

The 35th Annual IFTSA and Mars Wrigley Product Development Competition RULES AND GUIDELINES

BACKGROUND

The 35th Annual IFTSA and MARS Product Development Competition is a chance for students to take the skills and knowledge learned in school and apply them to a real-world situation.

Each participating school's team develops a new food idea and carries the concept through marketing and production, much like a commercial product development team. This is an opportunity for any student to get involved in food science and IFTSA. It promotes organization, teamwork, creativity, and scientific skills.

PURPOSE

1. Provide a link between industry, students, and the IFT Student Association
2. Encourage involvement in the Institute of Food Technologists
3. Promote professionalism, teamwork, and innovative thinking
4. Provide an opportunity for individuals to develop skills in teamwork and cooperation
5. Afford food industry representatives the opportunity to spot talented students for potential employment

SPONSOR

Mars Wrigley

SCHEDULE

Date	Event
February 1, 2025	Preliminary application deadline
March 1, 2025	Finalists notified
May 1, 2025	Finalist proposals deadline
July 13 - July 16, 2025	IFT FIRST in Chicago

GENERAL COMPETITION RULES

1. Entries must consist of a proposal for a new food product. Judges will be evaluating the potential success of product entries in today's market and technical problem-solving skills used in product development. Teams may not enter their product in competitions outside of IFT.
2. Teams may not enter their product in more than one IFTSA competition.
3. To control the emphasis and fairness of the competition, the following limitations will be enforced:
 - a. Judges will not award extra points for the size of sensory panels or source of panelists. The purpose of this rule is to eliminate the possibility of teams earning extra points for their ability to collect more sensory data due to a larger number of team members. Rather, teams will be judged on how they went about gaining insights about the approval of their product from their potential consumers
 - b. Since the focus of this competition is on food science skills in product development, judges will not give points for the quality of package graphics or other advertising material.
4. All written proposals must be submitted via the submission portal on IFT.org in both .doc and .pdf format to the competition chair by the deadline.

ELIGIBILITY

1. Each team member must hold Student Member status in the Institute of Food Technologists (IFT) at the time of the submission of the preliminary report.
2. Teams must have at least three (3) and no more than ten (10) members.
3. All team members must be enrolled at the same university.
4. Each team member must be registered as a student at the university they represent during the Fall semester before the competition. (If participating in the finals at IFT FIRST, the student need not be currently enrolled.)
5. Teams may consist of undergraduate students, graduate students, or a combination thereof.
6. Each university may only submit one (1) entry (team) per year.
7. Entries must be the students' work. Professors may be consulted and referenced but may not be a major contributor to the actual work.
8. Industry support such as donation of ingredients or use of equipment is allowed and encouraged but should not be acknowledged by any team in the preliminary or final proposal, oral presentation, or product tasting sessions. (Penalties will apply if a violation occurs.)
9. Projects from product development classes are eligible in the competition.
10. MS, Ph.D., summer internship, research, or other such projects are NOT eligible in the competition.
11. The chair of the competition and Vice President of Competitions will be excluded from participating on any competing team of this competition during the year of their service.

12. Members of the most recent first place team of this competition are NOT eligible to compete in this competition. Members are encouraged to compete in another IFTSA competition.

PRELIMINARY ROUND PROCEDURES

Application

Teams must submit their application via the submission portal on IFT.org by February 1st at 11:59 pm CST (Chicago Time UTC-6). Applications received after February 1st will not be accepted.

Submissions include (but are not limited to): Proposal (both word and PDF format), IFT membership numbers, Advisor letter. Please start your submission early to ensure you have all necessary information.

Preliminary Written Proposal

1. The preliminary proposal may not exceed eight (8) pages; including the title page, the page for photographs, and the appendix page for a process flow diagram (Penalties will apply if a violation occurs).
 - a. Page 1: Title
 - b. Pages 2-7: Key material describing your product (described below)
 - c. Page 8: Appendix
 - d. Additional page(s): references in *Journal of Food Science* format
2. The report must be typed double-spaced with 12-point Times New Roman font. All text and figures must be on 8.5 × 11.0" paper with 1" margins.
3. The Title Page should include the title of the report and date. No university affiliation or student names should be included on the title page. Include a 5" × 7" color photograph of the proposed product in the preliminary proposal.
4. Names of sponsor companies, any university, students, or other indication of team location are NOT acceptable in the Preliminary Proposals.
5. References: All references cited within the proposal must follow the *Journal of Food Science* formatting. The list of references (which are not included in the eight-page limit) must be submitted as separate .doc and PDF documents with the preliminary proposal. If a problem arises with reference credibility, a Judge may contact the competition chair for verification.
6. A separate cover letter from the Department Head or a professor, verifying the originality of work and the team's compliance with the competition rules, is to be submitted as a separate PDF document with the preliminary proposal. The standard format for the certificate of originality may be obtained from ift.org.



