

**PRODUCT INFORMATION**  
**ALCOHOLIC Z-FIX CONCENTRATE**



**INTENDED USE**

Properly diluted Alcoholic Z-Fix Concentrate (Alcoholic Z-Fix) is buffered zinc formalin in 70% alcohol. It is used as a histological fixative.

**PRODUCT SUMMARY**

Formaldehyde fixation is a two-step process. First, formaldehyde forms addition products with macromolecules. Second, the formaldehyde adduct crosslinks the macromolecules, firming the tissue. While necessary for complete fixation, the crosslinks (methylene bridges) can block access to antigenic epitopes. With Alcoholic Z-Fix, both the zinc and formalin initially attach to tissue sites. Additional zinc ions then form large coordination complexes that prevent the formaldehyde from further crosslinking by simply getting in the way. The zinc constituent of Alcoholic Z-Fix gives cellular components enough rigidity without undesirable hardening.

The 70% alcohol component of Alcoholic Z-Fix increases the penetration rate of the fixative and starts the dehydration process without excessive drying.

Alcoholic Z-Fix prevents the formalin artifact described as nuclear bubbling, in which chromatin patterns are disrupted due to inadequate exposure to formalin. Enhanced H&E staining due to the mordant effect of the zinc is another Alcoholic Z-Fix benefit. With fewer methylene bridges, Alcoholic Z-Fix reduces or eliminates the need for antigen recovery procedures in immunohistochemistry.

**INGREDIENTS**

Formaldehyde, ionized zinc, buffer, methanol (inherent to formaldehyde)

**WARNING**

**DANGER. CONTAINS FORMALDEHYDE.** May cause cancer. Toxic if swallowed, in contact with skin or if inhaled. Causes serious eye damage. May cause sensitization by inhalation or by skin contact. Causes skin, eye, and respiratory irritation. Do not breathe vapors. Do not get on skin.

Methanol Warning:

**DANGER. POISON. ☠ VAPOR HARMFUL. MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED. CANNOT BE MADE NONPOISONOUS.**

For In Vitro Diagnostic Use.

**STORAGE**

Store at room temperature.

Avoid freezing; product is not harmed but container may break.

Keep containers tightly closed when not in use.

Properly diluted product is flammable; store in a flammable cabinet.

**DIRECTIONS FOR USE**

1. Alcoholic Z-Fix Concentrate must be diluted before use. To make 5 gallons:
  - a. Dilute 1 gallon of Alcoholic Z-Fix Concentrate with 3.5 gallons of anhydrous alcohol and 0.5 gallons of deionized/distilled water.
  - b. Use only ethanol, reagent alcohol or isopropyl alcohol.
  - c. Mix well.
2. Mixing and dispensing of Alcoholic Z-Fix Concentrate will be easier with a graduated five-gallon plastic carboy equipped with a spigot (ANATECH Catalog #003).
3. Phosphate salts from neutral buffered formalin (NBF) will precipitate zinc. To dilute Alcoholic Z-Fix Concentrate in a container that previously held NBF, rinse several times with tap water, followed by deionized/distilled water to remove residual phosphate salts.
4. Large fatty specimens like brains may be fixed initially in Alcoholic Z-Fix for several days. For most other specimens, use Z-Fix ready to use (ANATECH Catalog #170, 174, 175 and 179) prior to grossing and in the first processing station, then place Alcoholic Z-Fix in the second station of the processor.
5. Alcoholic Z-Fix may be used as the secondary fixative in conjunction with NBF. However, exposure to NBF can cause the precipitation of zinc phosphate.
  - a. A water rinse between fixatives is recommended to prevent the precipitation.
    - i. Inadequate rinsing causes precipitation in the processing chamber and in the first dehydrant.
    - ii. Remove by purging with a mild acid solution (5% acetic acid in water), followed by a water rinse.
  - b. The benefits of Alcoholic Z-Fix will diminish as time in NBF increases.
6. Exposure to Alcoholic Z-Fix will not harden delicate specimens even after several days; however, for long-term storage, aqueous Z-Fix is recommended.

**DISPOSAL**

1. Contact a licensed professional waste disposal service to dispose of this material.
2. Dispose of contents/containers in accordance with governmental regulations.
3. Proper waste disposal is the generator's responsibility.

**SAFETY DATA SHEETS (SDS)**

SDS are available online at [www.anatechltusa.com](http://www.anatechltusa.com).

**ORDERING INFORMATION FOR ALCOHOLIC Z-FIX CONCENTRATE**

<u>Cat#</u>	<u>Packaging</u>
161	1 gallon