

# Determination nitrate content (NO<sub>3</sub>)

- Take soil samples (min. 8 per selected site) => Collect samples ONLY from a specific part of the field to ensure that the results are significant (soil samples across the entire field in an investigation would massively distort the results!)
- Divide the sample into 0-30 cm, 30-60 cm and 60-90 cm (PAY ATTENTION to the correct division!)
- Determine the moisture content and define the factor (see Table)
- Sieve the soil sample so that only fine particles remain
- Pour exactly 100 grams of soil into a plastic cup and label it (label the cup with the soil depth and the factor)
- Add exactly 100 millilitres of distilled water and stir vigorously with a spoon until the soil / water mixture is well mixed (no more solid clumps)
- Put a filter paper in the plastic cup and fix with clothespins
- As soon as there is enough clear solution in the filter (approx. 2 cm), immerse the nitrite/nitrate test strip for EXACTLY 1 second
- After PRECISELY 60 seconds, compare the colour of the test strip with the colour scale (important for the result to be correct!)
- Multiply the test result with the factor determined at the beginning
- The result is the plant-available nitrogen (in kg / ha)

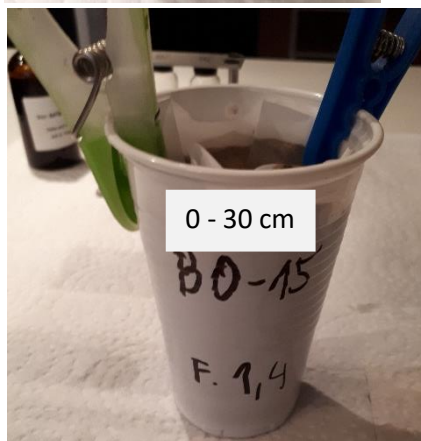
Determine the multiplication factor and write it on the plastic cup

Soil moisture	Soil finger test	Factor
12%	Crumbles between the fingers	<b>1.3</b>
15%	Feels moist	<b>1.4</b>
18%	Sticks between the fingers	<b>1.5</b>

## Determination of the nitrate content (NO<sub>3</sub>)

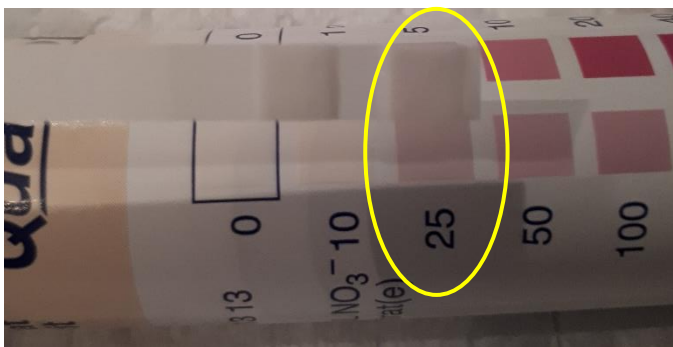


Weigh exactly 100 grams of the sieved soil in the cup (visible on the image: 0 - 30 cm soil depth and previously determined factor 1.5)



Mix exactly 100 g of soil with 100 ml of distilled water, and as soon as everything is well mixed, insert the filter and fix with clothespins

As soon as approx. 2 cm of clear liquid have seeped into the filter, immerse the test strip for 1 SECOND until the 2 indicators are covered with liquid => read the result after EXACTLY 60 seconds and write it down



Value on scale 25

Determined factor 1.4

**$25 \times 1.4 = 35$  kg/ha plant-available nitrogen in the 0-30 cm soil layer**

Source:

"Einfacher Boden-Nitrat-Test", BIO FORSCHUNG AUSTRIA, Vienna, February 2015  
Bio Forschung AUSTRIA, Esslinger Hauptstr. 132-134, 1220 Vienna, www.bioforschung.at

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