

## Tekran Pre-Packed and Batch Tested Soda Lime Traps

*Rev. 100422*

Placing a soda lime trap just upstream of the Tekran 2537 sample filter inlet is necessary for certain applications to extend the life of the gold cartridges. Soda lime has been proven to quantitatively pass elemental mercury quantitatively, but scrub deleterious compounds such as acid gases and halogen compounds (e.g. EPA Method 1631). *Soda lime is essential in Tekran 2537-1130-1135 speciation systems to scrub deleterious compounds that may be generated when the denuder and regenerable particulate filter are heated to release mercury and pyrolyze co-collected particulate material.*

Many users have observed the soda lime they have in stock or purchase from a catalog can cause artifacts. Soda lime type, storage, packing, and purging are important variables in achieving good results. Tekran is now offering pre-packed, sealed, batch tested soda lime traps with unique batch and date identifiers to provide our 2537/1130/1135 users with much needed standardized and reliable soda lime traps.

The soda lime traps are sold in packs of six, allowing simple change out as part of your other routine maintenance activities. Please note although the general life time of the traps is two weeks, the lifetime of the soda lime within the trap will vary according to the characteristics of the ambient air being monitored.

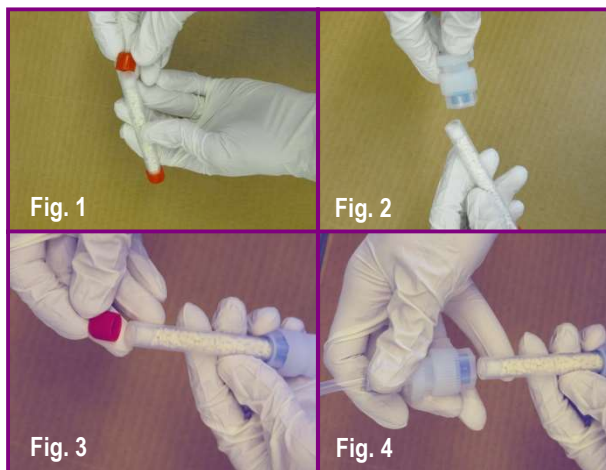
Each soda lime trap is made from newly purchased soda lime, and an acid cleaned ½" Teflon tube loosely plugged with clean, silanized glass wool. For QA/QC purposes each set of traps has a unique ID referencing the specific pre-tested soda lime batch used to pack the trap. The traps have been pre-purged with high purity dry nitrogen.

### Installation

Soda lime traps should be kept in a dry contaminant-free environment with the end cap seals in place until installation. Install using Teflon ¼" to ½" fittings (Part Number 30-25115-01). These fittings are supplied with all 1130 new speciation units. The trap should be located in an area that is slightly above ambient temperature to prevent condensation of moisture within the trap. (See Heating Recommendations, below.)

Install the soda lime trap just before the Tekran 2537 **Sample Inlet** filter fitting. While installing, hold the trap in a semi vertical position, remove the “upper” red cap and insert it into the Teflon fitting and tighten. (Fig. 1 and Fig. 2)

Next elevate the other capped end, remove the red cap and insert it into the other Teflon fitting and tighten. (Fig. 3 and Fig. 4) Performing installation in this manner eliminates the possibility a quartz plug falling out and losing the contents of the trap.



### Soda lime Heating Recommendations

It is advisable to keep the soda lime slightly above room temperature. However, excessive heating may lead to the introduction of sampling artifacts. In most cases, the sample line leading to the 2537 is heated to 50°C and commercially available foam pipe insulation may be used to retain this heat and keep the soda lime trap warm. This insulation is commonly available at hardware stores and is used to insulate copper plumbing.

Ensure all of the Teflon tubing and fittings leading to the soda lime trap are insulated with small diameter foam wrap. This will retain the heat generated within the heated sample line. Use a larger diameter length of foam insulation to cover the entire length and diameter of the soda lime trap. The trap should stay well above the dew point of the sample air. This will extend the life of the soda lime.

### PART NUMBERS

- 90-13310-06 - Six pre-packed, sealed and batch tested soda lime traps (approximately 3 months' supply)
- 30-25115-01 – Single Teflon ¼” to ½” fitting