Judging

1. Each submission will be reviewed by at least three (3) judges, at least one of which will be from Mars Wrigley.
2. Each entry will be scored based on 100 points, with the points to be distributed as shown in the rubric.
3. Judges will select a maximum of six (6) finalists.
4. All competing teams will be informed of only their respective scores and judges' comments. Each Judge will provide 1-2 sentences of feedback at a minimum.
5. The finalists will be selected as follows by the judges and Product Development Chair
 - a. All point scores are converted into rank scores (highest score out of 100=1, second highest score out of 100=2, etc.).
 - b. Rank scores are totaled for each team (one rank score per judge).
 - c. The lowest six scores are designated as the finalists.
 - d. In the event of a tie, the two lowest rank scores will be added for each group, and the team with the lowest score will advance. If this fails, the judges will be asked to make a decision.
6. Finalists will be notified of their status by March 1, 2025.

FINAL ROUND PROCEDURES

Responsibilities of finalists include the preparation of a final written proposal, an oral presentation, and samples of their product tasting defense for the five (5) judges and competition chair.

Application

Finalists must submit their final proposal, in both .doc and PDF formats, via the submission portal on IFT.org by May 1st at 11:59 pm CST. Proposals received after the deadline will not be accepted.

Final Written Proposal

1. The maximum number of pages for the final written proposal is twenty-five (25). This number DOES include all portions of the document (Including but not limited to title page, photograph page, proposal body text, references, process flow diagram, references, and appendices)
2. The proposal must be typed, double-spaced with 12-point Times New Roman font. All text and figures must be on 8.5 × 11.0" white paper with 1" margins.
3. The title page, for which there is no specific required format, must include the title of the proposal and date.
4. Include a 5" × 7" color photograph in the final written proposal. Additional images throughout the report are optional.
5. References should be added at the end of the proposal and must be in the *Journal of Food Science* format.
6. Teams' anonymity is no longer required.

Oral Presentation

1. For the components taking place at the IFT Annual Event, please note the following: the oral presentations are meant to be more of an overview where you "sell" the product while the defense or tasting session is technical. You should still include some technical aspects in the oral presentation but save the details for the defense/tasting.
2. Finalists will present a fifteen (15) minute oral report followed by a fifteen (15) minute question/answer period. This presentation should give an overview of what the product is, why it is desirable, and how it was developed. This is your chance to showcase the entire product development journey and the work your team has done. All areas of the written proposal should be addressed. The audience will include: three Mars Wrigley Judges, at least two additional Judges, and the invited public from the conference: peers, industry, and conference visitors.
3. The presentations will be open to the public; however, only judges may ask questions.

4. At least three team (3) members will present the report; additional team members may also present. Teams will be judged on how the whole team is used; judges are looking to see how each member contributed to the product.
5. A PowerPoint presentation is required. The Chair will provide finalists with details concerning the PowerPoint presentation (format, version, file size, etc.).
6. Time limits will be enforced. The competition chair will keep track of time.
7. The Oral Presentation should include the Product and Process Description clearly explained as well as the major technical difficulties. Other areas should include Safety/Shelf Life, Originality, Economic Feasibility, Marketing, and Sustainability. This portion will be judged on quality, organization, communication, interest generated, and selling the product idea to fellow Food Technologists.

Product Sampling and Defense

1. Each team will defend its product concept individually before the panel of judges. During the defense, the team will present their product to the judges for tasting, and the judges will have an opportunity to ask in-depth technical questions. Preliminary Feedback will be given to each team after product samplings are complete. Judges will not know the final scores or winners and will provide constructive feedback to each team.
2. Twenty-five (25) minutes will be allotted for each team. Teams will have a maximum of 5 minutes to present their product to the judges, focusing on technical aspects of the product and formulation. The remaining time will focus on an in-depth Q&A. Audio visual equipment will not be available.
3. The goal of the tasting session will be for the judges to engage in a technical dialogue with the team about their product.
4. Be sure to provide enough product for five judges and the IFTSA student representative to sample.
5. Your product must be prepared beforehand and brought to the event, a prep table will be made available to stage product.
6. Teams are solely responsible for their products (delivery, storage) at the event. Please notify the Chair to request special storage conditions **by May 1st**, IFT will make reasonable accommodations. IFTSA and IFT are not responsible for lost products.
7. All microbiologically sensitive products should be tested and properly prepared before consumption to avoid food safety issues. This should be reviewed in your paper after discussions with your Food Microbiology Professors. Be prepared to answer questions and discuss results regarding the microbiological safety of the product being shared.
8. *Delivery vs. Promise: The "promise" is the product that the team orally communicates to the judges through the written report, oral report, and photograph. The "delivery" is the product produced and presented to the judges for tasting.

