

# The 34<sup>th</sup> Annual IFTSA and Mars Wrigley Product Development Competition

## RULES AND GUIDELINES

### BACKGROUND

The 34<sup>th</sup> 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

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

### SPONSOR

Mars Wrigley

### SCHEDULE

<b>Date</b>	<b>Event</b>
February 1, 2024	Preliminary application deadline
March 1, 2024	Finalists notified
May 1, 2024	Finalist proposals due
July 16 - July 19, 2024	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 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.
5. The judges will determine penalties for violations. Judges will communicate their decision to the chair. The chair will communicate the decision to the team captain, and it will be considered final.
6. Integrity is expected of all participants throughout the entire competition. All reports will be checked through plagiarism checking software. Any team found guilty of plagiarism will be significantly penalized (at the discretion of the judges and chair) or disqualified.

## **ELIGIBILITY**

1. Each team member must hold Student Member status in IFT at the time of the submission of the preliminary report.
2. All team members must be enrolled at the same university.
3. 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 the IFT Annual Event, the student need not be currently enrolled.)
4. Each university may only submit one (1) entry per year.
5. Entries must be the student's work. Professors may be consulted and referenced but may not be a major contributor to the actual work.
6. 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.) The competition chair will acknowledge industrial support provided to the six finalists by publishing a list of contributors in the printed program provided to the audience at the PDC oral presentation session at the IFT Annual Event.
7. Projects from product development classes are eligible in the competition.
8. MS, Ph.D., or summer internship projects are NOT eligible in the competition.
9. Teams must have at least three and no more than ten members.
10. The chair of the competition will be excluded from participating on any competing team during the year of their service.

## PRELIMINARY ROUND PROCEDURES

### Application

Teams must submit their application via the submission portal on IFT.org by February 1st at 11:59 pm CST. Proposals received after February 1st will not be accepted.

### 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. Failure to comply with formatting requirements will result in significant point deductions (minimum 5 points per infraction).
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. Submission information will be provided on the IFTSA website in January 2024.
5. Names of sponsor companies, any university, students, or other indication of team location are NOT acceptable in the Preliminary Proposals. (Dismissal will apply if a violation occurs.) Additional images throughout the report are optional.
6. References: All references cited within the proposal must follow the *Journal of Food Science* formatting (failure to comply with *JFS* formatting will result in a significant point deduction). 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.
7. 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](http://ift.org).

### Judging

Each submission will be reviewed by at least three (3) Judges, at least one of which will be from Mars Wrigley. Each entry will be scored based on 100 points, with the points to be distributed as shown here.



<b>Preliminary Proposal Evaluations</b>	<b>100 points total</b>
<b>Product Description:</b> Effectively communicates what the product is: composition, nutrition, standard of identity, target market, use case	20 points
<b>Process Description:</b> <i>Considers how the product would be feasibly manufactured in scale-up environment</i>	20 points
<b>Technical Problem Solving:</b> <i>Demonstrates how challenges and solutions from product formulation or process are or will be overcome</i>	20 points
<b>Safety/Shelf life:</b> <i>Describes the potential hazards in the product and how these will feasibly be controlled during the process. Discusses the expected shelf life of the product and its mode of failure</i>	15 points
<b>Originality:</b> <i>Displays innovation and novelty against current market offerings and demonstrates the need for the product</i>	10 points
<b>Economic Feasibility:</b> Describes profitability and financial sustainability of product with support from market analysis and preliminary cost analysis of product (ingredient, equipment capital cost, manufacturing, distribution & retail)	10 points
<b>Marketing:</b> Discusses marketing vision and strategy: how and where the product would be promoted, distributed, and sold	5 points

1. Judges will select a maximum of six (6) finalists. 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.
2. 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.
3. Finalists will be notified of their status by March 1, 2024.

## FINAL ROUND PROCEDURES

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

### Application

Finalists must submit their final proposal, in both .doc and PDF formats, via the submission portal on IFT.org, to the Product Development Competition Chair by May 1<sup>st</sup> 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 report must be typed, double-spaced with 12-point Times New Roman font. All text and figures must be on 8.5 x11.0" 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. A list of donors and other contributors that assisted the team should be listed ONLY on the title page of the chair's copy.
4. Include a 5" x 7" color photograph in the final written proposal. Additional images throughout the report are optional.
5. The final proposal will be evaluated against the seven areas listed below. You may include other areas as appropriate. Remember, thoroughness is important, but originality is encouraged! Be sure to cover all areas according to the allotted points below and be mindful of the distribution (e.g., more points awarded for work surrounding Technical Problem Solving compared to Marketing)
6. References should be added at the end of the proposal and must be in the *Journal of Food Science* format.
7. Teams' anonymity is no longer required.

