

Author Submitted Videos Acceptance Criteria

Rev. 2020-6-17 Live

A consistent standard of quality for all of our content is an important measure, and just as scientific manuscripts must meet a standard of quality and rigor, so must our videos.

For Author Submitted Videos (ASVs), the manuscript and video must be submitted at the same time, although they may be reviewed separately. A manuscript may pass editorial quality control while the video fails, or vice versa. This document specifically details the requirements for the video portion of the JoVE submission, for more information on our manuscript requirements, please see *JoVE's Manuscript Instructions for Authors* document.

Manuscripts will be reviewed by JoVE's scientists and videos will be reviewed by JoVE's video professionals. Authors should aim to meet all of the criteria in their submissions. Should the video not meet the criteria, a revision report will be delivered to the authors and they will have an opportunity to make changes to meet the criteria. Most videos will need at least one round of revision before being finalized for publication.

Below is the list of ASV quality criteria against which we will evaluate your video. Extraordinary issues with the video that are not on the list may also result in the video failing review. Please review these criteria before beginning production of your video. Approaching your video production with these criteria in mind will likely result in a video that requires fewer revisions. We've also included some tips at the end of this document to aid you in the creation of your video.

Criteria

Video File Delivery

1. The video file should be a single self-contained file with video and audio elements.
2. The accepted file container formats are: MP4, AVI, MOV, MPG, and MKV.
3. The JoVE article ID number should be in the file name.
4. The video must not exceed 15 minutes in length.

Video & Audio Specifications

Encoding

1. Most video codecs supported by the above container formats are acceptable. The H.264 codec is commonly available and acceptable for submission. Encoding settings should ensure that the picture is free from artifacts and glitches.
2. Audio can be uncompressed or compressed, but should be virtually or completely lossless, meaning no audio compression artifacts should be noticeable.

Resolution & Size

1. JoVE videos must have a 16:9 or 4:3 aspect ratio. Visual content should fill the entire video frame, therefore black bars on the sides of the video (“letterboxing” and “pillarboxing”) are not permitted. Still images, computer screen capture, and microscope visuals are the exceptions to this.
2. The minimum resolution for JoVE videos is 1280x720 for 16:9 or 960x720 for 4:3. The maximum resolution for JoVE videos is 1920x1080 for 16:9 or 1440x1080 for 4:3. Videos larger than 1920x1080 will be downconverted.
3. The video must have a standard playback frame rate such as: 23.976, 24, 25, 29.97, or 30. Frame rates above 30 are not permitted.
4. The video must be progressive scan. Interlaced videos will be deinterlaced, possibly resulting in video quality degradation.
5. Audio volume peaks should fall between -12 and -6 dB.

Format & Content Standards

JoVE Video Protocol Formatting

1. Each video should have a title card at the beginning that lists the title of the protocol, the authors, and their affiliations.
2. The video must have the following sections in the listed order:
 - a. **Introduction**, which may feature authors speaking to the audience
 - b. **Protocol**, made up of one or multiple sections. This should be the majority of the video.
 - c. **Representative Results**, featuring narration describing the results of the protocol. Methods used to process collected data (ie. generating these results) should be part of the protocol and do not belong in this section.
 - d. **Conclusion**, which may also feature authors speaking to the audience
3. Each section or chapter should have its own chapter title card, clearly separating the sections of the video.

Narration

1. The video should have a human voice describing the on-screen visuals (such as the steps of the protocol).
2. This narration track should be a human being and not a computer-generated voice.
3. This narration track should also be high quality, free of reverb, echoes, or other distracting audio artifacts or recording nuisances such as background noise. Please see the 'Tips' section below for advice on how to achieve this.
4. The narration track should be well edited and tightly trimmed, editing out periods of recorded silence, and synchronized with the visuals on screen. The audience should be able to see what the narration is talking about, and there should be no long stretches of video without some audio narration explanation.
5. Volume levels for the narration track should remain constant, clear, and understandable throughout.
6. Subtitles are permitted but not required, and do not replace the above narration requirement or criteria.

Video Content Recording & Editing Standards

1. High quality video recording standards should be observed and practiced, including correct lens focus, stabilization (using a tripod), exposure, and white balance. The picture must be clear enough for the audience to understand the content.
2. When editing, YouTube-style “jump cuts” are not permitted. These are edit points that feature shots with very similar content transitioned over a single frame, causing the content to “jump” on screen. This style of edit is not appropriate for JoVE videos since it causes confusion and draws attention away from the content. When needing to join very

similar shots in succession, use a cross dissolve or fade so the transition between shots is smooth.