Judging

Final proposals will be scored based on **300** points.

1. At least three judges will be chosen from industry or academia, with practical product development experience
2. Up to three judges will be appointed by the sponsor whenever possible
3. Judge identities will remain anonymous until the final competition
4. Judges are required to evaluate products by point totals, not personal preferences

Tips from the Judges

1. It is recommended that teams consult or have a member on their team with packaging and engineering experience on types of packaging and how to bring a product of quality to the market shelves.
2. Use your whole team. Judges want to see teamwork in play and how members contributed to the product.
3. Use your resources; consult your professors, ask for guidance. This competition is about bringing a product from an idea to market.
4. Create a strong and accurate business case with key financial breakdowns. – Do not “guess” the price. An important key to formulating something and bringing it up to scale is knowing the cost and knowing if the market would pay that amount.

AWARDS

1. An informational Mars Wrigley webinar for all preliminary applicants
2. A max of six (6) teams will make it to the finals. The teams will all be judged against one another in the finals.
3. Each finalist team will receive a travel and registration reimbursement of up to \$1,800.
4. The 1st place winner will receive \$3,000 and a mentoring opportunity with Mars Wrigley staff.
5. The 2nd place winner will receive \$1,500, and the 3rd place winner will receive \$500.

NOTES

- Copyright and trademark violations will not be tolerated. Teams who submit a product that features a character or franchise that they do not have explicit rights will be disqualified.
- Patent rights belong to the individual teams and will be handled according to university patent policies. IFT, the IFTSA, and MARS Wrigley do not claim any responsibility or rights for product development ideas presented in this competition.
- Mars Wrigley, IFT, and the IFTSA are not responsible for any complication that may result from product sampling throughout product development to final presentation at the

competition. Entry into this competition implies the release of Mars Wrigley, IFT, and IFTSA from any liability for damages incurred as a result of this competition.

- Any team or team member that does not follow the IFT Event Code of Conduct will risk being disqualified.

Challenges and Penalties

Challenges based on rule infractions during oral presentations must be made immediately after the presentation, and no later than the finalization of scores. It is the duty of the Chair to ensure that infractions in written proposals and product tastings are noted. Scores should be considered finalized by one (1) hour prior to start of the IFTSA Closing Ceremony. No challenges will be entertained once this time has passed.

Challenges must be referred to the Chair and/or VP of Competitions. The Chair will refer challenges to the VP of Competitions, IFTSA Office of the President, and IFTSA Staff Liaison. It is the necessary duty that all Competition Chairs, VP of Competition, and IFTSA Office of the President report any infractions they receive or notice during competition. Final decisions on challenges, penalties, and IFT Code of Conduct will be made by the IFTSA Staff Liaison and disseminated to necessary parties. This may include input from judges.

QUESTIONS

Contact the IFTSA Mars Competition Chair via email at iftsa.pdc@gmail.com.

