

ICACC 21 Shot Glass Drop Competition - Virtual Edition

Overview

To compete in this year's virtual shot glass competition, teams of up to 3 students will source their own shot glasses and materials, perform the drops, and submit videos of drops for judging. A compilation video from all the submissions will be viewed during ICACC and the winners announced at that time. Each member of the winning team will receive free conference registration to ICACC 22.

Materials

1. **Shot glass** - must be a standard size (up to 1.5 oz capacity) but can be from any source (Goodwill or other second hand shop is a great option!). There is no requirement on the materials of the shot glass as long as it is some composition of silicate, but decorative, ornate, or oddly shaped glasses that contain reinforcement materials/shapes will not be accepted. See the images for reference, below.
2. **Enclosure materials** - Any materials may be used except for commercially available packing materials including but not limited to: styrofoam, packing peanuts, bubble wrap, air bags, packing paper, newspaper, corrugated cardboard, etc. Total weight of your enclosure may not exceed 10 g.
3. **Scale** - Any variety of scientific or kitchen scale will suffice. Scale must have a tare mode that allows you to zero out the scale reading before weighing objects.
4. **Drop location** - Identify a retaining wall, fence, balcony, or other suitable site where you can video your drops. Any configuration is OK as long as the surface being dropped onto is any variety of concrete. Initial height may be whatever you choose. See judging criteria below for guidance on this choice.
5. **Video capture device** - A phone or camera of any sort that can capture 10-60 second videos in MP4 video format.
6. **Scale bar** - On the last page of this packet. Print out the scale bar at 100% scale and affix to your vertical drop surface (retaining wall, balcony, etc). Scale bar must be visible in each drop video to calibrate the drop distance.

Procedure

1. **Initial weighing**
 - a. Take a close-up photograph of your shot glass before you begin adding an enclosure. This will be uploaded to the submission form.
 - b. Record a short video of yourself (or your team members) weighing your shot glass before you begin adding an enclosure. The video must include you taring your scale (show the scale reading 0 g, scientific or kitchen models are OK), placing your shot glass onto the scale, and showing the final weight of the shot glass. This will be uploaded to the submission form. Record the initial weight of your shot glass.
2. **Build your enclosure.** You may test with multiple shot glasses and enclosures, but your final submission must have an image, weighing video without enclosure, image with

enclosure, weighing video with enclosure, and drop video, all with the same shot glass and enclosure.

- a. Take a close-up photograph of your shot glass + enclosure. This will be uploaded to the submission form.
- b. Record a short video of yourself (or your team members) weighing your shot glass after you have added your enclosure. The video must include you taring your scale (show the scale reading 0 g, scientific or kitchen models are OK), placing your shot glass and enclosure onto the scale, and showing the final weight of the shot glass + enclosure. This will be uploaded to the submission form. Record the weight of your glass + enclosure.

3. Perform and record your drops

- a. Video yourself (MP4 format), or your team members dropping your shot glass + enclosure from the height of your choosing. Drop the glass from a static height; do not toss into the air or throw towards the ground, simply release the glass from the specified height. This will be uploaded to the submission form.
- b. Take a close-up photograph of your shot glass + enclosure after dropping to confirm that the shot glass has survived (or not survived) the drop. This will be uploaded to the submission form. Image must show the majority of the shot glass surface; you may have to remove the enclosure to capture this image.
- c. Repeat the above steps for subsequent drops. Videos and images for each drop will be uploaded through the submission form.

4. **Submit** - Upload all images and videos to the [submission form](#) along with contact information for each of your team members by January 20th. The submission form will require the following items:

- a. Name and contact information for up to 3 team members.
- b. Image of shot glass without enclosure
- c. Video of weighing glass without enclosure (MP4 format)
- d. Image of glass + enclosure before any drops
- e. Video of weighing glass + enclosure before any drops (MP4 format)
- f. Drop video (MP4 format) and post drop image of glass (glass + enclosure, if possible) for each drop conducted.

Judging Criteria

The team that builds the enclosure that can sustain a drop from the highest distance will be the winner. However, in order to be considered, your glass must withstand at least one drop, i.e. your submission must contain at least one video with your shot glass being dropped without sustaining any cracking, chipping, or other damage. You may continue dropping until your glass begins to show damage. We recommend that you begin your drop at a low height and increase the distance gradually. You may change drop sites as many times as necessary just make sure to affix the scale bar printout in plane with each drop site. Glasses that do not withstand any drops will be assigned a competition height of 0 m.

Detailed Rules

1. Teams may consist of up to 3 team members. Each member must be a university student (undergraduate or graduate) and must participate in the constructing and/or dropping/recording of your submission. We recommend forming your team from fellow class-mates at your college or university. At least one of the team members must be registered to attend ICACC 21 to enter, and you may enter alone (i.e. team of 1).
2. Teams must observe current local and state public health guidelines regarding COVID-19 during all portions of this activity. It is recommended that mask wearing and social distancing be observed at all times during this activity and that work be conducted outdoors whenever possible. Any evidence that teams disregarded local or state public health guidelines may lead to such teams being disqualified.
3. Teams must wear proper safety attire when conducting their drop. This includes safety glasses or a face shield, and cut-proof gloves when touching broken glass. Please clean up your drop site when you are finished.
4. Commercially available packing materials including but not limited to: styrofoam, packing peanuts, bubble wrap, air bags, packing paper, newspaper, corrugated cardboard, etc. may not be used to construct the enclosure.
5. Total weight of enclosure may not exceed 10 g.
6. Video submissions must be in MP4 format.
7. All drop videos must show the scale bar printed at 100% scale. Scale bar may be printed in grey-scale but NOT black and white.
8. Any incomplete submissions, submissions containing banned materials, submissions that do not show the scale bar, or submissions where the shot glasses appear to change between drops will be disqualified.

Allowed	Not Allowed
	
	
	

Scale Bar

