

## JoVE Video Produced by Author Quality Criteria

The following requirements represent a series of criteria meant to ensure JoVE videos that produced by authors approach the level of quality of the videos produced by JoVE. Consider video quality as something akin to the writing quality of a manuscript; though the science may be interesting or useful in a given manuscript, we would not accept a manuscript written in broken English. Likewise, we will not accept a poorly filmed or edited video submission.

For “video produced by author” submissions, 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. Your article will not be published until both portions meet our guidelines. For more information on our manuscript requirements, please see JoVE’s Manuscript Instructions for Authors document. We reserve the right to fail any video for not meeting our guidelines.

Here is the way we generally approach the grading process for videos produced by the author:

- If any single criterion in **bold** is not met, the submission fails Quality Control (QC) and is rejected. Authors are given reasons for the rejection of their article and have the option to resubmit if they so choose. JoVE does not counsel authors beyond telling them what is wrong with their submission and why it has been rejected.
- If three or more of the criteria listed in normal text are not met, the submission fails QC and is rejected. Authors are given reasons for the rejection of their article and have the option to resubmit if they so choose. JoVE does not counsel authors beyond telling them what is wrong with their submission and why it has been rejected.
- If one or two criteria are not met, the authors will need to address the issues with their video before publishing. In this case, JoVE’s production department can counsel authors as to how they can go about addressing technical concerns.

Below is the list of ASV quality criteria against which we will judge your video. Some of the more unfamiliar video terms are hyperlinked for reference. The better your video adheres to these guidelines, the quicker it will make it through the review process. Keep in mind, however, that almost all videos require at least one round of revision. Also, extraordinary issues with the video that are not on the list may also result in the video failing review.

# Criteria

## Video File:

We will accept the following video file formats: [MOV](#), [MP4](#), [MPG](#), [AVI](#). Most [codecs](#) supported by these formats are acceptable. However, given the ever changing landscape of video software, we may come back to you and request the video be delivered in a different codec.

- **The submitted video should be submitted as a single file rather than a group of files that need to be edited together.**
- **The submitted video file should include audio. We should not have to add an audio track to an author submitted video. This is editing work.**
- **The video cannot exceed 15 minutes in total length.**
- **The video frame rate should be a standard frame rate. See the 'Tips' section for more details.**
- **The video file must contain the article ID number somewhere in the file name.**

## Formatting

- **The video must have a representative results section following the protocol. This section must have voice-over describing the results being shown.**
- **The video must have a concluding statement after the results section. This section must have both audio and video.**
- **The video must have title cards at beginning *and end*.** These title cards should include the authors' names and their affiliations.
- The video must have chapter title cards.

## Video Quality

Initial video submissions must be at least 512x384 resolution for 4:3 videos and 512x288 for 16:9 videos. After the video has passed Peer Review and QC, we strongly recommend submitting files in high definition (1440x1080 for 4:3 videos and 1920x1080 for 16:9 videos).

- **Footage should be free of distracting and erratic camera movement. A tripod should be used when filming the project. Excessive handheld camerawork will likely not be accepted.**
- **The picture must be clear enough for audience to understand content.**
- The video should be free of [digital artifacts](#) or other glitches.

## Audio

Any voice, whether [voiceover](#) or on-screen voice, should be audible and understandable, above all else.

- **There must be a spoken audio component of the video that explains what is happening in the visual. If a video is submitted with no voiceover, it will be failed.**
  - Voiceover audio should be free of noticeable [audio compression artifacts](#). This includes loud jarring artifacts as well as more subtle but consistent

artifacts. Leaving your audio uncompressed can help avoid this.

- Background noise should be kept to a minimum and not affect the understanding of or distract from the narration.
- Quality and volume levels of voice should remain relatively consistent throughout.