Mars Preliminary Proposal Rubric

Rubric Category	Product Pitch	Product Formulation	Process Description	Technical Problem Solving	Safety/Shelf Life	Economic Feasibility
Points	25	15	15	15	15	15
Category Description	Introduce and pitch the product. Convince the reader that the product has potential by describing what it is and what makes it innovative/unique. Justify how the product will be marketed and why consumers will purchase the product.	Detail the ingredients, introducing any uncommon inclusions, and briefly describe the importance of each ingredient in the product. Provide a complete nutritional label for your product that complies with the current FDA (US Food and Drug Administration) regulations.	A description of the product's commercial manufacture procedure (large-scale, not benchtop) that includes all processing steps and important processing parameters (i.e. temperatures, times, concentrations, water activities, etc.). Include a process flow diagram.	A short description of the most prominent technical challenge (one), and its solution, that was encountered during product formulation or process development. Detail what problem was encountered, how it was solved, and justify why the solution used was the best choice.	Create a detailed HACCP plan (Hazard Analysis and Critical Control Points) that demonstrates how the commercial processing will prevent all types of hazards (biological, physical, chemical, etc.). State the shelf-life of the product and provide some reasoning supporting the estimate.	Justify the product price in relation to competitors and the preferences of target consumers. Demonstrate that the product will be profitable by comparing the product price to the costs of raw ingredients and packaging.
Rubrics Breakdown	Description of Product and Packaging (10 Points)	Description of Ingredients (5 Points)	Completeness of Commercial Manufacturing Plan (10 Points)	Technical Problem Solving Success (10 Points)	Product Safety (10 Points)	Profitability (10 Points)
	10-8 Points: Describes the product and packaging clearly and completely.	5-4 Points: Provides a clear description of the product's ingredients.	10-8 Points: Process description is highly detailed and is not missing any important steps or processing parameters.	10-8 Points: Justifies why the given solution was the best choice considering the context of the product <i>and</i> demonstrates that the technical problem is fully resolved.	10-8 Points: Describes all major hazards in the product and how they will be effectively controlled.	10-8 Points: Demonstrates clear profitability with support from cost analysis (including ingredients and packaging).
	7-4 Points: Some aspects of the product are unclear, though the general idea is communicated.	3-2 Points: Omits a few major ingredients from the description.	7-4 Points: Process description is missing a few minor details <i>or</i> contains a few minor mistakes that could lead to an undesirable product.	7-4 Points: The solution is either partially unjustified <i>or</i> the technical problem is not fully resolved.	7-4 Points: Minor mistakes or omissions in the safety plan need to be corrected.	7-4 Points: Demonstrates profitability but with limited support from cost analysis.
	3-0 Points: The product idea is unclear or incomplete, hindering the understanding of this proposal.	1-0 Points: Fails to adequately describe the product composition.	3-0 Points: Commercial manufacture will not be feasible due to being unclear, incomplete, or highly problematic. No points should be given to a proposal which only describes the benchtop process instead of the scaled-up commercial manufacture.	3-0 Points: The solution is not justified <i>or</i> the technical problem is not resolved.	3-0 Points: Major mistakes or omissions undermine the product's safety plan.	3-0 Points: Missing information, unrealistic estimates, or mistakes undermine the claim that the product will be profitable.
	Innovation / Novelty (5 Points)	Ingredient Importance (5 Points)	Process Flow Diagram (5 Points)	Demonstration of Food Science Knowledge (5 Points)	Shelf Life (5 Points)	Justifies Product Price (5 Points)
	5-4 Points: Displays <i>significant</i> innovation or novelty. Does not resemble any existing product and differentiates itself in many major ways.	5-4 Points: Provides justification of why each major ingredient is important in the formulation.	5-4 Points: Process flow diagram clearly summarizes all steps and parameters of the product's commercial manufacture.	5-4 Points: Demonstrated some application of technical food science knowledge during the process of problem solving.	5-4 Points: Defends the expected shelf life and its mode of failure with sound logic.	5-4 Points: Clearly justifies a realistic product price in relation to competitors and the preferences of target consumers.
	3-2 Points: Displays <i>limited</i> innovation or novelty. While it does differentiate itself in minor ways, it largely resembles a singular existing product.	3-2 Points: Flawed logic or ignored ingredients undermine the justification.	3-2 Points: Process flow diagram is missing minor steps or is unclearly organized.	3-0 Points: Did not demonstrate any application of technical food science knowledge during the process of problem solving.	3-2 Points: The shelf life estimate, while potentially accurate, is not adequately justified.	3-2 Points: Partially justifies a realistic product price.
	1-0 Points: Lacks significant innovation and novelty. Directly resembles an existing product.	1-0 Points: The section does not provide any reasoning for the importance of ingredients.	1-0 Points: Process flow diagram is missing major steps.	Total=15 (Technical Problem Solving)	1-0 Points: The shelf life estimate is unrealistic and completely unjustified.	1-0 Points: Product price is either completely unjustified or unrealistic.
			Total=15 (Process Description)		Total=15 (Safety/Shelf Life)	Total=15 (Economic Feasibility)
	Marketing and Consumer Appeal (10 Points)	Nutrition Information (5 Points)				
	10-8 Points: Product marketing is detailed, clearly supporting why the product will attract <i>many</i> consumers away from competitors/alternatives.	5-4 Points: Nutrition label is complete, properly formatted (according to the FDA's current labeling regulations), and is reasonably accurate considering the products composition.				
	7-4 Points: Product marketing contains gaps or logical flaws, it is partially supported why the product will attract <i>some</i> consumers away from competitors/alternatives.	3-2 Points: Nutrition label is missing a few required nutrients or contains minor formatting mistakes.				
	3-0 Points: Product marketing is incomplete or deeply flawed.	1-0 Points: Nutrition label is missing or is unreasonable considering the products composition.				
	Total=25 (Product Pitch)	Total=15 (Product Formulation)				

