

# Delvotest<sup>®</sup>

## Information on testing other types of samples with Delvotest<sup>®</sup>

### Introduction

Delvotest<sup>®</sup> is a microbiological test system for the detection of antibacterial substances in milk. The standard test application for Delvotest<sup>®</sup> is bovine milk such as raw milk, reconstituted and skimmed milk, etc.

Apart from this, Delvotest<sup>®</sup> may be used to test other (liquid) materials such as whey, milk from other animals (sheep, goat, etc.), cream, etc.

This technical bulletin describes how to adjust the testing procedure for other sample matrices. The incubation time and the reading of the test are similar to the normal procedure.

**It is strongly recommended that a negative control sample is included with the same sample matrix (known to be inhibitor-free) to determine the exact required duration of the incubation.**

### Quality control

Delvotest<sup>®</sup> has been developed and quality controlled for the application with bovine milk. Other applications as mentioned have not been quality controlled but may be used based upon practical experience with various users.

### Sample pretreatments

Before testing other types of samples the following points should be considered.

- Samples may have various natural (lysozyme, urea, etc.) and /or added artificial (preservatives, etc.) inhibiting components which need to be inactivated or diluted to become inactive before testing.
- The pH of the sample must be neutralised and free of pH buffering because the efficacy of Delvotest<sup>®</sup> is based upon the indication (bromocresol purple) of acid formation by the test microorganisms (*B. stearothermophilus*).
- When testing samples the excretion pattern of the antibiotic should be known in order to detect the antibiotic residues. A sample should be taken in a manner related to the administration of the treatment/use (intramuscular, intramammary, etc.) and type of antibiotic.
- Maximum residue levels set may differ based upon toxicity and ADI (Acceptable Daily Intake) of the sample (food). The maximum residue levels may vary depending on type of food or feed.

### General testing of other samples

Perform Delvotest<sup>®</sup> as normal. Incubation times and colours may differ from milk (matrix) application depending on the sample and the pretreatment.

Include in the test run a known negative (inhibitor- free) sample of the same matrix.

To avoid differences in the sample of milk matrix it is advisable to use inhibitor-free skimmed milk (5-10% w/v solids) to dilute and/or reconstitute the sample to be tested.

NOTE: reliable results from tests on non-milk samples may require minor empirical modifications to procedures.

### Some examples:

#### Sample with natural inhibitors

(abnormal milk, goat/ewe's milk, whey, etc.)

1. Preheat the sample in a water-bath for 2-10 minutes at 80-100°C.
2. Perform Delvotest<sup>®</sup> as normal after cooling down the sample.

#### Sample with added preservation\*

(Na-azide, preservative agents)

1. Dilute sample with inhibitor-free milk.
2. Perform Delvotest<sup>®</sup> as normal. (Dilution will change given sensitivity.)

(\* = Samples may also be tested with longer incubation times to avoid dilutions.)

#### Sample acid or basic/caustic

(whey, yogurt, etc.)

1. Neutralise samples with HCl or NaOH to pH 6.5-6.7. (Do not use buffering reagents).  
Alternatively, dilute/reconstitute the sample into inhibitor-free skimmed milk (5 - 10% w/v solids).
2. Perform Delvotest<sup>®</sup> as normal.

#### Sample with high fat concentration

(Cream, butter, etc.)

1. Always add nutrient tablet\* first.  
(\* = Not applicable for Delvotest<sup>®</sup> MCS.)
2. Add 0.05-0.1ml of distilled water to the test ampoule or well.
3. Wait 5 minutes to dissolve tablet.
4. Add sample (liquid). Perform Delvotest<sup>®</sup> as normal (dilution will change given sensitivity).

DSM also has available the Premi<sup>®</sup>Test which is designed to test; meat-, fish-, egg and honey samples. Ask your DSM distributor for more information.

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