

THE 32nd ANNUAL IFTSA & MARS WRIGLEY PRODUCT DEVELOPMENT COMPETITION

MARS WRIGLEY

Please read these rules carefully, as many changes have been made to facilitate the competition during a pandemic. These may be different procedures than recent years.

Purpose:

The purpose of the competition is to:

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

Please see end of document for pandemic contingencies. Guidance is given for students enrolled at universities with limited in-person operations.

Eligibility:

1. Each team member must hold Student Member status in the Institute of Food Technologists 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 he or she is representing during the Fall semester before the competition. (If participating in the finals at the Annual Meeting, 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 Meeting.
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 3 and no more than 10 members.
10. The chair of the competition will be excluded from participating on any competing team.

Awards:

- A total of six teams will make it to the finals. The 6 teams will all be judged against one another in the finals.
- Each finalist team will receive a travel reimbursement of up to \$1500 (N/A for virtual competitions).
- The 1st place winner will receive \$3,000, the 2nd place winner will receive \$1,500, and the 3rd place winner will receive \$500.
- 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.
- In the event that the in-person components of the IFT Annual Event & Food Expo is canceled, the winner will be announced during a livestreaming event either during virtual IFT or post virtual IFT.

General Competition Rules:

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. Teams may not enter their product in more than one IFTSA competition.

Section 1: (If virtual competition)

If competition is virtual the entry must be able to be made with household kitchen machinery (no pilot plant machinery allowed).

Examples of kitchen machinery: blender, food processor, freezer, food scales.
Please do not purchase equipment that would not regularly be in one's kitchen.

To control the emphasis and fairness of the competition, the following limitations will be enforced:

1. Judges will not award extra points for the size of sensory panels or source of panelists.
 - a. 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. Teams will rather be judged on how they went about gaining insights about the approval of their product from their potential consumers
2. 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.
3. 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.
4. 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.

5. Integrity is expected of all participants throughout the entire competition. All reports will be put through plagiarism checking software. Teams found guilty of plagiarism will be significantly penalized (at the discretion of the judges and chair) or disqualified.

Procedures for first round:

Preliminary Proposal

1. Teams must submit their preliminary proposal in a .doc and PDF format via the submission portal on IFT.org by February 1st at 11:59pm CST. Proposals received after February 1st will not be accepted.
2. 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).
 - Page 1: Title
 - Pages 2-7: Key material describing your product (described below)
 - Page 8: appendix
 - Additional page(s): references in Journal of Food Science format
3. The report must be typed, double-spaced 12-point Times New Roman font with 1" margins. All text and figures must be on 8.5 x 11.0" paper. Failure to comply with formatting requirements will result in significant point deductions (minimum 5 points per infraction).
4. 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" x 7" color photograph of the proposed product in the preliminary proposal.
5. Submission information will be provided on the IFTSA website in January 2021.
6. 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.
7. 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 8-page limit) must be submitted as a separate .doc and PDF document with the preliminary proposal. If a problem arises with reference credibility, a Judge may contact the competition chair for verification.
8. 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.

Evaluation of Preliminary Proposals

1. Each Submission will be reviewed by at least three (3) Judges, 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:

<u>Preliminary Proposal Evaluations</u>	<u>100 points total</u>
Product Description	20 points
Process Description	20 points
Technical Problem Solving	20 points
Safety/Shelf Life	15 points
Originality	10 points
Economic Feasibility	10 points
Marketing	5 points

2. Judges will select a maximum of six (6) finalists.
3. 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

Note: 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. Previous final reports will be available for viewing on the IFTSA website. ** Sharing of past reports

Selection of Finalists

The finalists will be selected as follows by the Judges and Product Development Chair:

1. All point scores are converted into rank scores (highest score out of 100=1, second highest score out of 100=2, etc.).
2. Rank scores are totaled for each team (one rank score per judge).
3. The lowest six scores are designated as the finalists.
4. 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 provide a decision.

