

## Subex Air 28 versus PADI Nitrox 32

Debate "Air 28" boot 2007 - 11:00 a.m.

(c) Divers Travel Guide - Düsseldorf January 21, 2007  
11:00 a.m. (recording)



### Moderator introduction:

Nitrox, there are different opinions here about how it can be used for diving, on the one hand "with certification" and on the other hand "without certification."

**Johann Vivian – Subex –**

**We don't need** a special certification to dive with it.

**Thomas Legassa - PADI -**

**We need** a special certification to know how people can handle it.

Two specialists are also on stage to provide expert commentary: Prof. Dr. Dieter Seiler (physician and chemist) and Dr. Joachim Schippke (physiologist).

**Moderator: Please give a statement from both sides:**

**Johann Vifian SUBEX:** We do NOT need a special certification because we do not want to make money from the safety that our customers need.

**Thomas L. PADI:** As in all areas of diving, and especially for beginners, we need training to be able to handle the gas correctly and sensibly.

**Moderator: Training is essential, but why not with Air28?**

**Subex:** We train on the basis of the normal diving license, as well as with normal air mixture (21% oxygen = Air 21).

We teach our customers exactly the same thing that all other organizations do.

The diving community agrees on this.

Only with us do customers get the 28 mixture from the start and are trained as if they were diving with a 21% mixture.

Yes, there are tables for Nitrox, but you don't need them if you adhere to the safety margin as you would for normal dives.



For me, it's not a question of the technology to produce it, as all bases in the resort area are capable of producing it (the mixture – note DTG). It's more a question of "ticket sales" – you sell tickets to your customers, we don't sell tickets to our customers, we sell training.

**Moderator to PADI:**

**Is it that you just want to make money and that's why you offer it?**

**Thomas L. – PADI**

Of course not, but we also see that the market always needs new impetus; people don't always want to do the same thing.

People don't just want to get their basic diving certification, they also want to go night diving, dive a little deeper, dive in caves or even dive with other gas mixtures.  
The fact is that 21% is not a big difference from 28%.

I understand the point of view of the safety margin, but if you go to a different dive center, or dive in Australia, for example, you need proof for the dive instructor and the dive center that the diver has received the information, that they have learned it and don't have to start from scratch.

**In this sense:**

Certification as proof



**Moderator: Yes, the certification as proof for other diving centers:**

**Johann Vifian SUBEX:** We all know, and it can be read on the PADI homepage, that vacation divers, who make up over 70% of all divers, dive with Nitrox less than 10% of the time.  
And PADI is trying to make money from these 10% through certification.  
PADI is represented at most resorts and centers worldwide, and if PADI now says that safety in the form of nitrox should be offered at all centers, safety in the form of a certification is being SOLD instead of offered.

We earn money from diving, not from selling cards (certificates).

**Moderator: I would like to ask the experts about this aspect of safety so that they can also have their say.**

**I have the PADI table here, which states a maximum diving depth of 40 meters and a partial pressure of 1.4 bar.**

Air 28 with greatly reduced risk of oxygen toxicity...

Is it true that an increased oxygen content greatly reduces the risk of decompression sickness and/or oxygen toxicity?  
?

**Dr. Joachim Schippke, physiologist:** Based on diving habits and the guidelines provided here, that is entirely correct. Especially at a diving depth of no more than 40 meters, there is no risk, and people feel better the day after diving.

**Moderator:**

**Let's be honest, I know this from my own experience – maximum diving depth of 40 meters, if I have a wreck at 50 meters, I'll go**



down to 50 meters.

**With normal air, it was at 70 meters where it became dangerous, but 50 meters is one of those things, many people have been there...**

**Dr. Joachim Schippke Physiologist** Well, let's not start haggling, we can also have accidents at 40 meters that have nothing to do with oxygen, and if we go to 50 meters, the gas doesn't suddenly become toxic, it's just like deep intoxication... it can occur, it may not occur, but it doesn't automatically have to occur at 40 meters.

**Moderator: To the chemist, what are the connections?**

**Dr. Dieter Seiler** – There is no such thing as "THE STANDARD DIVER," that's the problem – every diver reacts individually... but one comment (to the moderator) – you said that it can be dangerous at 70 meters, and you go down to 50 meters from time to time, that's where I see the safety aspect.

