

## Application note

# Determination of nitrate in whey and whey powder

Overview	
Parameter	Nitrate
Test	QUANTOFIX® Nitrate 250 (REF 91366)
General	<p>The determination of nitrate in dairy products is necessary for dairies in order to detect and, if necessary, remove undesirable nitrate levels. To obtain correct results with the test strip</p> <p>QUANTOFIX® Nitrate 250 test strip, we recommend adapted measuring methods for measurements in liquid and powder samples.</p> <p>With these adaptations, reliable measurement results for the nitrate content in dairy products can be obtained in good agreement with the reference method (xylenol method).</p>



## Sample preparation, performance and calculation of the result

Implementation	Liquid samples	Powder samples
	Adjust the sample to be analyzed to a dry matter content of approx. 6%.	Prepare a 6% aqueous solution with the sample to be analyzed.
Evaluation	Liquid samples	Powder samples
Visual evaluation	<ol style="list-style-type: none"> <li>dip the test strip into the sample for 3 s.</li> <li>shake off excess liquid.</li> <li>wait for 60 s.</li> <li>compare the test strip to the color scale.</li> </ol> <p><b>Calculation:</b> Nitrate content [mg/L] = measured color scale value [mg/L] × 1.1</p>	<ol style="list-style-type: none"> <li>dip the test strip into the sample for 3 s.</li> <li>shake off excess liquid.</li> <li>wait for 60 s.</li> <li>compare the test strip to the color scale.</li> </ol>
On the QUANTOFIX® Relax (version 3)	<ol style="list-style-type: none"> <li>select the NO<sub>3</sub> 250 method.</li> <li>dip the test strip into the sample for 3 s.</li> <li>shake off excess liquid.</li> <li>place the test strip on the test strip holder (with the reaction time of 60 s switched on).</li> <li>read the test results once the reaction time has elapsed and recalculate.</li> </ol> <p><b>Calculation:</b> Nitrate content [mg/L] = QUANTOFIX® Relax measurement result [mg/L] × 1.1</p>	<ol style="list-style-type: none"> <li>select the NO<sub>3</sub> 250 method.</li> <li>dip the test strip into the sample for 3 s.</li> <li>shake off excess liquid.</li> <li>place the test strip on the test strip holder (with the reaction time of 60 s switched on).</li> <li>read the test results once the reaction time has elapsed.</li> </ol>

## Contact

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

Technical support and customer service	tel.:	+49 24 21 969-333
	e-mail:	support@mn-net.com
Orders	e-mail:	sales@mn-net.com

Results for doped whey samples determined using the QUANTOFIX® Relax:

Sample	Doped quantity [mg/L]	Quantity shown on the display [mg/L]	Corresponds to calculated quantity [mg/L]
1	50	45	50
2	50	51	56
3	5	5	6
4	7.5	6	7
5	8.8	10	11

Results for doped whey powder samples determined using the QUANTOFIX® Relax:

Sample	Doped quantity [mg/L]	Quantity shown on the display [mg/L]
1	0	<4
1	5.0	4
1	30	30
1	60	56
1	120	123
1	150	152
1	180	182
1	210	214
1	250	>250
2	0	<4
2	50	51
3	0	<4
3	50	47