



Description

High-quality figures accelerate [peer review](#); poor artwork slows it down. Many publishers explicitly list artwork problems such as low resolution, incorrect aspect ratios, unclear labels, and embedded text issues as frequent causes of delays at submission and during production. Addressing these four problem areas early in the writing workflow reduces revision cycles and improves the chances of a smooth handoff to production. This article explains what each problem looks like, why it matters to reviewers and production teams, and [how researchers can fix artwork](#) so manuscripts progress without avoidable hold-ups.

Low-Resolution Images: Meaning, Consequences, and Fixes

What it is:

Low-resolution images are raster files whose pixel dimensions or dots-per-inch (dpi) are insufficient for print or close inspection. The visible effect is pixelation or blurring when a reviewer zooms in or when the publisher scales artwork to page size. Journals commonly request minimum dpi for different figure types typically 300 dpi for photographs and 600–1,200 dpi for line art or bitmapped line drawings because each figure type has different sharpness and reproducibility needs. Supplying images made for screen display (e.g., PNGs or JPEGs exported at 72–96 ppi without adequate pixel counts) will often trigger requests for replacement files.

Practical Fixes:

- Capture and save images at the highest practical resolution and retain original raw files or high-resolution exports.
- Export final images in lossless or minimally lossy formats recommended by journals (TIFF for photographs, EPS/PDF for vector drawings); avoid screen-optimized formats such as GIF or low-quality JPEGs.
- When resizing, reduce pixel dimensions rather than enlarging low-resolution images; upscaling creates artifacts that cannot be reliably corrected.
- Check the intended print width (single- or double-column) and calculate required pixel dimensions from the target width and required dpi (for example, for a 3-inch column at 300 dpi,

aim for ~900 pixels width).

Incorrect Aspect Ratios and Resizing Pitfalls

What it is:

Aspect ratio describes the proportional relationship between width and height. When authors stretch, squash, or crop figures without preserving the original aspect ratio or without clear indication in legends, graphical relationships can be misrepresented. Distorted axes, misaligned panels, and inconsistent scaling across subpanels introduce confusion and, in some fields, can change quantitative interpretation.

Why Journals Notice:

Production teams expect figures sized close to the final publication dimensions to avoid reflow problems. If a submitted image's aspect ratio is altered or panels are unevenly scaled, production will either ask for corrected files or perform edits that may degrade image quality either outcome delays acceptance. Journals also prefer that subpanels be arranged logically with consistent scale bars and annotations clearly associated with the correct panel.

Practical Fixes:

- Build figures at the aspect ratio and final width intended for publication. Use templates or set artboard/page size in your graphics application to match the journal's column widths.
- Keep each subpanel as a separate layer or file during creation; assemble only the final image for submission so panel proportions remain controllable.
- Include scale bars and units within the figure (not only in the legend) and ensure they scale correctly when the file is reduced for display or print.

Improper Labeling and Captioning: Clarity Matters

What it is:

Incomplete, inconsistent, or incorrectly placed labels introduce interpretive friction for reviewers. Common errors include missing axis titles or units, overlapping labels, using abbreviations without definition, and embedding descriptive text inside an image rather than in a caption. Some journals require figure captions to be supplied separately from artwork files so typesetters can apply house style; failing to follow that convention can cause delays.

Practical Fixes:

- Use concise, informative captions that state what the figure shows, define abbreviations, and note any image processing (e.g., contrast adjustments).
- Place axis labels and units using standard, legible fonts and sizes; avoid tiny fonts that become

unreadable when published.

- Supply figure captions as separate editable text in the [manuscript submission](#) system if the journal requires this.
- Number figures consecutively and use a consistent naming convention for uploaded files (e.g., Fig1_TIFF.tif).

Embedded Text and Font Problems: Reproducibility and Accessibility

What it is:

Embedded text refers to labels, annotations, or legends drawn into the image as raster elements or created in software without embedded fonts. Problems arise when fonts are not embedded or when text is saved as raster pixels rather than editable vectors. This can cause missing characters, font substitution, or illegible text after conversion, especially when publishers convert files or export to different color spaces. In addition, small or low-contrast text hinders accessibility for colour-impaired readers and for reproduction in grayscale print.

Practical Fixes:

- For vector artwork (charts, schematics), save as EPS or PDF with fonts embedded. For raster images with overlaid annotations, keep those annotations in layers that can be exported at high resolution or re-created by the author if requested.
- Use standard, widely available fonts (e.g., Arial, Helvetica, Times New Roman) and avoid specialized or decorative fonts. Confirm that all fonts are embedded before submission.
- Ensure sufficient contrast between text and background; check legibility at 100% and at reduced dimensions that simulate final print size.
- Where possible, supply editable original files (e.g., Illustrator .ai, .eps, PowerPoint .pptx) so production can adjust labels without losing quality.

Examples and Brief Case

A common scenario reported by authors and publishers is composite microscopy panels created in image editors where scale bars or panel labels are added at inconsistent sizes. Reviewers request raw images for verification, or the production team asks for replacement high-resolution panels, both of which extend the acceptance timeline. Another frequent cause for correction letters is embedding descriptive sentences in images (for aesthetics) rather than in captions; such text may be lost or mispositioned during conversion to a publisher template. These problems are documented across publisher guidance and author-support resources.

Checklist for Submission-Ready Artwork

- Confirm required dpi for each image type and provide files that meet or exceed those specifications.
- Use recommended file types (TIFF for photos, EPS/PDF for vector art) and embed fonts where relevant.
- Maintain original aspect ratios; prepare figures at intended final widths; include scale bars and units.
- Provide concise, separate captions and ensure figure numbering matches references in the text.
- Retain and archive original, editable source files in case a journal requests replacements.

How to Integrate This Into a Reproducible Workflow

Start figure planning alongside experiments or analysis. Capture raw data at high fidelity, annotate in a versioned, editable workspace, and export final editions only when ready to submit. Use preservation formats for intermediates (e.g., native image software files) and generate publication-ready exports that conform to the target journal's specifications. Before submission, run a quick verification: open each file at 150% zoom, check all labels and scale bars, and view the image in grayscale to ensure legibility if printed without color.

Conclusion and Next Steps

Artwork problems low resolution, distorted aspect ratios, poor labeling, and embedded text issues are common and preventable contributors to submission delays. Implementing a few practical habits (capture at high resolution, maintain editable originals, follow journal-specific format and dpi rules, embed fonts, and separate captions) reduces the likelihood of revision requests and speeds the pathway to acceptance.

For authors who prefer guided support, professional artwork and figure preparation can help bridge the technical gap between data and publication-ready figures. Consider Enago's [artwork editing service](#) for technical adjustments (resolution, color mode, file-format conversion) and the [graphical abstract service](#) to create publication-ready visual summaries that meet journal guidelines. These services can help address the specific pain points discussed above and reduce production-related delays.

Category

1. Reporting Research

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