

Gas Stream Dryer

December 2013

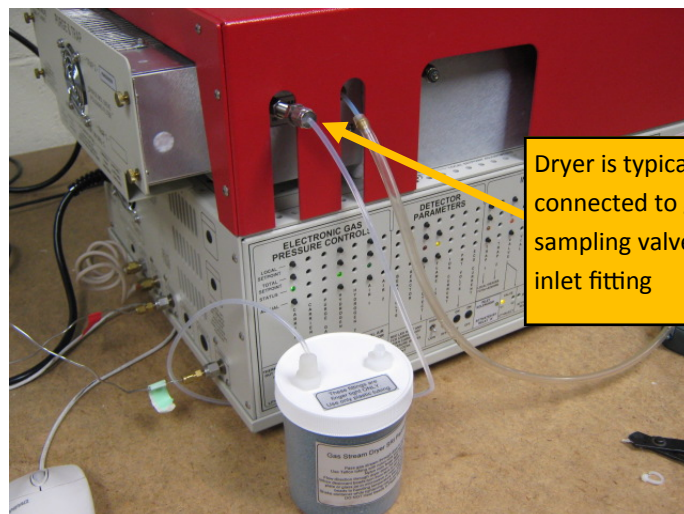
The SRI Gas Stream Dryer (SRI part# 8670-5850) (2013 price \$535) is able to substantially eliminate water vapor from a flowing gas stream. The dryer is constructed from a Nafion tube which is buried in a plastic tub full of indicating molecular sieve.



18 inch long Nafion tube

The indicating molesieve keeps the outside of the Nafion tube extremely dry while the inside of the tube looks like a clean Teflon tube to the gas flow.

The Nafion tube is coiled inside the plastic tub, and the ends of the Nafion tube are connected to 1/8" Nylon Swagelok bulkhead fittings.



Dryer is typically connected to gas sampling valve inlet fitting

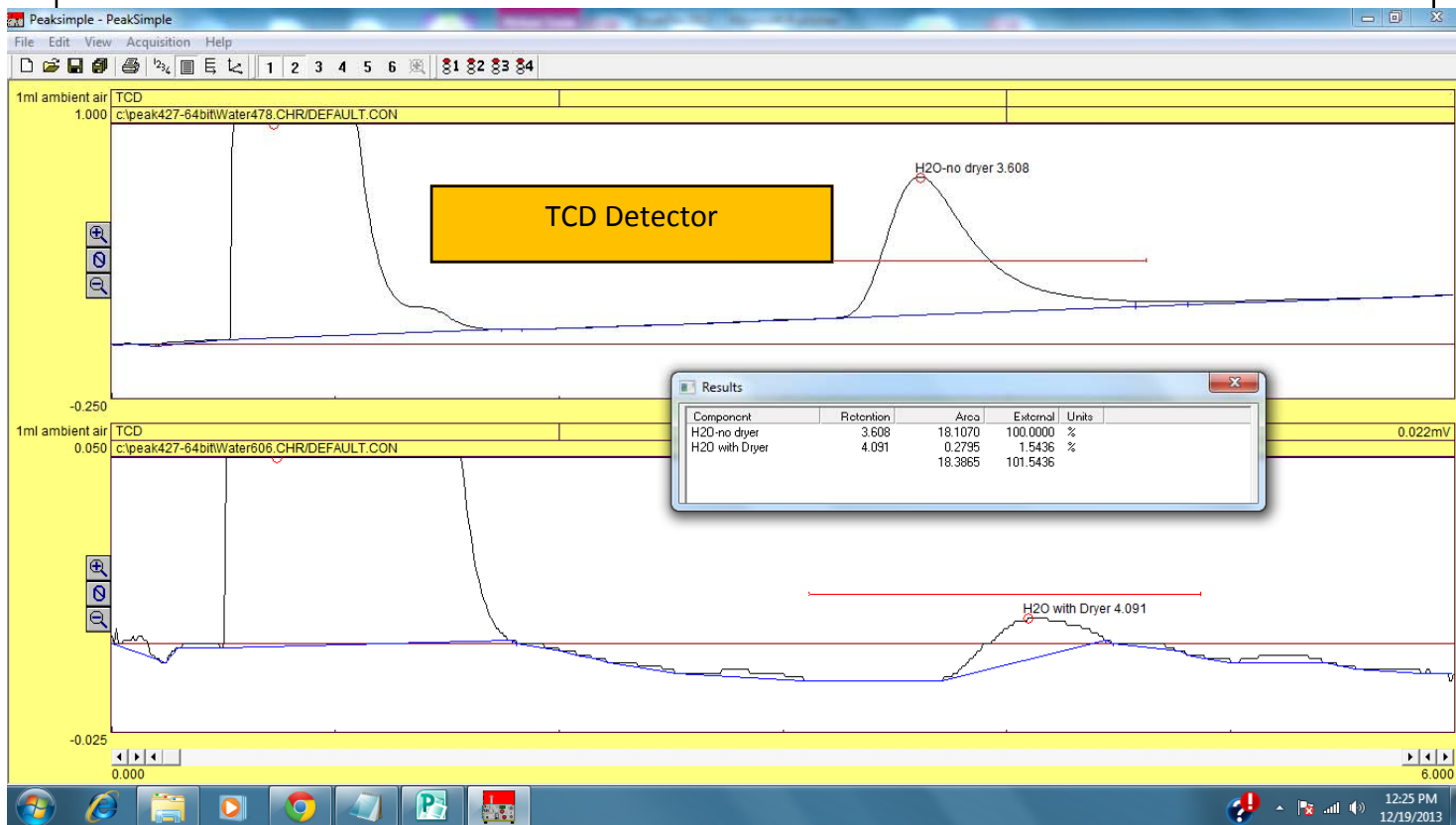


SRI Tech Support: 310-214-5092

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The two chromatograms shown below show the difference the dryer makes to a stream of ambient air flowing at 100ml/minute through the dryer. The top chromatogram shows ambient water calibrated to be 100%. The lower chromatogram shows that the water concentration has been reduced to 1.5% from 100% after passing through the dryer.



The SRI dryer design is convenient since the molesieve dessicant beads can be re-used many times by baking them out in the microwave when they become water saturated (they turn from blue to brown when they get wet). So there are no consumable items. Similar dryers from other companies use a counterflow of dry gas to keep the outside of the Nafion tube dry. This can be expensive. The SRI design does not require the dry gas since the dessicant performs the function of keeping the outside of the Nafion tube very dry.



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