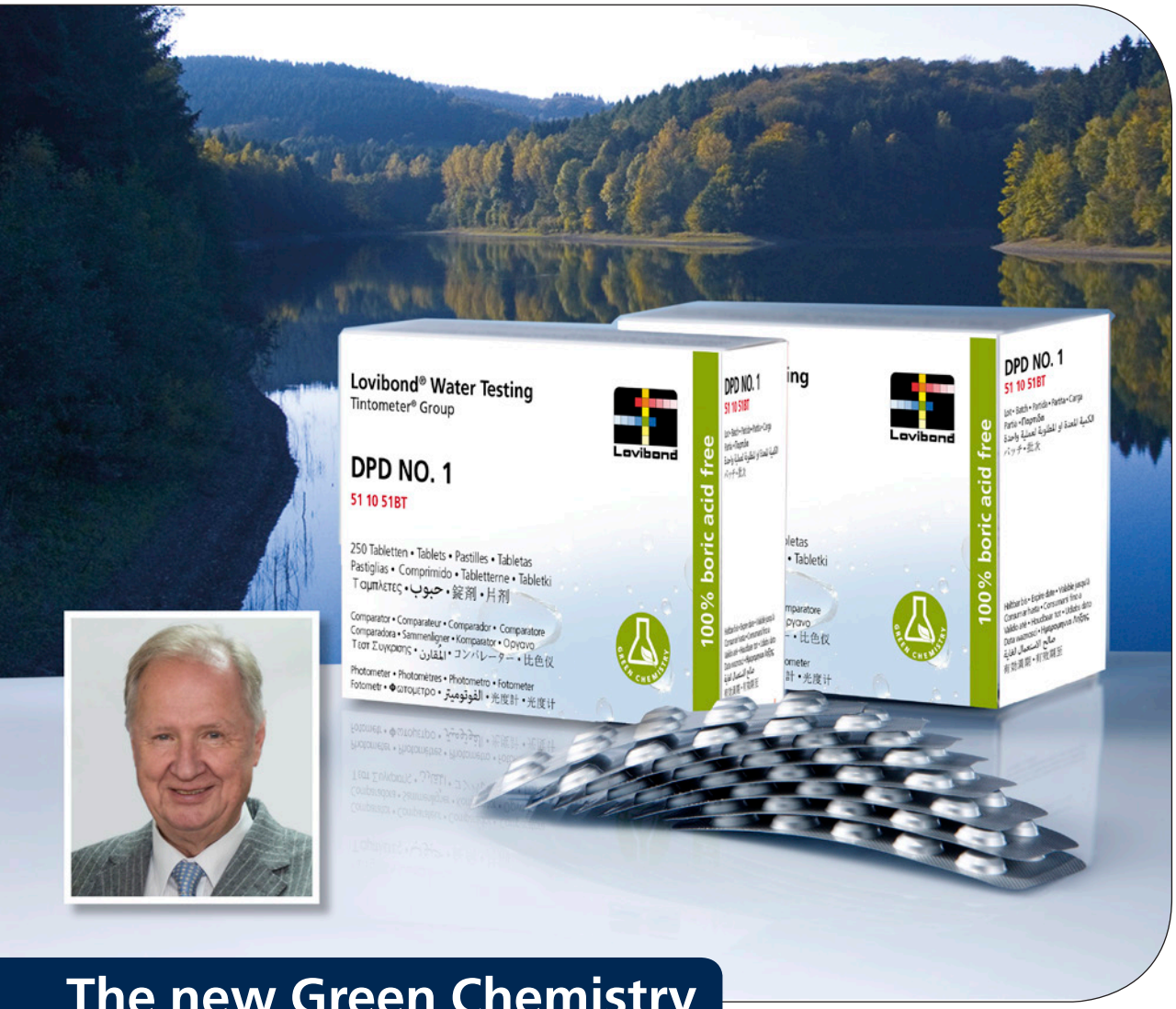
Green and chemistry: can that work? Interview with Cay-Peter Voss

Green Chemistry



The new Green Chemistry

We interviewed the owner and CEO of the Tintometer Group in his office in Dortmund.

Hello, Mr Voss. Green and chemistry: isn't that a contradiction in terms?

C.-P. Voss: No, it's definitely not a contradiction. Green chemistry is an issue that experts in the field have been discussing for well over a decade. It refers to the industry's efforts to produce its products in a way that is as environmentally friendly as possible and conserves resources wherever possible. To be specific, for us, it's about avoiding hazardous substances and sustainability. As a German company with a close relationship to our customers and people generally, for us Green Chemistry is an idea that we are especially committed to.

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For example, since 2010 we have, wherever possible, systematically avoided using boric acid in our DPD tablets and other tablet products.