Mars Final Proposal Rubric

Rubric Category	Product Pitch	Technical Product Description	Process Description	Technical Problem Solving	Safety/Shelf Life	Economic Feasibility	Marketing / Legality	Sustainability
Points	20	15	15	10	10	15	10	5
Category Description	Introduce and pitch the product. Convince the reader that the product has potential by describing what it is, what makes it innovative/unique, and why it will succeed on the market.	Detail the formulation and completely justify the inclusion of all components. Describe the packaging system in depth and justify the choices made. Include a nutritional label (compliant with FDA regulations) and justify any nutritional claims (if applicable).	A highly detailed description of the product's commercial manufacture procedure (large-scale, not benchtop) that includes all processing steps and important processing parameters (i.e. temperatures, times, concentrations, water activities, etc.). Justify the purpose of each step and parameter. Describe the equipment that will be used. (no need to name specific company, size, or spec number of equipment). Include a process flow diagram that includes all processing steps and the critical control points from the HACCP plan. Briefly describe some potential issues that could arise when the product formulation is scaled-up to commercial manufacture.	A detailed description of two (or more) technical challenges, and their solutions, that were encountered during product formulation or process development. Justify why these were the most prominent/important problems facing the product. Detail what problem was encountered, how it was solved, and justify why the solution used was the best choice.	Create a detailed HACCP plan (Hazard Analysis and Critical Control Points) that demonstrates how the commercial processing will prevent all types of hazards. Briefly describe the GMP's (good manufacturing practices) that would be most relevant to the processing facility making the product. State the shelf-life of the product and thoroughly justify how that time was chosen.	Justify the product price in relation to competitors and the preferences of target consumers. Demonstrate that the product will be profitable by comparing the product price to the costs of raw ingredients, packaging, and processing. Additionally, discuss estimates for the cost of equipment (or other relevant capital costs) and justify how the product could accumulate enough sales to offset these large purchases.	Justify why your target consumer(s) will choose your product over other competitors and support your claims with results from sensory/consumer tests. Describe the packaging of the product and justify why it will be appealing to your target consumer(s). Describe any other methods that will be used to market the product. Defend the products legality regarding standard of identity, ingredient labeling, claims, allergens, safety hazards, etc.	Describe how your product is environmentally and/or socially sustainable compared to competitors.
Rubrics Breakdown	Description of Product and Packaging (5 Points)	Description and Justification of Formulation (5 Points)	Completeness of Commercial Manufacturing Plan (5 Points)	Technical Problem Solving Success (5 Points)	Product Safety (5 Points)	Profitability (10 Points)	Marketing and Consumer Appeal (5 Points)	Sustainability (5 Points)
	5-4 Points: Describes the product and packaging clearly and completely.	5-4 Points: Justifies the use of every ingredient by describing their functionalities in the product and defending their inclusion.	5-4 Points: Process description is highly detailed and is not missing any important steps or processing parameters. Product commercially manufactured using this process (as written) would be safe, high quality, and consistent with the product's description.	5-4 Points: Justifies why the given solutions were the best choice considering the context of the product and demonstrates that the technical problems are fully resolved.	5-4 Points: Describes all potential hazards in the product and how they will be completely controlled at the critical control points. All GMP's which are highly relevant to the product are included. This product will be manufactured safely if production started immediately.	10-8 Points: Demonstrates clear profitability with strong support from cost analysis (including ingredients and packaging). Justifies how capital costs will be offset over time.	5-4 Points: Product marketing is detailed and well justified, clearly supporting with strong evidence why the product will appeal to the target consumer(s) compared to competitors.	5-4 Points: Well justifies how the product is more environmentally or socially sustainable compared to competitors.
	3-2 Points: Some aspects of the product are unclear, though the general idea is communicated.	3-2 Points: Flawed logic or unjustified ingredients undermine the description of the formulation.	3-2 Points: Process description is missing a few minor details or contains a few minor mistakes that could lead to an undesirable product.	3-2 Points: One solution is partially unjustified or one technical problem is not fully resolved.	3-2 Points: Minor mistakes or omissions in the HACCP plan need to be corrected before the product can be manufactured safely. Some highly relevant GMP's are missing.	7-4 Points: Demonstrates profitability but with limited support from cost analysis. Doesn't convincingly justify how capital costs will be offset.	3-2 Points: Product marketing contains gaps or logical flaws. Weak evidence only partially supports why the product will appeal to the target consumer(s) compared to competitors.	3-2 Points: Partially justifies how the product is more environmentally or socially sustainable compared to competitors.
