



# CERTIFICATION

**AOAC<sup>®</sup> Performance Tested<sup>SM</sup>**

Certificate No.

**102104**

The AOAC Research Institute hereby certifies the test kit known as:

**Delvotest<sup>®</sup> Fast BT**

manufactured by

**DSM Food Specialties**

**P. O. Box 1**

**2600 MA Delft**

**The Netherlands**

This method has been evaluated in the AOAC<sup>®</sup> *Performance Tested Methods<sup>SM</sup>* Program and found to perform as stated by the manufacturer contingent to the comments contained in the manuscript. This certificate means that an AOAC<sup>®</sup> Certification Mark License Agreement has been executed which authorizes the manufacturer to display the AOAC *Performance Tested<sup>SM</sup>* certification mark along with the statement - "THIS METHOD'S PERFORMANCE WAS REVIEWED BY AOAC RESEARCH INSTITUTE AND WAS FOUND TO PERFORM TO THE MANUFACTURER'S SPECIFICATIONS" - on the above-mentioned method for a period of one calendar year from the date of this certificate (October 28, 2021 – December 31, 2022). Renewal may be granted at the end of one year under the rules stated in the licensing agreement.

A handwritten signature in black ink that reads 'Scott Coates'.

\_\_\_\_\_  
Scott Coates, Senior Director  
Signature for AOAC Research Institute

\_\_\_\_\_  
October 28, 2021

Date

<b>METHOD AUTHORS</b> Dhiredj Jagesar	<b>SUBMITTING COMPANY</b> DSM Food Specialties Alexander Fleminglaan 1 2613AX Delft The Netherlands
--	---

<b>KIT NAME(S)</b> Delvotest® Fast BT	<b>CATALOG NUMBERS</b> 23727
--	---------------------------------

<b>INDEPENDENT LABORATORY</b> ILVO-T&V Brusselsteenweg 370 B-9090 Melle Belgium	<b>AOAC EXPERTS AND PEER REVIEWERS</b> Joe Boison <sup>1</sup> , Jim Agin <sup>2</sup> , Sherri Turnipseed <sup>3</sup> <sup>1</sup> Canadian Food Inspection Agency, Saskatoon, SK, CANADA <sup>2</sup> Retired Ohio Department of Agriculture, Cincinnati, OH, USA <sup>3</sup> U.S. Food and Drug Administration, College Park, MD, USA
---	--

**APPLICABILITY OF METHOD**  
Target drugs – Penicillin G and Tetracycline

Matrixes – raw commingled cow’s milk

Performance claims - Delvotest® Fast BT detection capabilities:  
Penicillin G: 2.1 ppb and Tetracycline: 95 ppb.

<b>ORIGINAL CERTIFICATION DATE</b> October 21, 2021	<b>CERTIFICATION RENEWAL RECORD</b> New approval 2021
--	--

<b>METHOD MODIFICATION RECORD</b> NONE	<b>SUMMARY OF MODIFICATION</b> NONE
---	--

<b>Under this AOAC® Performance Tested<sup>SM</sup> License Number, 102104 this method is distributed by:</b> NONE	<b>Under this AOAC® Performance Tested<sup>SM</sup> License Number, 102104 this method is distributed as:</b> NONE
---	---

**PRINCIPLE OF THE METHOD (1)**  
Delvotest® Fast BT comprises a lateral flow test strip containing three lines; a control line, a test line for β-lactams (BETA) and a test line for Tetracyclines (TET). The test strip is embedded in a cassette with a sample loading site and a window exposing the part of the strip where the three lines will appear. The test principle is based on competition of binding of an analyte-specific, nanogold-labeled receptor to the targeted antibiotics in the milk sample. Any unbound receptor will bind to a high affinity-molecule which is immobilized on the lateral flow test strip. The presence of antibiotics in the milk sample is signaled by the test line intensity, which depends on the concentration of antibiotic in the sample. High concentrations of target antibiotic present in the milk will diminish test line intensity on the strip.

**DISCUSSION OF THE VALIDATION STUDY (1)**  
Delvotest® Fast BT can detect Penicillin G and Tetracycline below their respective MRL levels. The detection capabilities are 2.1 ppb Penicillin G and 95 ppb Tetracycline. Stability studies indicate a shelf-life of at least one year when stored at 4-8 °C. The kit robust and shows no interference or masking effects when other antibiotics are present. Performance of Delvotest® Fast BT remains unaffected by small variations in user-parameters such as milk volume, incubation temperatures and milk temperature and it is robust towards normally expected variations in the milk, such as the presence of bacterial cells, somatic cells and other classes of antibiotics.

**Table 1. Results of Method Developer and Independent Laboratory study. (1)**

Milk sample and Channel	Method developer study		Independent lab study	
	Replicates	POS/tested	Replicates	POS/tested
Antibiotic-free milk				
BETA	180	0/180	60	0/60
TET		0/180		0/60
2.1 ppb Penicillin G				
BETA	120	120/120	40	40/40
TET		0/120		0/40
95 ppb Tetracycline				
BETA	40	0/40	40	0/40
TET		40/40		40/40
2.1 ppb Penicillin G + 95 ppb Tetracycline				
BETA	40	40/40	40	40/40
TET		40/40		39/40

**REFERENCE CITED**

1. Jagesar, D., Validation of Delvotest® Fast BT for Detection of  $\beta$ -Lactams and Tetracyclines in Raw Cow's milk, AOAC® *Performance Tested<sup>dSM</sup>* certification number 011102.