

Special information

Version 3

Determination of sodium in nutrient solutions

In nutrient solutions for fertilization, sodium occurs almost completely as sodium chloride. Therefore, the sodium concentration can be determined indirectly by measuring the chloride content.

On **NANOCOLOR®** spectrophotometers a special method can be calibrated at the wavelength 462 nm, automatically giving the result in mg/L Na⁺.

Instruction	
Parameter	Sodium in nutrient solutions for fertilization
Product group	NANOCOLOR®
Method	Photometrical determination with mercury(II) thiocyanate and iron(III) nitrate
Reagents and equipment	Tube test NANOCOLOR® Chloride 200 (REF 985019) Digital piston pipette 1–5 mL (REF 916909) with pipette tips (REF 916916)
Measuring range	10–300 mg/L Na ⁺
Procedure (REF 985019)	Open test tube, add 0.5 mL of the sample (the pH value has to be between pH 1 and 13), 1.0 mL R2 , close tube and mix. Clean outside of test tube and measure after 3 min.
Programming of a special method on the NANOCOLOR® spectrophotometer	Wavelength: 462 nm Cuvette size: 14 mm ID Reaction time: 3 min F0: -2.746 F1: 98.52 F2: 74.903 F3: 24.184 Barcode-linkage: 0-19 (optional) Zero: measure against water
Calculation of the sodium value	Using the programmed special method, the result will be given directly in mg/L Na ⁺ .
Measurement without special method	Perform the test NANOCOLOR® Chloride (REF 985019) following the instructions in the leaflet and determine the chloride concentration using the pre-programmed method of the test 0-19. The result in mg/L Na ⁺ is calculated as follows: ___ mg/L Cl ⁻ × 0.649 = ___ mg/L Na ⁺ The measurement range will be 3–130 mg/L Na ⁺ .

Contact

If you have further questions, please do not hesitate to contact us:

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