Instructions for Visible Implant Alpha Tags

If you have questions, problems or comments about using VI Alpha, please call +1 (360) 764-8850 or email office@nmt.us. Visit www.nmt.us for more detailed tagging information.

Storing VI Alpha Tags

When properly stored, VI Alpha Tags have a very long shelf life. To maximize shelf life, store VI Alpha Tags in a cool, dark place. Excessive exposure to sunlight may fade the fluorescence.

Injectors and Needles

Your injector and needle must match the tag size.

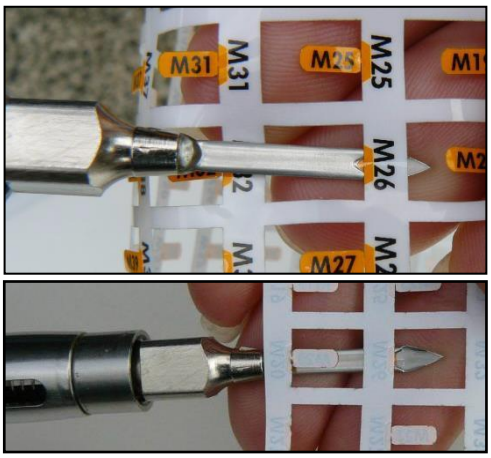
For large tags:

- The injector body must have “V2.0” printed on it as shown to the right.
- Install a large needle – “L” or “LV” is marked on the needle hub.

For standard tags:

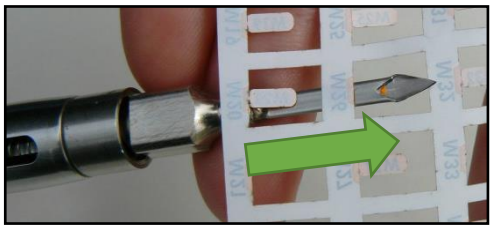
- Any of our VI Alpha injectors will work.
- Install a standard needle – “S” or “V” is marked on the needle hub.

Loading Tags into the Injector



1. Wet the needle. This helps prevent the tag from sticking to the needle.
2. With the bevel up, push a tag into the injector so that the needle is all the way to the top of the rectangular cutout. For the large tags, it may be helpful to pinch the top of the tag and direct it into the needle.
3. Keeping the tag pushed into the needle, fold the tag sheet back until it is flush with the needle, and the tag sheet is upside down. This bends the joint between the tag and the tag sheet.

4. Push the injector forward to cut the tag. Do not twist the injector to remove the tag. Twisting will distort the tag material at the joint with the sheet. The tag will not load completely into the injector, and will not lay flat after injection.



5. The tag is ready to be injected. Detached tags can be difficult to load, particularly when wet. Try holding one end of the tag with tweezers and inserting it into the needle.

Injecting VI Alpha Tags

1. Cut a path for the tag with the needle so that the tip is slightly in front of where you want the edge of the tag to be.

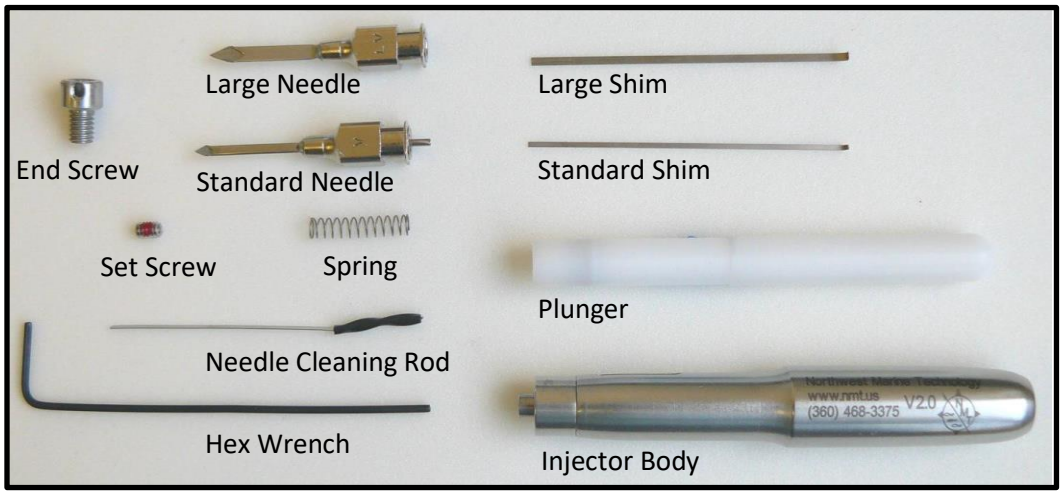
2. Advance the shim until the tag is just at or past the tip of the needle.