<b>Final Written Proposal</b>	<b>105 points total</b>
Product Description: Effectively communicates what the product is:	15 points
<ul style="list-style-type: none"> <li>▪ General product description</li> </ul>	



<ul style="list-style-type: none"><li>▪ Originality: What makes your product stand out</li><li>▪ General description of the target consumer and rationale</li><li>▪ Composition: product formulation and ingredient functionality</li><li>▪ Nutritional label/Nutrition facts</li><li>▪ Package selection and the basis for selection</li><li>▪ Product validation through sensory/consumer tests</li><li>▪ Relation to standard of identity, if applicable</li></ul>	
<p>Process Description: Demonstrates how the product would be feasibly manufactured in scale-up environment:</p> <ul style="list-style-type: none"><li>▪ General process description (considering how this product would be made when scaled-up)</li><li>▪ Basis for selection: describe what equipment will be used and why (no need to name specific size or spec number of equipment)</li><li>▪ Process flow diagram that includes critical control points from HACCP plan</li><li>▪ Process limits</li></ul>	20 points
<p>Technical Problem Solving: Demonstrates how challenges and solutions from product formulation or process were overcome.</p>	20 points
<p>Safety/Shelf Life: Describes the potential hazards in the product and how these will feasibly be controlled during the process. Discusses the expected shelf life of the product and its mode of failure.</p> <ul style="list-style-type: none"><li>▪ Microbial considerations</li><li>▪ Legal implications of the product (ingredient labeling)</li><li>▪ Food Safety Plan which includes: Hazard Analysis - Critical Control Points (HACCP) and Preventive Controls</li><li>▪ Good Manufacturing Practices (GMPs)</li></ul>	15 points

<ul style="list-style-type: none"> <li>▪ Expected shelf life, mode of failure</li> <li>▪ Home use: preparation instructions and safety hazards, as appropriate</li> <li>▪ State, Federal, FDA, USDA, OSHA, EPA, etc. Regulations</li> </ul>	
<p>Originality: Displays innovation and novelty against current market offerings and demonstrates the need for the product.</p>	10 points
<p>Economic Feasibility: Shows and supports profitability and financial sustainability of product</p> <ul style="list-style-type: none"> <li>▪ Market analysis</li> <li>▪ Cost analysis: raw ingredients, process/equipment cost, operation, distribution</li> <li>▪ Supply Chain</li> <li>▪ Competitive framework</li> <li>▪ Price and profitability assessment</li> </ul>	10 points
<p>Marketing:</p> <ul style="list-style-type: none"> <li>▪ Marketing vision</li> <li>▪ Marketing strategy (how vision is executed): Advertising/product promotion, distribution channels, product positioning</li> </ul>	5 points
<p>Sustainability: Supports how choices made in product, process, and/or packaging aim to improve environmental sustainability of product</p>	10 points

### 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. At least three team 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.
4. A PowerPoint presentation is required. The Competition Chair is responsible for bringing/acquiring a laptop computer for competition finals at the IFT event. The Chair will provide finalists with details concerning the PowerPoint presentation (format, version, file size, etc.).
5. The presentations will be open to the public; however, only judges may ask questions.
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.

<b>Oral Presentation</b>	<b>80 points total</b>
<p>Effectiveness of communication and interest generated:</p> <p>Speakers are confident and engaging in their delivery and follow a clear and logical flow. <i>Choices made in the product development process are well-supported and the feasibility of the product is demonstrated.</i></p>	20 points
<p>Presentation material quality:</p> <p>Presentation slides are organized clearly, have a cohesive theme, and thoroughly cover all important aspects of the product.</p>	15 points
<p>Use of entire team to answer questions:</p> <p><i>Demonstrates how each member contributed to the product</i></p>	10 points
<p>Ability to answer technical questions:</p> <p><i>Demonstrates ability to support and explain technical aspects of product including product formulation (nutrition, ingredient functionality), processing, safety and shelf-life, validation studies</i></p>	15 points
<p>Ability to answer other questions:</p> <p><i>Demonstrates ability to support and explain other aspects of product including the need and rationale for product, product claims, economics, marketing, and sustainability.</i></p>	15 points