- **Text-to-speech narration will not be accepted.**
- [Subtitles](#) can be added for voice-over or on-screen voice. However, adding subtitles will not exempt audio from meeting our quality standards.
- If music is used, it should be appropriate and should not compete with narration.
- Leave at least three (3) seconds of silence at the end of the video. Our web player stops videos slightly ahead of their actual ending. Leaving three seconds at the end will ensure that all of the audio is heard.

### Editing

- **[Jump cuts](#) should not be used in the editing of the video. Jump cuts tend to have a jarring effect on the audience, and are not conducive to the tutorial nature these videos need to have. Cross dissolves (aka Fades) can be used instead of jump cuts.**
- Fast motion should be reserved for time-lapse events. It should not be used to compress multi-step procedures into a shorter amount of time. Seeing actions performed in real-time is often an important detail for our viewers.
- Each shot or still image shown on screen should have voice-over or text explaining what is being shown when it is being shown. Listing several steps in voice-over all at once and then showing those steps in silence is an ineffective way of showing your method. There should be no long stretches (greater than 20 seconds) of video without audio or at least some form of explanation.
- The video should be edited in such a way that the pacing is not too quick for a viewer to comprehend what he or she is seeing.

### Text and Graphics

- Any graphics or screen capture should not be so small or pixelated as to detract from understanding of content.
- All on-screen text must be legible (not too small or too [pixelated](#)).
- Text must be legible on images or graphics in the video.
- Any stock images used cannot have the stock house's watermark still on it. Authors are responsible for securing any permissions for re-use of images.

### Human and animal subjects

- **If human subjects are used in the video, a title card demonstrating approval from your institution's human ethics board (e.g. IRB) should appear before any human subjects are shown in the video.**
- **If animals are used in the video, a title card demonstrating approval from your institution's animal review board (e.g. IACUC) should appear before any animals are shown in the video.**

- **Any procedure involving animals that is shown on screen must be shot tastefully (ex. restricted to surgical or dissection area) and with ethical and sensitivity concerns in mind.**

- Footage of the animal's face should not be shown unless seeing the face is absolutely critical to understand the procedure.
- No visible animal discomfort should be shown.
- **No shots of euthanasia or anesthesia should be shown.**

#### Frame size/proportions

- Video must have a consistent aspect ratio of either 4:3 or 16:9. There should be no switching between the two ratios.
- Video must completely fill the frame. No black borders, including [letterboxing](#) or [pillarboxing](#), should be visible.
- Exceptions can be made for microscope footage or still images. However, if an image can be enlarged to fill the screen and was not, we may request it be enlarged.
- "Vertical video" (i.e. video shot in portrait mode on a cell phone) should be avoided.

#### Branding Concerns

- **The narrative should sound objective and not biased toward "features and benefits" of a product featured in the video. The video should not feel like a commercial.**
- The video should be free of ™ or ® symbols.
- Use of branded terms and manufacturers (e.g. Zeiss, Millipore, AutoCAD) should be minimal.

## **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 animals' 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 computer.
- When choosing a person to record voice-over, 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 re-record any voice-over if it is deemed necessary.
- If you are not sure which codec to use, [H.264](#) is an option for several file formats (including MOV and AVI). It maintains good image quality while keeping file sizes relatively low.
- When submitting a low-resolution version of your video early in the review process, do not make the dimensions of the video any smaller than 512x384 for 4:3 videos, and 512x288 for 16:9 videos.
- When selecting a frame rate, it is generally best to edit and export in the same frame rate that your camera shoots at. 29.97 fps, 25 fps, 24 fps, and 23.976 fps are our accepted frame rates and are specific to regions of the world. 29.97 fps for North America, Japan, South Korea, Taiwan, Philippines, and parts of South America. 25 fps for Europe, Asia (except the previously listed countries), Africa, Oceania, and parts of South America (including Brazil and Argentina). 24 and 23.976 are also acceptable frame rates, regardless of country.
- **After exporting a self-contained video file, watch that 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.**

### **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 16)  
Channels: Stereo  
Quality: High