	Questions & Answers
LiCONiC INSTRUMENTS	

Title:	O2 N2 CO2 Gassing Option low O2 Concentration	ID:
		0357

Date in:	Response:	Model:	Author:
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Q:

As you know, I on site with the STX44 3 gas option, S/N 1528. I meet some difficulties to adjust the N2/O2 regulation.
The customer wants to use it in a hypoxic mode at 1% O2.

Here are my questions:
- The customer want to work at 1% O2 (maybe less), is it possible with this incubator?

- The O2 valve is always opened, so to reach low level of O2 (to 1%), I left the O2 input closed. If we open it, the O2 concentration raises in very high level very fast, up to a point that the O2 tank has been emptied in less than 1 night!!! So I suppose that it is not normal, how to fix it?

- Could you explain how the N2 regulation is working and which value we need to set for N2 to get 1% O2? Is it a real percentage value of N2 i.e. to get 1% O2, if CO2 is set to 5%, does the N2 should be set at 94%? Or it is independent from the absolute percentage value and it is a ratio N2/O2, and N2 should be set at 99%?

- What is the algorithm for the N2 regulation? It is not like for the CO2. The N2 valve stay open all the time and close only when the set value is reach, therefore with the inertia the N2 value continue to increase up to a value which about 2.5% more than the set value? Why this algorithm is different form the CO2 one.

- Please explain also how to adjust the display? I tried the same method than for CO2, with the 2 potentiometers without success?

- What kind of stability/fluctuation do we have to expect on O2 at 1% level?

A:

The sensors are of high quality and measure very selectively the specific gas concentration. The N2/O2 sensor measures O2. For N2 we subtract O2 form 100%.

It is normal that you will need a lot of N2 if you want to have O2 at such low level since you have to displace all the O2.