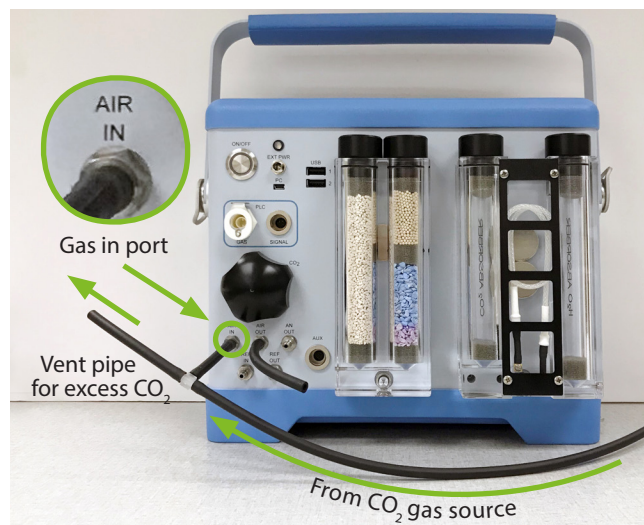


## Using An External CO<sub>2</sub> Source with CIRAS-3

Some experiments require the need to connect directly to an external CO<sub>2</sub> source. Perhaps they require a greater amount of CO<sub>2</sub> from a tank as opposed to the small CO<sub>2</sub> cartridges. Whatever the reason, the CIRAS-3 offers a simple solution that does not require the need to purchase additional hardware.



- Using a known, accurate CO<sub>2</sub> mixture, and a low pressure regulator, connect to the CIRAS-3 **Air In** gas port on the CIRAS-3 console as shown below with a T-piece and vent pipe to avoid overpressure.
- Set the flow rate on the CO<sub>2</sub> regulator to a rate of approximately 100 cc min<sup>-1</sup> greater than the **Cuvette Flow** rate set on the CIRAS-3 under **Settings-F2**.



Check the vent pipe to ensure that you have excess flow out of it (a flow meter is handy to have here). Also make sure that the link pipe is in place connecting the **Ref In** and **Air Out**.



### CIRAS-3 Setup Instructions

- Remove the soda lime and Drierite from the CO<sub>2</sub> and H<sub>2</sub>O control absorber columns as shown above. If you still want to have H<sub>2</sub>O control you can keep the H<sub>2</sub>O absorber column filled with Drierite. Otherwise empty the H<sub>2</sub>O control absorber as shown above for ambient humidity measurements.
- Make sure that the CO<sub>2</sub> cartridge holder is empty (No need for a CO<sub>2</sub> cartridge).
- Under **Settings - F2**, set **CO<sub>2</sub> Reference** and **H<sub>2</sub>O Reference to Ambient (Remove Chemicals)**



If you would like to learn more about this application or speak with one of our experienced technical staff, please feel free to get in direct contact with us via any of the contact information listed below:

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