

Application note

Version 1

Determination of nitrite in milk and milk powder

Overview	
Parameter	Nitrite
Test	QUANTOFIX® Nitrite 25 (REF 91367)
General	The determination of nitrate 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 test strip QUANTOFIX® Nitrite 25, we recommend an adapted measuring method for measurements in milk and milk powder.



Sample preparation, performance and calculation of the result

Procedure	Liquid samples	Powder samples
	Dilute the sample to be analyzed 1:1 with distilled water.	Prepare a 6% aqueous solution with the sample to be analyzed.
Evaluation	Liquid samples	Powder samples
Visual evaluation	- 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 result.	- 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 result.
	Calculation: Nitrite content [mg/L] = measured color scale value [mg/L] × 2.2	
On the QUANTOFIX® Relax (version 3)	- select the NO₂ 25 method. - dip the test strip into the sample for 1 s. - shake off excess liquid. - place the test strip on the test strip holder (with the reaction time of 60 s switched on). - read the test result once the reaction time has elapsed.	- select the NO₂ 25 method. - dip the test strip into the sample for 1 s. - shake off excess liquid. - place the test strip on the test strip holder (with the reaction time of 60 s switched on). - read the test result once the reaction time has elapsed.
	Calculation: Nitrite content [mg/L] = QUANTOFIX® Relax measurement result [mg/L] × 2.2	

Contact

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

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Measurement results for spiked milk samples determined on the QUANTOFIX® Relax:

Sample	Doped quantity [mg/L]	Quantity shown on the display [mg/L]	Corresponds to calculated quantity [mg/L]	Recovery rate [%]
1	1	0.6	1.3	130
1	4	2.0	4.4	110
1	20	9.1	20.0	100
1	30	13.0	28.6	95
2	1	0.6	1.3	130
2	4	1.7	3.6	91
2	20	8.9	19.6	98
2	30	13.9	30.6	102

Measurement results for spiked milk powder samples determined on the QUANTOFIX® Relax:

Sample	Doped quantity [mg/L]	Quantity shown on the display [mg/L]	Recovery rate [%]
1	2	2.0	100
1	10	8.9	89
1	15	14.3	96
1	20	20.5	103
2	0.5	0.6	120
2	2	2.2	110
2	10	10.4	104
2	15	15.4	103