

# LAS approved NMD and VTEC laboratories: Issues

## *Information Pamphlet*

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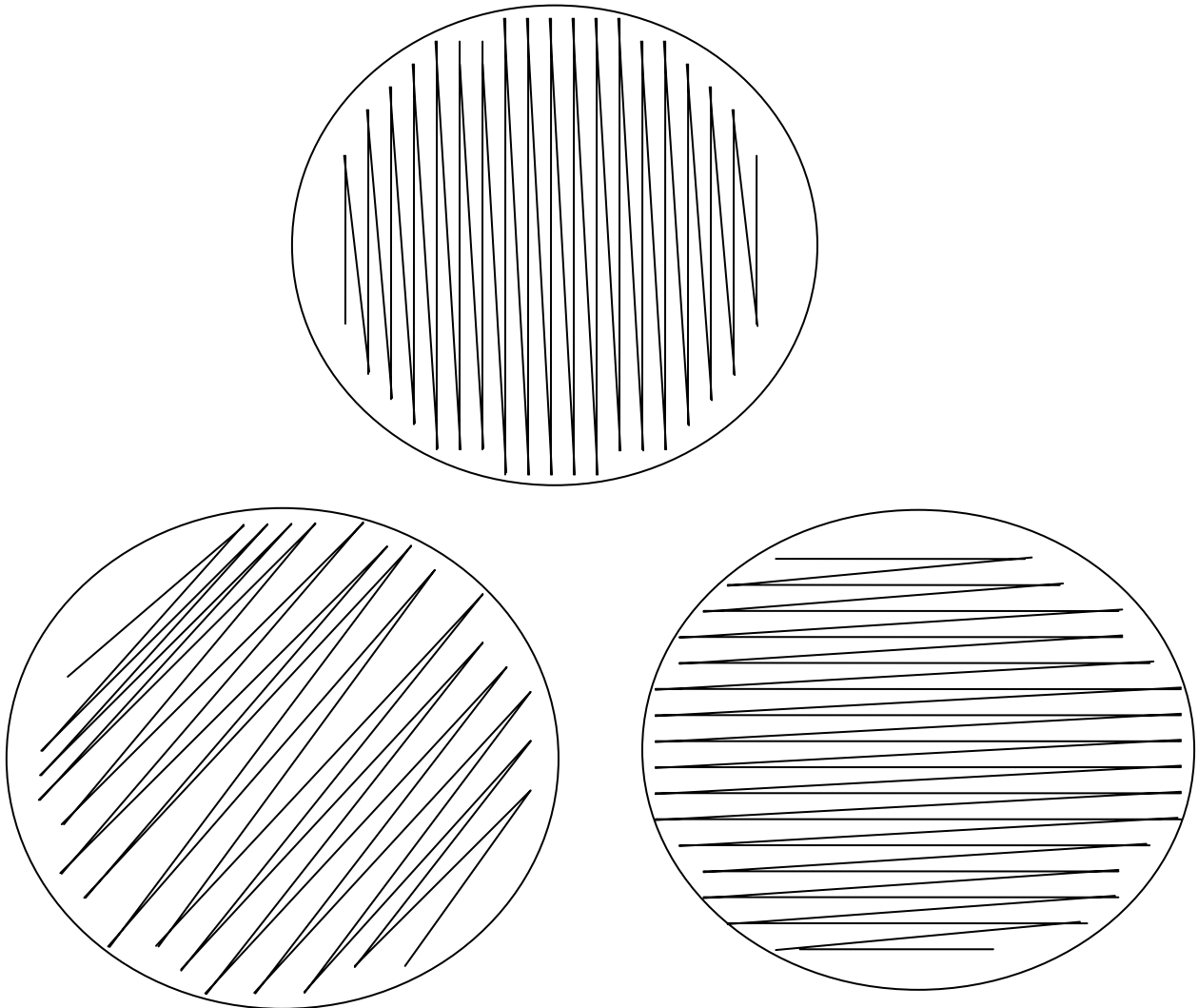
## **NMD Sampling**

The LAS approved laboratory is responsible for oversight of NMD sampling. In recent months both Compliance and Investigation Group (CIG) audits of premises and observations of sampling conducted by NZFSA VA Trainers has revealed that sampling needs a much more rigorous review by laboratory authorised representatives.

### **Wet/dry swabbing technique**

#### **Coverage**

Schedule 1 National Microbiological Database Programme Section 3.4.1 (8) – “rubbing of the wet swab/s vertically, then horizontally, then diagonally across the entire surface” is not being followed in many cases. The sampler must understand that it is like colouring an area in completely three times, using three different angles. It would be a good idea when training new samplers or retraining samplers that have gone astray with this technique to practice using areas of 5cm<sup>2</sup>, 25cm<sup>2</sup> and 100cm<sup>2</sup>, depending on the species they are trained to sample, scribed on a sheet of paper and asking the trainee sampler to colour in the area three ways using a felt tip pen. Once this is mastered, then use swabs and then practice on carcasses.