Style/creativity	5 points
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### 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. Skits are no longer encouraged for the tasting session. Please come prepared to answer questions about your product. Do not prepare a skit.
4. Be sure to provide enough product for five judges and the IFTSA student representative to sample.
5. If your product cannot be prepared beforehand and brought to the event, the Product Development Chair will find the best available preparation facilities; however, the IFTSA cannot guarantee that specific processing equipment will be available. Full-scale kitchens are not available, and descriptions of Conference Center Kitchens will be provided by the Competition Chair. In the event a kitchen is not available, IFT will let teams know in advance.
6. Teams are solely responsible for their products (delivery, storage) at the event. IFT may have some refrigerator and freezer space available with a sign-in, sign-out service. IFTSA and IFT are not responsible for lost products.
7. All microbiologically sensitive products should be tested or properly heated 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. Please note these additional policies:
  - a. A list of kitchen equipment needed for sample preparation at the annual event must be submitted by April 5th. The list should be a separate document. Requests submitted after the deadline may not be accommodated. Note: a full kitchen may not be available, and IFT will do its best to accommodate team needs. If accommodations are not available, the team will need to make their own arrangements for the product.
  - b. Finalist teams must also notify the IFT office with payee and address information for finalist travel grant check distribution. Failure to do so will delay travel grant payment.



<b>Product sample evaluation and defense</b>	<b>50 points total</b>
Taste/eating experience	20 points
Expectations/delivery* on claim	20 points
Ability to defend product/decision	10 points

\*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 **235** points, distributed as follows.

<b>Final Round Scoring</b>	<b>235 points total</b>
Final written proposal	105 points
Oral presentation	80 points
Product sample	50 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 encouraged to evaluate products by point totals, not personal preferences
5. Rule breaches should not result in disqualification but will be left to the judges to decide.
6. Sponsor judges reserve the right to accept or reject the final decision. Any rule breaches should be brought to the attention of the competition chair and judges before the finalization of scores (prior to product evaluation). No rule breaches reported after the scores have been finalized should be entertained.

**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. A total of six teams will make it to the finals. The six teams will all be judged against one another in the finals.
2. Each finalist team will receive a travel and registration reimbursement of up to \$1800.
3. The 1st place winner will receive \$3,000, the 2nd place winner will receive \$1,500, and the 3rd place winner will receive \$500.
4. The Student Association will present the first-place team with a personalized plaque after the IFT annual event. The top three finalist teams and their winning entries may be highlighted in Food Technology.
5. In the event that the in-person components of the IFT Annual Event are canceled, the winner will be announced during a livestreaming event either during virtual IFT or post virtual IFT.

Placement	Award
1 <sup>st</sup> place	\$3000, travel and registration reimbursement up to \$1800 total, personalized plaque
2 <sup>nd</sup> place	\$1500, travel and registration reimbursement up to \$1800 total
3 <sup>rd</sup> place	\$500, travel and registration reimbursement up to \$1800 total
4 <sup>th</sup> , 5 <sup>th</sup> , and 6 <sup>th</sup> places	Travel and registration reimbursement up to \$1800 total

## NOTES

- 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.
- The enforcement, review, and changes of these Rules and Guidelines will be the responsibility of the Chair of the competition and designated IFT Staff member. Failure to comply with any of the rules of the competition may result in disqualification.
- **Any team or team member that does not follow the IFT Event Code of Conduct will risk being disqualified.**

## QUESTIONS

- Please contact the IFTSA Mars Competition Chair via email at [iftsa.pdc@gmail.com](mailto:iftsa.pdc@gmail.com).

## Product Development Competition Checklist

Check off items as completed:

### Items to be completed for entry in PD competition

- Check IFT student member status for team.
- Check preliminary proposal format.
- Submit a preliminary proposal (in .doc and PDF) to the competition chair via the IFT.org submission portal by 11:59 pm CST on February 1<sup>st</sup>.

### Items to be completed for PD competition finalist

- Submit a list of kitchen equipment needed for sample preparation at the IFT annual event to PD chair by April 5.
- Check final written proposal format.
- Submit a final written proposal (in .doc and converted to PDF document) to PD Chair via the submission portal on IFT.org by **May 1<sup>st</sup>** at 11:59 pm CST.
- Include team picture for finalist and competition promotion.
- Prepare a 15-minute oral presentation to be presented by only three team members.
- Check oral presentation format.
- Prepare five-minute technical presentation and product sampling for judges for the final competition. Prepare for 10-20 minutes of in-depth Q&A about technical components of the product development process.