

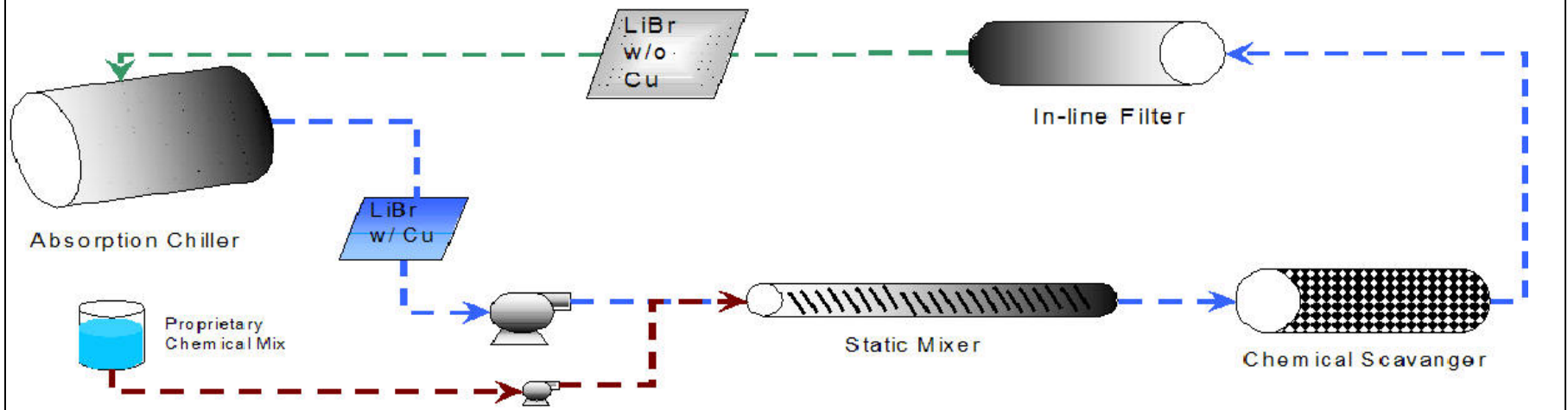
### CuES-IIA. Proprietary Process for the Removal of Cu from Lithium Bromide

**Problem:** Oxygen leak in an absorption chiller.  
 Secondary Problem: Copper builds up in the circuit and plates out in the most in opportune location.  
**Needed:** Easy method to remove copper from the lithium bromide on-line without shutting the system done.

**Solution:** Pump the lithium bromide through a cartridge containing a proprietary blend of chemicals to remove the copper ... without taking the unit off-line.  
**How it works:** the chemicals are activated by heat using a strip heater wrapped around the cartridge . Simply plug it in when a copper excursion occurs.

# Absorption Chillers

## Copper removal after an O<sub>2</sub> leak -- CuES-IIB



### Proprietary Process for the Removal of Copper from Lithium Bromide

**Problem:** Oxygen leak in an absorption chiller.

**Secondary Problem:** Copper builds up in the circuit and plates out in the most opportune locations.

**Needed:** Easy method to remove copper from the lithium bromide on-line without shutting the system down.

**Solution:** Pump the lithium bromide through a static mixer along with a proprietary chemical mix to remove the copper ... without taking the absorption unit off-line. Remove any excess chemical in a scavenger unit. Remove particulates that are formed in an in-line filter.

**How it works:** Fast. Removal is almost instantaneous.

**CuES-IIA or CuES-IIB.** Both methods work. CuES-IIA is simpler, but slower. Copper removal can take a week whereas method CuES-IIB can be carried out as fast as the lithium bromide can be pumped through the static mixer. CuES-IIA can be put in place and activated when required by plugging it in. CuES-IIB requires a dedicated effort by a technician trained to use the process. The scavenger has to be matched with the amount of chemical added to insure that large amount of chemical does not get in the absorption chiller (this will result in precipitation of copper compounds inside the chiller ... which is not the end of the world, but should be avoided).