Module 1: Imaging, Fluid-preserved

Module 1B: Record images of labels associated with specimens

Task ID	Task Name	Explanations and Comments	Resources
T1	Select and retrieve specimens/lot/container and associated labels.	This workflow assumes that only labels are being imaged. For specimen imaging workflows, label imaging should be commensurate with specimen imaging to reduce redundancy and minimize specimen handling. Selection of labels to digitize may be governed by institutionally determined digitization goals and practices.	• Institutional policy or guidelines governing digitization priorities. • Project guidelines.
T2	Transport containers to staging or preparation area.	An associated or intermediate staging area facilitates organization of labels to be imaged. This area may or may not be in close proximity to the imaging station.	
T3	Find, isolate, extract from vials, jars, or other containers as needed, and determine the specific label(s) to be imaged.	General practice and recommendation is to image all labels associated with a specimen or collection object, regardless of data redundancy, duplication, or label type. Imaging all labels associated with a collection object while they are available is efficient and only marginally time intensive. Duplicate	Institution-wide policy for: • selecting labels to image, • dealing with duplicate labels.

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		labels are important; the determination of whether a label is a duplicate may require elevated decision-making, which may increase time and reduce efficiency with little or no gain. Nevertheless, when multiple labels are associated with a lot or specimen, some institutions may choose to exclude images of those with redundant or very similar data or those that document loan.	
T4	Record or mark label(s) and their associated specimen(s) to ensure the two do not get separated during the imaging process.	This step maintains the association between label and specimen or container. Imaging multiple lots/specimens simultaneously is not recommended to avoid the possibility of mixing labels from separate containers. Safest practice is to image labels from a single container and return those labels to the container before opening succeeding containers.	
T5	Transport container(s) to imaging station. (when staging area and imaging	Position lots/specimens on cart or similar conveyance to ensure that labels and specimens remain in proximity to one another and are easily re-associated, and to reduce	Cart.

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	station are in separate locations).	travel time and the number of trips between staging area and imaging station.	
T7	Image label(s).	In most cases labels are wet, rendering a camera the best imaging solution, though scanners are sometimes used. Institutional policies vary regarding label imaging. Some prefer to include multiple labels in single or multiple composite images. Others prefer a single label per image. Labels with data on both sides require multiple images. Whatever policy is adopted, it is important to ensure that all images are linked to the specimen or lot database record to which they refer. A visible notation within the images noting which side of the label has been recorded is helpful. Including the specimen/lot catalog number or digitization project identifier within each label image	• Adobe Lightroom or similar, • Image capture software, • Image processing software, • Digital camera, • Flatbed or other scanner, • Institutionally specific imaging protocol.

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		ensures that an image can be visually linked to the specimen it represents. Including some or all of the data above in the image EXIF (exchangeable image file format) or associated IPTC (International Press Telecommunications Council) metadata within the image is a consideration and can be accomplished with Adobe Lightroom or similar products.	
T8	QC images. Re-image as necessary.	This is an iterative step during which images recorded in T7 are checked for quality and immediately re-imaged as necessary until a satisfactory image is obtained. Quality control includes: Check images for: ● sharp focus, ● clarity, ● completeness, ● clear view of entire page, ● proper orientation.	Technician.
T9	Return labels to containers and containers to shelves.	Ensuring that labels and containers are re-filed in their original locations and order should be specifically	● Technician. ● Cart or transport vehicle.

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		stated in the written workflow protocol.	
T10	Archive image.	The succeeding workflow module for many institutions involves creating database records for each specimen/lot and attaching or linking label image to them, or linking/attaching the images to existing database records. Processes for transitioning to this activity are important.	• Technician. • Database software. • Computer hardware.

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