3. Adding fast motion to the protocol steps is not appropriate unless showing a time-lapse necessary to enhance understanding of the science involved. Seeing the protocol in real-time is often important for the understanding of the science.
4. Following the above criterion, use judicious and careful editing to only feature the most important shots and content of the protocol. Skip over and edit out mundane and common steps in the procedure that could be considered prerequisites for your protocol. A common example is unpacking, assembling, or disposing of pipettes- what really matters is what is loaded in the pipette and how it was aspirated and dispensed.
5. The video editing pacing should be quick enough so that the audience is not given too much information, but slow enough so that the audience should be able to comprehend what they're seeing without excessive pausing and replaying of sections.

Text and Graphics

1. Graphics and text sharpness should match the resolution of the video. There should not be any added blurriness, jagginess, or fuzziness in either the graphics or text elements.
2. All text on-screen should be legible and appear long enough to be read by the audience.
3. All text with scientific units should be accurate and appropriately styled. Use actual scientific symbols such as degrees °, micro μ, etc; do not substitute.
4. All stock and third party media should be licensed appropriately by the authors and be free from watermarks. JoVE is not responsible for securing or defending the rights to third party media in your video.

Ethics and Academic Integrity

Use of Animal & Human Subjects

1. All protocols that involve vertebrate animals (including humans) must include a title card demonstrating approval from your institution's animal or human use ethics committee. This title card should appear between the end of the introduction and the beginning of the protocol.
2. Any procedure involving animals that is shown on screen must be shot tastefully (e.g. restricted to surgical or dissection area) and with ethical and sensitivity concerns in mind:
 - a. The animal's face should not be shown unless seeing the face is absolutely critical to understand the procedure.
 - b. Any visible animal discomfort should not be shown.
 - c. Shots and/or visual depictions of euthanasia or anesthesia are not allowed. Verbal and textual descriptions of euthanasia and/or anesthesia regimens are allowed.

Non-Commercialization

1. The video should not be commercial nor aim to directly generate sales of any product. The video is published as a scientific report and not an advertisement.
2. Generic terms for devices, tools, reagents, etc., should be used, and the brand names should be avoided. The video should be free of trademark symbols and other indicators of intellectual property.
3. Institutional logos may be shown at the end of the video. They should not be used at the beginning of the video or as a watermark throughout the video.

Tips

Below are a few things to remember when shooting and editing your video:

- Plan out your shots before heading into your lab with a camera. This will help you create a more coherent video. This is especially important when shooting procedures involving animals.
- Be sure to avoid showing animal's faces whenever possible. This can often be achieved by using surgical drapes, even when they are not necessarily called-for in the protocol.
- Record your voice-over in a quiet room away from the lab. Use a stand-alone microphone as opposed to a microphone built into the computer.
- When choosing a person to record narration, consider that the revision process can go on for several months. Selecting a person who will be available to you for the foreseeable future will make it much easier to re-record any narration if it is deemed necessary.
- If you are not sure which video codec to use, h.264 is an option for several file formats (including MP4 and AVI). It maintains good image quality while keeping file sizes relatively low.
- When selecting a frame rate, it is generally best to edit and export in the same frame rate that your camera shoots at.
- Be sure to watch the exported video file before submitting. Catching and correcting any errors before submitting can prevent your video from failing review, potentially saving you weeks of turnaround time.
- Be sure to make revisions to your original project file in your editing software. Making revisions to the exported file that was previously sent to JoVE will result in severe quality loss, which will necessitate further revision.

Example file export settings

Since there is a variety of video editing software available, we cannot offer a single, universal set of export settings. However, below are some example settings that you can use as a guide to help you set up your export.

Basic Video settings

Format (codec): H.264
Width and height: Match source
Frame rate: 29.97 (see Tips for more information)
Field order: Progressive

Bitrate settings

Encoding: VBR, 2 pass
Target bitrate: 10 Mbps
Maximum bitrate: 12 Mbps

Audio settings

Audio format: Uncompressed (if unavailable, AAC)
Sample rate: 48 kHz
Bitrate: 320 (minimum 64)
Channels: Stereo
Quality: High