	1-0 Points: The product idea is unclear or incomplete, hindering the understanding of this proposal.	1-0 Points: The ingredient functionalities are either not included or the section does not provide any reasoning for their selection of ingredients.	1-0 Points: Commercial manufacture will not be feasible due to being unclear, incomplete, or highly problematic. No points should be given to a proposal which only describes the benchtop process instead of the scaled-up commercial manufacture.	1-0 Points: Multiple solutions are not justified or multiple technical problems are not fully resolved.	1-0 Points: Major mistakes or omissions undermine the product's potential to be manufactured safely with this plan.	3-0 Points: Missing information, unrealistic estimates, or mistakes undermine the claim that the product will be profitable.	1-0 Points: Product marketing is incomplete, unjustified, or does not identify a clear target consumer(s).	1-0 Points: Does not properly justify or include any sustainability improvement.
								Total=5 (Sustainability)
	Innovation / Novelty (5 Points)	Description and Justification of Packaging (5 Points)	Justification of Commercial Manufacturing Plan (5 Points)	Importance/Prominence of Technical Problems (5 Points)	Shelf Life (5 Points)	Justifies Product Price (5 Points)	Product Legality (5 Points) (Nutrition/health claims, standard of identity, labeling allergens, ingredient legality, etc.)	
	5-4 Points: Displays <i>significant</i> innovation or novelty compared to current market offerings.	5-4 Points: Justifies the product's packaging by describing their packaging system and defending the choices made during its creation.	5-4 Points: The purpose of each step and processing parameter in the process is clearly stated.	5-4 Points: Solving these problems were vitally important to the viability of the product, drastically improving its feasibility, safety, profitability, or quality.	5-4 Points: Discusses the expected shelf life and its mode of failure with a thorough justification that support the predictions.	5-4 Points: Clearly justifies a realistic product price in relation to competitors and the preferences of target consumers.	5-4 Points: Proposal defends the legality of the product regarding all applicable regulations or well justifies why they do not apply.	
	3-2 Points: Displays <i>limited</i> innovation or novelty compared to current market offerings.	3-2 Points: The description of the packaging is missing minor details or some flawed logic undermines their packaging choices.	3-2 Points: The purpose of a few steps or processing parameters in the process are unclear.	3-2 Points: Some problems discussed were important to product viability, but one was not a prominent problem. It is unclear why it was included <i>instead of other large issues</i> .	3-2 Points: The shelf life estimate, while potentially accurate, is not adequately justified.	3-2 Points: Partially justifies a realistic product price.	3-2 Points: One mistake or omission is made which would impact the products legality.	
	1-0 Points: Lacks significant innovation and novelty.	1-0 Points: The description of the packaging is missing major details or their packaging choices are deeply flawed.	1-0 Points: The section does state the purpose of most of the steps or processing parameters.	1-0 Points: The problems discussed were not relevant to product viability. Either the team is unaware of larger issues or these larger issues were ignored for the sake of this section.	1-0 Points: The shelf life estimate is unrealistic and completely unjustified.	1-0 Points: Product price is either completely unjustified or unrealistic.	1-0 Points: Multiple mistakes or omissions are made which would impact the products legality.	
				Total=10 (Technical Problem Solving)	Total=10 (Safety/Shelf Life)	Total=15 (Economic Feasibility)	Total=10 (Marketing)	
	Marketing and Consumer Appeal (10 Points)	Nutrition Information (5 Points)	Process Flow Diagram (5 Points)					
	10-8 Points: Product marketing is detailed, clearly supporting why the product will attract <i>many</i> consumers away from competitors/alternatives.	5-4 Points: Nutrition label is complete, properly formatted (according to the FDA's current labeling regulations), and is reasonably accurate considering the products composition.	5-4 Points: Process flow diagram clearly summarizes all steps and parameters of the product's commercial manufacture. Critical control points are included.					
	7-4 Points: Product marketing contains gaps or logical flaws, it is partially supported why the product will attract some consumers away from competitors/alternatives.	3-2 Points: Nutrition label is missing a few required nutrients or contains minor formatting mistakes.	3-2 Points: Process flow diagram is missing minor steps. Critical control points are missing or incorrectly placed.					
	3-0 Points: Product marketing is incomplete or deeply flawed.	1-0 Points: Nutrition label is missing or is unreasonable considering the products composition.	1-0 Points: Process flow diagram is missing major steps or is unclearly organized.					
	Total=20 (Product Pitch)	Total=15 (Technical Product Description)	Total=15 (Process Description)					

