

Project Timelines

Beverage & Food Product Recipe Formulation

Stage	Task Description	General Recipe (30 Days)	Unique Recipe (60 Days)	Functional Recipe (90 Days)	Assigned To	Remarks/Notes
1. R&D Kickoff	Concept finalization and market research	Day 1-3	Day 1-7	Day 1-10	R&D Team	Includes trend analysis
2. Raw Material (RM)	Procurement of raw materials	Day 4-6	Day 8-15	Day 11-20	Procurement	Ensure quality and compliance
3. Trial Formulation	Initial trials and optimization	Day 7-15	Day 16-30	Day 21-45	R&D Team	Minimum 3 trial runs
4. Sensory Analysis	Testing for taste, texture, and aroma	Day 16-20	Day 31-40	Day 46-60	QA Team	Conduct with experts and focus groups
5. Stability Testing	Assess shelf life and physical stability	Day 21-25	Day 41-50	Day 61-75	R&D & QA Team	Simulate storage conditions
6. Final Optimization	Adjustments based on test results	Day 26-28	Day 51-55	Day 76-85	R&D Team	Ensure compliance with desired attributes
7. Documentation	SOP finalization and recipe handover	Day 29-30	Day 56-60	Day 86-90	R&D Team	Include process, ingredients, and QC parameters

Standard Operating Procedure (SOP)

Beverage Recipe Formulation

Stage 1: Idea Generation

Objective: Develop a concept aligned with market trends and business goals.

Actions:

1. Conduct market research to identify trends, gaps, and consumer preferences.
2. Brainstorm unique product concepts with cross-functional teams.
3. Validate ideas using focus groups or surveys.

Deliverables:

4. Finalized product concept.
5. Market feasibility report.

Stage 2: Concept Finalization

Objective: Define the product's specifications, positioning, and target audience.

Actions:

1. Specify flavor profiles, nutritional goals, and functional attributes.
2. Identify the target demographic and pricing strategy.
3. Create a draft specification sheet, including expected shelf life and regulatory requirements.

Deliverables:

4. Detailed product concept document.

Stage 3: Raw Material Selection

Objective: Source high-quality ingredients and materials for R&D trials.

Actions:

1. Identify and procure raw materials from approved suppliers.
2. Perform initial quality tests to ensure compliance with specifications.
3. Document ingredient sourcing and specifications in the master file.

Deliverables:

4. Approved raw material list with specifications.
5. Supplier agreements or purchase orders.

Stage 4: R&D Trials

Objective: Develop and optimize the beverage recipe.

Actions:

1. Perform initial trials to establish the base recipe.
2. Test multiple variations for taste, texture, aroma, and stability.
3. Refine the recipe based on sensory evaluations and feedback.

Deliverables:

4. Finalized recipe with detailed formulation steps.
5. Trial results and optimization notes.



Stage 5: Sensory Evaluation

Objective: Ensure the product meets taste, appearance, and aroma expectations.

Actions:

1. Organize a sensory evaluation panel with internal experts and target consumers.
2. Collect feedback on attributes like sweetness, bitterness, carbonation, etc.
3. Adjust the recipe to address any concerns raised during evaluations.

Deliverables:

4. Sensory evaluation report.
5. Updated recipe, if necessary.



Stage 6: Stability Testing

Objective: Test the product for physical, chemical, and microbiological stability.

Actions:

1. Conduct shelf-life studies under simulated storage conditions.
2. Monitor pH, color, taste, and microbial growth periodically.
3. Validate packaging material for compatibility and preservation.

Deliverables:

4. Stability test report.
5. Recommended shelf life and storage conditions.



Stage 7: Packaging Design

Objective: Develop functional and visually appealing packaging.

Actions:

1. Design primary, secondary, and tertiary packaging aligned with branding.
2. Perform packaging material tests for durability and sustainability.
3. Finalize labeling and ensure compliance with regulations.

Deliverables:

4. Approved packaging design.
5. Material specifications and supplier agreements.



Stage 8: Pilot Production

Objective: Scale up the recipe for commercial production.

Actions:

1. Conduct a pilot production run in collaboration with manufacturing teams.
2. Validate the production process and resolve any scaling issues.
3. Perform quality checks on the pilot batch.

Deliverables:

4. Pilot batch samples.
5. Production process SOPs.



Stage 9: Regulatory Approvals

Objective: Ensure the product meets all legal and regulatory requirements.

Actions:

1. Prepare and submit product dossiers for regulatory approval (e.g., FSSAI, FDA).
2. Conduct necessary lab tests for certifications.
3. Obtain product licenses and approvals.

Deliverables:

4. Regulatory approval certificates.
5. Compliance documents



Stage 10: Product Launch

Objective: Introduce the product to the market successfully.

Actions:

1. Develop marketing strategies and promotional materials.
2. Plan and execute sampling or launch events.
3. Monitor market feedback and make post-launch adjustments.

Deliverables:

4. Successful product launch.
5. Launch feedback report.