Diving with Air 28 to 40 meters is safe, and even at 50 meters, there is a safety margin!  
Secondly, the reduced nitrogen content gives you an absolute additional benefit, and as PADI says anyway, recreational divers should only dive to 40 meters, and if the diver knows that oxygen becomes toxic below this mark, then that is the information the diver needs.

The diver does not need any more information than that.  
And therefore, provided that they dive in air mode, NO additional certification is required.

So, I have been teaching at university for several years and I am a fan of further education, but in this case, I do NOT think it is right to require a certification.

And if you think about it, there are so many certifications that you don't need to have, and no one has ever asked me if I have a certification when I dive with nitrox.

So I think that for THIS particular mixture, no certification is necessary, and I believe that if we could manage to dive with Air 28 everywhere in diving, we would have gained a lot in terms of safety.

**Moderator: So from a medical point of view, diving with Air 28 is recommended.**

But the topic was certification. If we could manage to dive with Air 28 everywhere, the commercial aspect would disappear and no additional certification would be required.

**Thomas L.– PADI:**

Everything that has been said is true, of course. If the dream of diving with Air 28 everywhere, in normal air mode, were to come true, we would indeed gain in terms of safety.

Undoubtedly, you wouldn't need a lot of theoretical knowledge, but I said **dream**, because it must also be guaranteed that I can actually get Air 28 at another base. But this is not feasible for the bases at the moment, because the bases would need additional filling equipment, and that is not exactly cheap.

It is becoming more and more accepted, especially on our side (PADI), that Nitrox is a wonderful thing, but it costs a lot of money, and the question is: Who bears the additional costs?

From left to right: Johann Vifian SUBEX, Dr. Joachim Schippke,



Dr. Dieter Seiler, Thomas L. PADI

**Dr. Joachim Schippke Physiologist:** I would like to say something about this. I believe that the business economists at PADI are making a mistake.

I am very sure that at the bases where Air 28 is used for diving, there are no decompression accidents. Just calculate the costs incurred for a rescue. I think it pays off when I send people home and they are all healthy!

**Moderator: That's certainly true, but I can also imagine that the bases would say, "That would immediately result in additional costs for me, and as bad as it sounds, I don't bear the costs in the event of a diving accident."**

**The commercially minded person says to himself, I'd rather risk a diving accident than invest 10,000 or 15,000 euros now to convert my compressor so that I can fill it with Air 28 without any problems.**



**Excerpt from entry dated January 21, 2007, in Divers Travel Guide on the subject of SUBEX air  
28**

**Johann Vifian SUBEX:** I'm also an entrepreneur, and I've thought about it too!

PADI says, make your dreams come true, become a PADI diving instructor. It's their job to sell dreams, and they would be shooting themselves in the foot if certification were to disappear.

The fact is that most facilities can already fill Air 28.

We don't do business at the expense of our customers!

A dead diver is not good business; he won't bring me any more money.

However, if I provide the diver with the gas during training, I reduce the risk and let them dive using the normal table.

**Dr. Dieter Seiler:** I think it's very dangerous to say that it causes costs. That's how every development has been ruined so far.

I would say that if we could get 10 percent of diving centers equipped with Air 28, that would already be a huge gain in safety, and the market would most likely regulate the matter...

The argument that it can't be done doesn't exist!

**Moderator:** OK, we would dive with our normal computers and tables, and everyone would have it in the back of their minds that they are on the safe side, but no one would know how far on the safe side they are!

**Now I have 7% more oxygen in my tank, how does that affect my no-decompression time? Some people get very confused calculations in their heads and then there is a risk that something will happen!**

**Dr. Dieter Seiler:** We did exactly that calculation earlier...

(Technical discussion between the computer display and the "display" in my head, even though it had already been clarified that the discussion was to be based on diving with normal air.... Discussion was shortened by the editors).

The moderator concludes with the closing remarks of the discussion participants.



After the discussion, photographer Rolf Gross asks the "arguers" to come forward for a group photo with a handshake... Thank you.