Mars Oral Presentation Rubric

Rubric Category	Product Description	Process Description	Safety/Shelf Life	Economic Feasibility	Persuasion of Product's Potential to Succeed	Verbal Presentation	Quality and Content of Slides	Ability to answer questions
Points	10	10	10	15	20	10	10	15
	An evaluation of how well the group introduced the product, its packaging, its formulation, and its nutrition.	An evaluation of how well the presenters describe the product's commercial manufacture procedure (large-scale, not benchtop). Speakers mention all important processing steps and parameters. They also include a visually-appealing, readable process flow diagram that includes all processing steps and the critical control points from the HACCP plan.	An evaluation of how well the presentation explains the few, most important points in the HACCP plan (Hazard Analysis and Critical Control Points). The speakers demonstrate how the commercial processing plan will prevent the most prevalent hazards. The presenters discuss the shelf-life of the product and thoroughly justify how that time was chosen.	The presentation justifies the product price in relation to competitors and the preferences of target consumers. It also demonstrates that the product will be profitable by comparing the product price to the cost of raw ingredients and packaging. Capital costs are discussed if time allows.	An overall evaluation of how well the presenters persuaded the audience of the product's potential to succeed (with the audience being comprised of food scientists who are familiar with the challenges of product development). Would the product be appealing, unique, profitable, practical, safe, and sustainable if it were going on the food market today?	An evaluation of the spoken aspect of the presentation. Speakers are confident and engaging in their delivery. The oral presentation follows a clear and logical flow (i.e. the audience can follow the presenters when they transition between topics and can understand when they introduce new ideas).	An evaluation of the visual aspect of the presentation. Presentation slides are well organized, visually appealing, and can be understood quickly. While the presentations' content will vary depending on how teams wish to "pitch" different products, the oral presentation should at least contain some information regarding the formulation, packaging, nutrition, production process, profitability, and safety of the product.	Demonstrates the ability to answer questions clearly and correctly, utilizing logic or evidence as support.
	Description of Product, Packaging, and Formulation (5 Points)	Process Flow Diagram (5 Points)	Product Safety (5 Points)	Profitability (10 Points)	Persuasion of the Product's Potential (10 Points)	Speaker Engagement (5 Points)	Organization of Slides (10 Points)	Content of Answers (10 Points)
	5-4 Points: Describes the product, packaging, and formulation clearly and completely.	5-4 Points: Process flow diagram clearly summarizes all steps and parameters of the product's commercial manufacture. Critical control points are included.	5-4 Points: Discusses the few most prevalent hazards in the product and how they will be completely controlled. This product will be manufactured safely if production started immediately.	10-8 Points: Demonstrates clear profitability with strong support.	10-8 Points: The presentation convinces the audience (as Food Scientists) that this product would feasibly succeed as a real food product, considering all aspects of product development (profitability, practicality, safety, etc.).	5-4 Points: Speakers are highly confident and engaging while maintaining strong vocal projection throughout. (Though please understand that English may not be everyone's first language)	10-8 Points: Slides are exceptionally well-organized with very clear content, being quickly understood and visually appealing.	10-8 Points: The team provides thorough and convincing answers to questions, with sound logic or scientific reasoning.
	3-2 Points: Some aspects of the product/packaging/formulation are unclear, though the general idea is communicated.	3-2 Points: Process flow diagram is difficult to view or understand.	3-2 Points: Major mistakes or prevalent omissions in the HACCP plan need to be corrected before the product can be manufactured safely.	7-4 Points: Demonstrates profitability but with limited or unconvincing support.	7-4 Points: The presentation <i>partially</i> convinces the listener of this product's potential, but some aspect of the product needs more development or justification.	3-2 Points: Speakers show limited confidence, with noticeable lapses in engagement and vocal delivery.	7-4 Points: Slides are somewhat organized, with some mistakes hindering the clarity of content or visual appeal.	7-4 Points: The team provides adequate responses to most questions, but with some aspects left unaddressed or unjustified.
	1-0 Points: Many aspects of the product, packaging, or formulation are unclear, hindering the understanding of this presentation.	1-0 Points: Process flow diagram is missing major steps or is very unclearly organized.	1-0 Points: The safety of the product is not discussed.	3-0 Points: Missing information, unrealistic estimates, or mistakes undermine the claim that the product will be profitable.	3-0 Points: The presentation <i>does not</i> convince the listener that this product could feasibly succeed as a real food product on the market.	1-0 Points: Speakers lack confidence, with frequent hesitations and a lack of engagement.	3-0 Points: Slides are poorly organized and difficult to understand.	3-0 Points: The team is unable to adequately answer questions.