3. Leave the tag in place by withdrawing the needle with the shim still out. Release the shim.

Tagging Tips

- Tag retention is often higher in larger animals – schedule tagging for when the study animals are as large as possible.
- Tag healthy animals with no signs of disease. Handling and stress from tagging can exacerbate the disease, increase mortality, and reduce retention.
- Tag in bright light.
- Replace dull or bent needles.
- When possible, set up your tagging station on land rather than in a boat. Tagging with VI Alpha requires a steady hand.
- Use clear or translucent tissue as a site for tags.
- Practice with animals that are not part of the study. Start with larger specimens and work your way to smaller specimens.
- Firmly restrain or anesthetize the animal to reduce stress and immobilize it during tagging.
- Place tags just below the skin. Deep tags may be obscured by pigmentation and tissue. Tags that stick out of the injection site are likely to be lost.
- When possible, retain a sample of tagged animals to evaluate tag loss and visibility.

Assembling the VI Alpha Injector



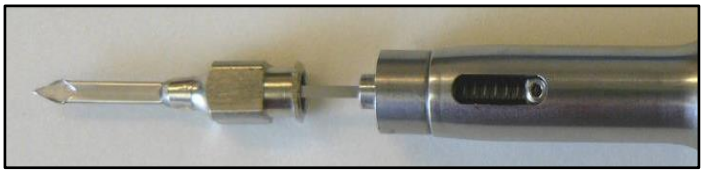
1. Insert the shim into the end screw with the bent end of the shim at the bottom of the screw.

2. Insert the end screw into the threaded end of the plunger and tighten it. Check to see that the shim rotates freely. Slide the spring over the shim.

3. Hold the plunger with the shim up and insert it into the injector body. If the shim does not slide straight into the threaded end of the injector body, gently twist the plunger once the shim contacts the injector and the shim will guide itself in. Avoid bending the shim. Put the set screw on the end of the hex wrench.

4. Rotate the plunger until the hole in the end screw aligns with the cutout in the side of the injector. Insert the set screw and tighten until it is flush with the outside of the injector body.

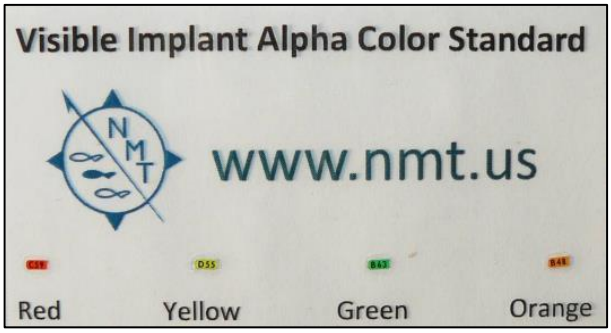
5. Insert the shim into the round end of the needle hub. Slide the needle over the shim. Again, be careful not to bend the shim. Screw the needle hub into the injector.



Tag Detection

To maximize tag identification:

- Choose distinct colors for tagging.
- Tag in clear tissue whenever possible.
- Train your samplers – let them practice with the tag colors they will encounter.
- Fluoresce poor or obscured tags with the VI Light.
- Encourage samplers to use the VI Alpha Color Standard. Place the color sample directly beside a tag for comparison, either under or over the tagged tissue.



Using the VI Light

- Never look directly into the VI Light.
- Keep the VI Light out of the reach of children.

Although you can usually see VI Alpha Tags with the naked eye (top right), the VI Light greatly enhances their visibility (lower right). When fluoresced, you can see tags at considerable distance, at night, and detect tags obscured by pigmentation in ambient light.

Turn on the VI Light by tightening the black cover. Shine it directly where the tag is thought to be. If working in direct sunlight, fluoresce the tags in the shade – even the shade of your body may be enough. Very faint tags are most visible when fluoresced in darkness.

The VI Light has a built-in regulator to ensure the beam intensity remains constant throughout the life of the batteries. When the batteries become weak, the VI Light will flash to let you know it's time for a fresh set.

Cleaning and Disinfecting

Clean the injector daily after use. The most common problem with the injector is damage to the shim when it sticks in the needle because it has been stored without cleaning. Disassemble the injector. Use freshwater and the cleaning rod to clean inside the needle (a squirt bottle is helpful for this). Gently wipe the other parts, and clean inside the injector body with a cotton swab or bottle brush. Dry all components before reassembling.

The possibility of spreading disease with tagging equipment concerns our customers and NMT. Disinfect after cleaning. Place the equipment on a clean, disinfected surface and spray liberally with a chlorine solution, made from 1 part household bleach and 250 parts water (one ounce of bleach to 2 US gallons of water) or similar disinfecting solution. Let stand at least 10 minutes. Use pathogen-free water to thoroughly rinse away the disinfectant. Dry all components before reassembling.