|------------|------------|--------------|
| Quinoa flour (g) | 17.3 | 20.0 | 19.0 |
| Oats flour (g) | 34.6 | 40.0 | 38.0 |
| Sugar (g) | 17.3 | 0.0 | 0.0 |
| Sunflower oil (mL) | 13.8 | 16.0 | 15.2 |
| Baking Powder (g) | 0.6 | 0.5 | 0.7 |
| Salt (g) | 0.5 | 0.5 | 0.5 |
| Rebaudioside-A (g) | 0.0 | 0.1 | 0.1 |
| Inulin (g) | 0.0 | 0.0 | 4.0 |
| Vanilla Essence (mL) | 1.4 | 1.6 | 1.5 |
| Water (mL) | 14.5 | 21.0 | 21.0 |

Note: Sugar-based (SuC, control), Rebaudioside-A based (StC), and Rebaudioside-A and Inulin-based (InStC).

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Supplementary Table S2: Texture analysis results

| Formulations | Average maximum force (Fmax) (N) ± standard deviation | |
|--------------|---|------------|
| | Day 1 | Day 5 |
| SuC | 5.5 ± 0.7 | 17.1 ± 4.7 |
| StC | 5.2 ± 2.9 | 6.2 ± 3.6 |
| InStC | 13.3 ± 3.8 | 7.9 ± 5.4 |

Supplementary Table S3: Water activity results

| Formulations | Water Activity (a _w) (Average ± standard deviation) | |
|--------------|---|---------------|
| | Day 1 | Day 5 |
| SuC | 0.612 ± 0.029 | 0.583 ± 0.004 |
| StC | 0.807 ± 0.045 | 0.758 ± 0.028 |
| InStC | 0.610 ± 0.083 | 0.617 ± 0.042 |

Supplementary Table S4: Results from antioxidant activity for three different assays (average ± standard deviation)

| Sample | FRAP | TPC | DPPH |
|--------|-------------|-------------|-------------|
| | (mg GA/g) | (mg GA/g) | (mg AAE/g) |
| SuC | 0.088±0.006 | 0.083±0.010 | 0.062±0.013 |
| StC | 0.067±0.006 | 0.069±0.001 | 0.055±0.005 |
| InStC | 0.077±0.004 | 0.072±0.005 | 0.046±0.003 |