Procedures for final round:

Finalists

Responsibilities of finalists include the preparation of the following:

1. A final written proposal
2. An oral presentation
3. Samples of their product for the five (5) judges and competition chair to taste

Finalist Evaluation

Final proposals will be scored based on **225 points**, distributed as follows:

Final Written Proposal **100 points**

Oral Presentation **75 points**

Product Sample **50 points**

Guidelines and the scoring breakdown for these areas are outlined below.

Final Written Proposal

1. Finalists must submit their final proposal, in both .doc and PDF format via the submission portal on IFT.org, to the Product Development Competition Chair by May 1st at 11:59pm CST. Proposals received after the deadline will not be accepted.
2. 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)
3. The report must be typed, double-spaced, 12-point Times New Roman font with 1" margins on white paper. All text and figures must be on 8.5 x11.0" paper.
4. 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.
5. Include a 5" x 7" color photograph in the final written proposal. Additional images throughout the report are optional.
6. 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)
 1. Product Description
 - i. Originality & general product description
 - ii. What makes your product stand out
 - iii. General description of the target consumer and rationale
 - iv. Product formulation and ingredient functionality
 - v. Nutritional label/Nutrition facts
 - vi. Package selection and the basis for selection
 - vii. Product validation through sensory/consumer tests
 - viii. Relation to standard of identity, if applicable
 2. Process Description
 - i. General process description (focusing on scale-up vs. bench-top)
 - ii. Basis for selection: describe what equipment will be used and why (no need to name specific size or spec number of equipment)
 - iii. Process flow diagram that includes critical control points from HACCP plan
 - iv. Process limits
 3. Technical Problem Solving
 - i. Challenges and solutions from product formulation or process
 4. Safety/ shelf life
 - i. Shelf life
 - ii. Microbial considerations
 - iii. Legal implications of the product (ingredient labeling)

- iv. Food Safety Plan which includes: Hazard Analysis- Critical Control Points (HACCP) and Preventive Controls
- v. Good Manufacturing Practices (GMPs)
- vi. Home use: Preparation instructions and safety hazards, as appropriate
- vii. State, Federal, FDA, USDA, OSHA, EPA, etc. regulations
- 5. Economic Feasibility
 - i. Operating cost: raw ingredients, process, distribution, operation
 - ii. Supply Chain
- 6. Profitability assessment, business sustainability, marketing
 - i. Market potential
 - ii. Competitive framework
 - iii. Marketing plan
 - iv. Potential for intellectual property
- 7. Sustainability
 - i. What makes your product or process sustainable?

8. Points Distribution:

<u>Final Proposal Evaluations</u>	<u>105 points total</u>
Product Description	15 points
Process Description	20 points
Technical Problem Solving	20 points
Safety/Shelf Life	15 points
Originality	10 points
Economic Feasibility	10 points
Marketing	5 points
Sustainability	10 points

- 9. References should be added at the end of the proposal and are required to be in the Journal of Food Science format
- 10. Teams' anonymity is no longer required

For the components taking place at the annual meeting, 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.

Oral Presentations

Finalists will present a fifteen (15) minute oral report followed by a ten (10) 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: 3 Mars Wrigley Judges, at least two additional Judges, and the invited public from the conference: peers, industry and conference visitors.

1. ~~A maximum of~~ At least three team members will present the report. Additional team members may be present to answer questions. Teams will be judged on how the whole team is used; judges are looking to see how each member contributed to the product.

2. A PowerPoint computer 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 computer presentation (format, version, file size, etc.)
3. The presentations will be open to the public; however, only judges may ask questions 4. Time limits will be enforced. Competition chair will keep track of time

Oral Evaluations

	<u>75 points total</u>
Confidence in delivery	20 points
Quality of material in presentation and thought process	15 points
Use of entire team to answer questions	15 points
Ability to answer technical questions	10 points
Ability to answer other questions	10 points
Quality of slides	5 points
Style/Creativity	5 points

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 your fellow Food Technologists.