Why have you avoided boric acid?

C.-P. Voss: It goes back to EU substance testing and regulation. Boric acid was classified as a so-called 'substance of very high concern' by the European Chemicals Agency, ECHA. This means that the substance is not only generally labelled as hazardous, but at the same time, the classification also means that industry should avoid using it.

Perhaps you can explain for us briefly: why is using boric acid such a problem?

C.-P. Voss: Among other things, boric acid can have adverse effects on the ability to reproduce!

If we look around the market, then we will find many competitors' products that still contain boric acid. Consumers are still uninformed about this issue and are (unknowingly) exposing themselves to a risk. This is why we want to create transparency with the Green Chemistry logo and educate consumers: it enables customers to compare products and decide whether they want to avoid boric acid, for example.

Or, to put it another way, why should customers use a product containing hazardous substances when hazard-free alternatives are available at no extra costs?

Is avoiding boric acid the only step you are taking with your Green Chemistry initiative?

C.-P. Voss Voss: No. We're constantly improving the formulations of Lovibond® reagents and test kits in response to new findings. A large number of our reagents were improved for this reason in 2016 alone. And we will continue to systematically move forwards in this direction.

Does the composition of reagents influence the quality of the measurement results?

C.-P. Voss: That's an important question. Very rigorous quality criteria apply to Lovibond® products. That means that for every new test developed and every reagent offered for sale all the requirements of the current measurement must be fulfilled – without any exceptions. The fact that we research, develop and manufacture in Germany really pays dividends here. It gives us access to decades of experience and excellent specialists. We don't put any new test on the market without extensive approval and verification processes. Around 10% of our employees, that is more than 40 colleagues, work in research and development. You won't find that anywhere else in our industry!

Our customers can therefore be sure that all Green Chemistry reagents offer the same excellent measurement performance. They don't have to accept any reduction in measurement quality.

Do all the companies on the market take the same approach? Or do your competitors have other strategies?

C.-P. Voss: Some of our competitors' DPD tablets still contain boric acid. But we can only speculate as to why that is. The fact is that the change process takes a lot of expertise, time and money. After all, you don't want to lose the special benefits of reagent tablets: their exceptionally long shelf life of 5-10 years and precise dosing accuracy.

What's more, DPD tablets must not lose the ability to buffer different pH values in the test. ISO 7393-2 is critical here, too. It makes the unique quality and performance of Lovibond® DPD tablets especially clear when compared to competitors' products.

So, if we've understood correctly, the Green Chemistry concept describes reagents that contain fewer hazardous and toxic substances but maintain the same analytical performance? So this idea only has benefits to it?

C.-P. Voss: That's right!

I also still can't understand why some distributors and customers continue to sell or use orthotolidine (OTO) to detect chlorine – and for domestic use, of all places. It has been demonstrated that OTO is carcinogenic, so it is classified as toxic, poisonous. What's more, OTO only determines total chlorine and not the active free chlorine, as is required. And price is no longer an issue today. So why should our customers be exposed to a health hazard for no reason and completely unnecessarily, especially when there's a real alternative with Lovibond® DPD Green Chemistry? This is also one of the principles of the law of substitution, which states that where a safer and better alternative exists, then the more hazardous product should be discontinued. So there is no valid reason to continue to use OTO.

How exactly does Tintometer plan to ensure that this issue becomes front of mind for customers?

C.-P. Voss Voss: Our first step in communicating this message is our Green Chemistry logo. Users and consumers can then see at a glance which of our products already fulfil the requirements of this concept. We also hope that our customers who use our reagents in their own products will respond positively to the logo, and ideally, we hope that they will adopt it. We'd be delighted if, in this way, these products were able to communicate the benefits of green chemistry to end consumers, too.

We will also regularly publish further information on this topic. We can reach our customers via our website and our newsletter, and interested audiences via these two channels with broad reach.

Thank you for talking to us.

Do you have any questions about green chemistry? Would you like to use the Green Chemistry logo on your products? Then please contact us by email or telephone

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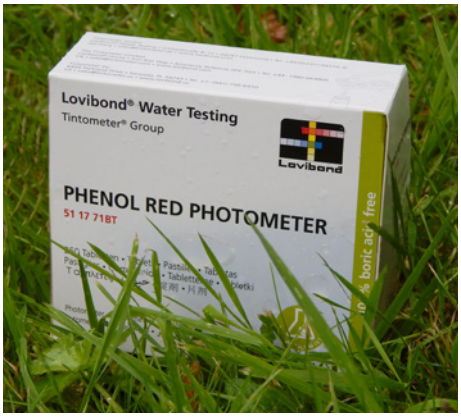

