

Hydrion-10

- You can do the analyses yourself, no laboratory experience is required
- A portable, compact and easy-to-operate system with a menu-controlled program
- Turbid samples can be analyzed without filtration
- Environmentally friendly measuring process; no chemicals are needed
- Inaccuracies are kept to 10% of the measured value. This applies to the entire measuring range.
- After the one-point calibration is finished, the system is ready to take measurements
- Up to 12 samples can be analyzed per hour
- Saves time and money



If you can't measure it,
you can't manage it

Knowing which substances are present in the water and in which quantities is vital for making the right decisions. Such analyses are usually performed by professional laboratories which are not only expensive, but also time-consuming. HortiMaX has therefore introduced the Hydrion-10 – a portable system for measuring the most important elements in the water quickly and easily.

HortiMaX
growing solutions



Hydrion-10

Hardware and software

- The measuring system is a stainless steel unit equipped with sensors, electronics and self-cleaning system.
- The standard model is 28cm in height and 8.2cm in diameter.
- The power supply is 5V via USB USP on PC.
- The software consists of a user-friendly Windows-based program.
- The manual is available in Dutch, German or English.
- The total weight is approx. 12kg
- An airtight and waterproof case is also available for the Hydrion-10.

Hydrion-10 – the 10-ion concentration meter

The Hydrion-10 measuring system consists of a waterproof stainless steel tube containing the sensors, the electronics, a storage case and a laptop PC running the read-out program. The entire system fits into a waterproof portable suitcase. This mini lab allows you to take on the spot measurements of the most important ion concentrations in the water. Since the Hydrion-10 provides almost immediate analyses, you can quickly adjust the fertilizer mixture, so it constantly meets the needs of your crop. It also prevents any unnecessary discharge of drain water. This saves you time and money.

Operation

The Hydrion-10 uses ion selective electrodes (ISEs). It is known that these sensors are affected by parameters such as pH, temperature and the total salt content. A unique measuring process was developed for the Hydrion which involves simultaneously measuring the temperature, EC, pH, K⁺, Na⁺, Ca⁺⁺, NH₄⁺, Cl⁻, NO₃⁻ and HCO₃⁻. The measurements are then instantly processed by a special calculation program running on the PC.

This calculation program automatically corrects the readings for temperature, pH, ionic strength and other elements which affect the measurements.

The system also gives you information on the condition of the sensors and possible transgression of the measuring ranges. This leads to highly accurate and reliable results. The analysis is performed in two phases. First, a one-point calibration is carried out, which takes a few minutes. Then, several measurements are carried out successively. To perform these measurements the sensor tube is submerged in the water sample. After a few minutes, the measurements are complete. The user-friendly Windows read-out program displays the results directly on the screen. Naturally, you can also export the measurements and display, save or send this data in table or diagram format.

More Information?

For more information, please contact HortiMaX at +31 (0)15 362 03 00 or one of our local dealers near you. You can also visit our website at www.hortimax.com.

	Type of sensor	Minimum		Maximum	
		5°C		30°C	
		0.005mS/cm10		10mS/cm	
		4		11	
Temperature	Pt 100				
EC					
pH	ISE				
K ⁺	ISE	5x10-6 M	0.2 ppm	0.1 M	3,900 ppm
Na ⁺	ISE	10-5 M	0.2 ppm	0.1 M	2,300 ppm
CA ⁺⁺	ISE	5x10-5 M	2.0 ppm	0.04 M	1,000 ppm
NH ₄ ⁺	ISE	4x10-6 M	0.08 ppm	0.1 M	1,800 ppm
CL ⁻	ISE	3x10-5 M	2.4 ppm	0.1 M	3,400 ppm
NO ₃ ⁻	ISE	10-5M	0.6 ppm	0.1 M	6,200 ppm
HCO ₃	gas				
bij pH ₄		4.4x10-8 M	0.003 ppm	4.4x10-5M	2.7 ppm
bij pH ₇		4.4x10-5 M	2.7 ppm	4.4x10-2 M	2,700* ppm
bij pH ₉		4.4x10-3 M	270 ppm	4.37 M	270,000* ppm

* Theoretical value

An optional sensor can be added for measuring redox, oxygen, fluoride, bromide, for example.

- Total ion strength up to 0.5M
- For applications with a clearly different ion composition other calibration sets are used.
- The greatest measuring accuracy is achieved by using the correct calibration set.

HortiMaX
growing solutions