Product Sampling and Defense

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.

1. Thirty (30) minutes will be allotted for each team. Teams will have a maximum of 10 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.
2. 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.**
3. Be sure to provide enough product for all five (5) judges and the IFTSA student representative to sample.
4. If your product cannot be prepared beforehand and brought to the meeting, 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 case a kitchen is not available, IFT will let teams know in advance.
5. 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.
6. 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.

Product Sample Evaluation

Taste/Eating experience
Expectations/Deliver on claim
Ability to defend product/decision

50 points total

20 points
20 points
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 that is actually produced and presented to the judges for tasting.

Note: 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 a release of Mars Wrigley Confectionery, IFT, and the IFTSA from any liability for damages incurred as a result of this competition.

Please note these additional policies:

1. 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.
2. 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.

Judges:

1. At least five 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. ~~One judge will be from a start-up or have significant experience working with start-ups~~
4. Judge identities will remain anonymous until the final competition
5. Judges are encouraged to evaluate products by point totals, not personal preferences
6. Rule breaches should not result in disqualification but will be left to the judges to decide.
*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. – Don't "guess" the price. An important key into formulating something and bringing it up to scale is actually knowing the cost and knowing if the market would actually pay that amount.

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. (It takes several weeks to complete the membership process, so begin early if not a current member.)
- ☐ Check preliminary proposal format
- ☐ Submit a preliminary proposal (in .doc and PDF) to the competition chair via the IFT.org submission portal by 11:59pm CST on February 1st.

Items to be completed for PD competition finalist

- ☐ Submit a list of kitchen equipment needed for sample preparation at the 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 1st** at 11:59pm CST.
- ☐ Prepare a 15-minute oral presentation to be presented by only 3 team members
- ☐ Check oral presentation format
- ☐ Prepare 10-minute technical presentation and product sampling for judges at the final competition. Prepare for 10-20 minutes of in-depth Q&A about technical components of your product development process.

COVID contingency plans:

- Preliminary round
 - In the event your University is not in session for the fall semester, or if your University is in session but with strict social distancing guidelines, you are encouraged to use your home kitchen to prepare product.
 - For sensory tests, if in-person testing is not advisable (please follow recommendations from your local health department), consider socially distant options, such as consumer concept acceptance surveys or virtual focus groups. Creativity is encouraged and expected.
- Final round
 - Written report: no changes (subject to change, however, depending on University operation statuses. This may result in changes to point breakdown. The

competition chair will notify the top 6 teams of any changes.) Similar to the preliminary round, work in a home kitchen and virtually should be conducted to the extent possible if your university is closed.

- If the annual event is cancelled, travel grant money will not be awarded, but the top teams (first, second, and third) will still receive their financial compensation. ○ Oral presentation: will occur, but virtually over teleconferencing software, like Zoom. The presentation will be recorded and posted online afterward (Q&A not recorded)
- Product tasting and defense: both will still occur. Both will be private and not recorded.
 - If the annual event is cancelled, the product can be prepared in your University's kitchen (depending on University's operation status) or home kitchen. Good GMPs are expected. The chair shall provide teams with address(es) to send their product to. Travel grant money will be used to cover shipping (and other related expenses, such as dry ice to keep the product chilled). Teams shall provide the chair with storage, preparation, and handling directions for their product (and the chair will pass this along to the judges). Under this scenario, the following point breakdown will be used:

Product Defense Evaluation **50 points total** Taste/Eating
experience **15 points**
Expectations/Deliver on claim **20 points**
Ability to defend product/decision **15 points**

In the event that the annual meeting is cancelled, a virtual awards ceremony will be held over a teleconferencing software such as Zoom. The chair shall provide the details to the teams. This will be recorded and posted online at a later date.

Questions:

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

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.