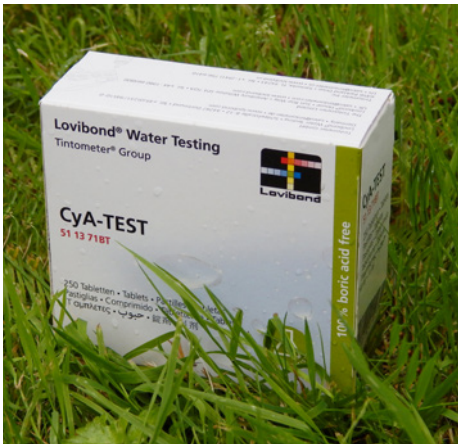

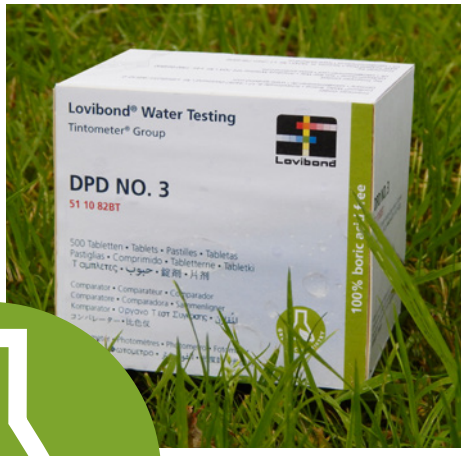

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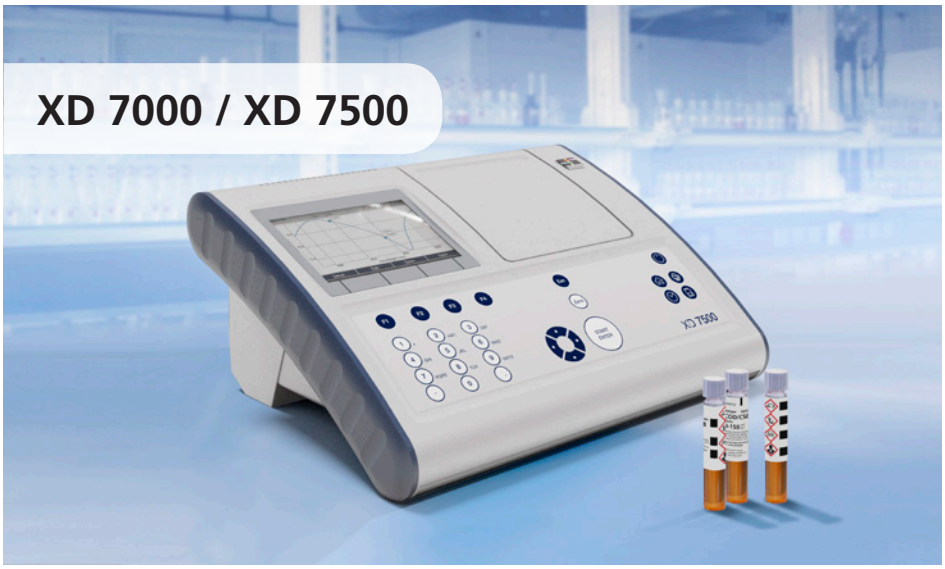
New milestones at Tintometer

Spectralphotometer for water analysis



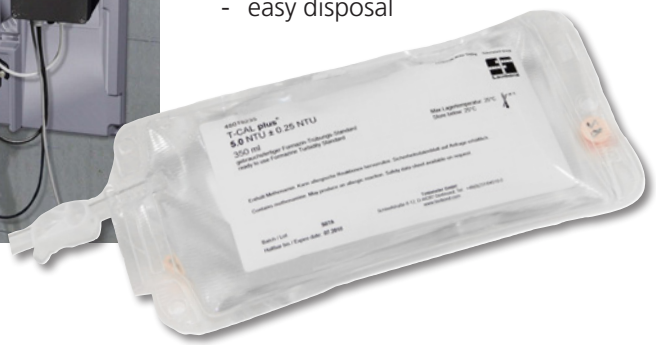
Highlights XD 7000 / 7500

- Premium optical system with reference beam
- Automatic test recognition with internal barcode reader
- Automatic cuvette type detection
- More than 150 analytical methods implemented
- Bright colour display
- Ethernet, USB

Process Turbidity Measurement

Highlights PTV 1000 / 2000

- Smart Interface - monitor and control all sensors in your facility with a single tablet or smartphone via the app AquaLX® App.
- Ultra low range
- Quick and safe calibration (5 minutes)
- small inner volume 300 ml
- durable lightsource
- Calibration solution:
  - not hazardous, no labeling obligation
  - easy to use and safe handling
  - easy disposal



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