Total=10 (Quality and Content of Slides)

Nutrition Information (5 Points)	Completeness of Commercial Manufacturing Plan (5 Points)	Shelf Life (5 Points)	Justifies Product Price (5 Points)	Marketing and Consumer Appeal (10 Points)	Logical Flow (5 Points)	Confidence and Clarity of Answers (5 points)
5-4 Points: Nutrition label is included, properly formatted (according to the FDA's current labeling regulations), and is reasonably accurate considering the products composition.	5-4 Points: Product commercially manufactured using this process would be safe, high quality, and consistent with the product's description.	5-4 Points: Discusses the expected shelf life and its mode of failure with a thorough justification that support the predictions.	5-4 Points: Clearly justifies a realistic product price in relation to competitors and the preferences of target consumers.	10-8 Points: The presentation is highly convincing regarding the product's ability to attract <i>many</i> consumers away from competitors/alternatives.	5-4 Points: The oral delivery follows a clear and logical flow, effectively transitioning between topics.	5-4 Points: The team responds clearly and confidently to questions.
3-2 Points: Nutrition label is missing a few required nutrients or contains minor formatting mistakes.	3-2 Points: The processing plan contains a few minor mistakes that could lead to an undesirable product.	3-2 Points: The shelf life estimate, while potentially accurate, is not adequately justified.	3-2 Points: Partially justifies a realistic product price.	7-4 Points: The presentation is somewhat convincing regarding the product's ability to attract <i>some</i> consumers away from competitors/alternatives.	3-2 Points: The flow of the oral delivery can be understood, but certain moments are difficult to follow.	3-2 Points: The team's responses to questions are able to be understood, but somewhat lack clarity or confidence.
1-0 Points: Nutrition label is missing or is unreasonable considering the products composition.	1-0 Points: The processing plan will not be feasible due to being highly problematic.	1-0 Points: The shelf life estimate is unrealistic and completely unjustified.	1-0 Points: Product price is either completely unjustified or unrealistic.	3-0 Points: It is unclear if the target consumers will purchase this product.	1-0 Points: The oral delivery is disorganized and difficult to follow.	1-0 Points: The team's responses to questions are not able to be understood, being completely unclear and unconfident.

Total=10 (Product Description)

Total=10 (Process Description)

Total=10 (Safety/Shelf Life)

Total=15 (Economic Feasibility)

Total=20 (Persuasion of Potential)

Total=10 (Verbal Presentation)

Total=15 (Ability to answer questions)

Product Sampling and Defense Rubric

Rubric Category	Oral Presentation and Reintroduction of the Product	Taste and Eating Experience	Expectations and Delivering on Claim	Ability to Answer Questions
Points	10	30	30	30
	Reintroduction of Product (10 Points)	Flavor Profile (15 Points)	Meeting Product Expectations (20 Points)	Defense of Development Decisions From Judges' Questions (20 Points)
	10-8 Points: The team effectively reintroduces their product in a timely manner (5 minutes or less).	15-11 Points: The target consumers would consider the product to have an exceptional flavor profile, with a pleasant taste, appealing aroma, and no off-flavors.	20-14 Points: The product fully meets all the claims made during the report and presentation, providing a strong match between description and experience.	20-14 Points: Provides thorough and convincing answers that justify decisions made during the product's development.
	7-4 Points: The team somewhat reintroduces their product in a timely manner (5 minutes or less).	10-6 Points: The target consumers would consider the product to have a decent flavor, but with some noticeable off-flavors or aromas.	13-7 Points: The product meets some claims but falls short on key points.	13-7 Points: Provides answers that somewhat justify most most decisions, with minor gaps.
	3-0 Points: The team fails to reintroduce their product effectively or exceeds the five-minute limit.	5-0 Points: The target consumers would consider the product to have an unpleasant flavor profile, with major off-flavors and imbalances.	6-0 Points: The product has significant discrepancies between claims and experience.	6-0 Points: Struggles to justify decisions, with several key areas inadequately defended.

Total=5 (Oral Presentation and Reintroduction of the Product)

Texture and Mouthfeel (15 Points)	Consumer Satisfaction (Considering price/use/marketing/everything) (10 Points)	Responding to Judge Criticism or Concerns (10 Points)
15-11 Points: The target consumers would consider the product to have an excellent texture and mouthfeel, being pleasant.	10-8 Points: Overall, the product is highly satisfying to the consumer, delivering an experience that is likely to encourage consistent consumer interest.	10-8 Points: Responds effectively to criticism of the product, supporting themselves with calm, clear, and logical reasoning when necessary.
10-6 Points: The target consumers would consider the product to have an acceptable texture and mouthfeel, with some minor issues.	7-4 Points: Overall, the product is mostly satisfying, with minor issues which could lower consumer interest.	7-4 Points: Responses to criticism are adequate but may lack some clarity or logic.
5-0 Points: The target consumers would consider the product to have an unpleasant texture and mouthfeel.	3-0 Points: Overall, the product is highly unsatisfying, with major failures that would prevent consistent consumer interest.	3-0 Points: Fails to respond effectively to criticism, with poor, angry, or non-existent reasoning.

Total= 30 (Taste and Eating Experience)

Total=30 (Expectations and Delivering on Claim)

Total=30 (Ability to Defend Product and Decision)