

White Mountain Imaging

TECHNICAL MEMO

SERVICE SUPPORT # 12-2203

PROBLEM:

How do you prevent freezing of developer in wintertime, and what to do if frozen.

DISCUSSION:

Developer and other x-ray chemicals are prone to freezing under particular circumstances. These chemicals are primarily water-based and water freezes at 32F (0C). Water also becomes most dense at approximately 40 F (4.5 C), which will make solubility of chemicals prone to “fallout” if kept at this temperature for any extended period of time. This is why all chemical manufacturers specify on their packaging to, “Store Above 40 F (4.5 C)”.

Prevention:

All X-Ray chemicals should be stored at room temperature, or at least above 50 F (10 C).

Transportation is another fact to consider. White Mountain Imaging ships all winter shipments that may be in cold weather for more than a day trip in heated trucks. For our dealers that transport product in unheated service vehicles remind drivers not to leave in the vehicle when the product may exceed minimum temperature for any extended period of time.

What to do if frozen:

Frozen developer will have crystalline fallout in the containers. When this occurs immediately move the product to a location with a 70 F (21.1 C) room temperature. The product should re-dissolve on its own. This may be dependent on the degree and length of time it has been frozen. Small amounts fallout may be “coaxed” into re-dissolving by shaking the container. **DO NOT BREAK THE SEAL.**

If Developer does not re-dissolve into solution within 24 to 48 hours at 70 F (21.1 C) then there may be a problem. Contact your supplier.

NOTE: When developer is frozen for an extended period of time certain chemicals may change structure and thus the Product integrity is altered and therefore probably will not be stable and performance will be affected.