

Special Instruction QUANTOFIX® Nitrit 25

Rev. 00, May 2025

Determination of Nitrite in Whey and Whey Powder

Overview	
Parameter	Nitrite
Test	QUANTOFIX® Nitrite 25 (REF 91367)
General Information	The determination of nitrite in dairy products is necessary for dairies in order to detect and, if necessary, remove undesirable nitrite levels. In order to obtain correct results with the QUANTOFIX® Nitrite 25 test strip, we recommend adapted measuring methods for measurements in liquid and powder samples.



Sample Preparation, Procedure, and Calculation of Results

Procedure	Liquid samples	Powder samples
	Adjust the sample to be analyzed to a dry matter content of approx. 6%.	Prepare a 30% aqueous solution with the sample to be analyzed.
Evaluation	Liquid samples	Powder samples
Visual Evaluation	<ol style="list-style-type: none"> dip the test strip into the sample for 1 s. shake off excess liquid. wait for 60 s. compare the test strip to the color scale and recalculate the measurement result. <p>Calculation: Nitrite concentration [mg/L] = measured color scale value [mg/L] × 1.1</p>	<ol style="list-style-type: none"> dip the test strip into the sample for 1 s. shake off excess liquid. wait for 60 s. compare the test strip to the color scale and recalculate the measurement result. <p>Calculation: Nitrite concentration [mg/L] = measured color scale value [mg/L] × 1.3</p>
On the QUANTOFIX® Relax (version 3)	<ol style="list-style-type: none"> select method NO₂ 25. dip the test strip into the sample for 1 s. shake off excess liquid. place the test strip on the strip holder (with an activated reaction time of 60 s). read the test result once the reaction time has elapsed and recalculate. <p>Calculation: Nitrite concentration [mg/L] = QUANTOFIX® Relax measurement result [mg/L] × 1.1</p>	<ol style="list-style-type: none"> select method NO₂ 25. dip the test strip into the sample for 1 s. shake off excess liquid. place the test strip on the strip holder (with an activated reaction time of 60 s). read the test result once the reaction time has elapsed and recalculate. <p>Calculation: Nitrite concentration [mg/L] = QUANTOFIX® Relax measurement result [mg/L] × 1.3</p>

Contact

For further inquiries, please contact us:

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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]	Recovery rate [%]
1	0.5	0.6	0.7	132
1	2	1.8	2.0	105
1	5	3.6	3.9	78
1	10	9.0	9.9	99
1	15	12.5	13.8	92
1	20	16.9	18.6	93
2	0.5	0.6	0.7	134
2	2	1.9	2.1	105
2	5	4.8	5.3	106
2	10	10.0	11.0	110
2	15	14.9	16.4	109
2	20	21.7	23.8	119

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

Sample	Doped quantity [mg/L]	Quantity shown on the display [mg/L]	Corresponds to calculated quantity [mg/L]	Recovery rate [%]
1	0.5	0.6	0.7	145
1	2	1.6	2.0	102
1	5	3.6	4.6	92
1	10	6.4	8.3	83
1	15	9.4	12.3	82
1	20	13.4	17.4	87
2	0.5	0.5	0.7	139
2	2	1.8	2.4	119
2	5	3.6	4.6	93
2	10	9.0	11.7	117
2	15	12.5	16.3	108
2	20	16.9	21.9	110