As you can see from the diagrams above for circles you need to start small at the side (vertical), top (horizontal) and  $\frac{1}{4}$  of the way round for diagonal and work outwards to the full diameter and back inwards again to achieve a full coverage for each angle.

For squares:

- Vertical; start from a top corner and downwards, up and down moving across until you reach the other side.
- Horizontal; start from a top corner across to the other top corner and back and forth downwards.
- Diagonal; start from the tip of a top corner (similar to circles) and outward to span the total diagonal, then back into the opposite bottom corner.

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## Swabbing time

See Schedule 1 National Microbiological Database Programme section 3.4.1 Table 21; for at least 10 seconds for 5cm<sup>2</sup>, or 20 seconds for 25cm<sup>2</sup> and 100cm<sup>2</sup> swabs.

## Swab pressure and rotation

Other skills that are often found overlooked are the pressure (and angle) required to hold the swab/s against the sample surface and rotation of the swabs. Refer Schedule 1 National Microbiological Database Programme section 3.4.1 (8) paragraph 2.

## Auditing of samplers

During the next 6 monthly NMD audit NZFSA VA will be focusing much more stringently on sampling technique, but it is up to laboratories in the first instance to ensure sampling is meeting the required standards.

## Poultry carcass rinse sampling

CIG has recently observed that carcasses were not massaged during rinsing and the rinsate was not passed through the internal cavity. Refer Schedule 1 National Microbiological Database Programme section 3.4.3.1 Rinse procedure 3.

Samples must be rocked for at least 120 seconds (2 minutes) Refer Schedule 1 National Microbiological Database Programme section 3.4.3.1 Rinse procedure Table 22.

## Random sampling

A further aspect of NMD sampling noted in recent CIG audits is the lack of attention to selection of truly random times; not times that are “adjusted” to fit in with lab schedules. The intent of the NMD programme is that every carcass (or other product type) has an equal chance of selection. The laboratory must ensure that sampling and transport of samples can be facilitated at anytime during processing. All processing times must be available for selection.

A random time selection excel macro is available from NZFSA. Using this macro times can be selected for the whole season and only varied (reselected) when the times originally chosen are unavailable on the particular production schedule for that week/day. For example the Monday originally randomly selected is a public holiday and there is no production that day – reselect from remaining days.

Whether times are selected for a whole season or just a week in advance they must be kept confidential from production staff such that processing cannot be organised in any way to arrange “best carcasses”.

CIG has reported a sampler selecting a bird from the rehangng table, after inspecting and discarding several others. This defeats the purpose of random sampling, creates bias and could make the premises results appear much better than they actually are. The sampler is not meant to judge the merit of the carcass, just sample the first one available at the random time selected. In the case of Very Low Throughput (VLT) collect each remaining carcass of five, following bagging/rinsing of the previous one, in the same manner (without prejudice) as the first. See Schedule 1 National Microbiological Database Programme section 3.4.3.

## Poultry Data Entry

For technical failures (TF), too numerous to count (TNTC) and not detected (ND) results some errors in data entry are occurring. All sampling details need to be recorded. If less than the required number of samples is entered the premises will default to 3.79 for each sample missed.

Only if sampling has not been undertaken do you pick less than the required samples for the day on the data entry sheet. If for example there was a TF for all three carcasses sampled, the carcasses were still sampled, so you enter 3 samples and the details of the times of sampling etc and in the Campylobacter data entry below enter TF in the first space for each of the samples.

The nominated ND value is 2.00. TNTC will default to 3.79. TF has no value recorded on the database, just a "TF" note to record that a sample was taken, but there was no result.

### Campylobacter enumeration

#### Carcass 1

Count Method: 2ml spread over 6 plates

nd        
1 2 3 4 5 6

Plate Counts: enter the counts or the a code in plate 1:  
'nd' for not detected  
'tntc' = to numerous to count  
'tf' = technical failure

Colony Ratio: No. Confirmed:  / No. Examined:

Log CFU / Carcass:  (nd = 2.00)

#### Carcass 3

Count Method: 2ml spread over 6 plates

tf        
1 2 3 4 5 6

Colony Ratio: No. Confirmed:  / No. Examined:

Log CFU / Carcass:  (ND = 2.00)

#### Carcass 2

Count Method: 2ml spread over 6 plates

tntc        
1 2 3 4 5 6

Colony Ratio: No. Confirmed:  / No. Examined:

Log CFU / Carcass:  3.79

If samples were missed on a processing day then select a reduced sample number. Or if no samples were taken at all on a processing day select "Failure to sample". Although the default

value of 3.79 does not show on the data entry sheet after authorisation it is recorded on the database and is factored into response calculations.

Examples: (1) Failure to sample on a processing day

**Sample Information**

**Carcasses Tested**

No Samples: Failure to Sample

Comment: [Empty text box]

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**Campylobacter enumeration**

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**Campylobacter Compliance**

MWF Window Count	13	MWF Compliant?	NON COMPLIANT	MWF Rating	10
HCF Period Count	9	HCF Compliant?	NON COMPLIANT	HCF Rating	1

Response: **Response 5**

NMD Comment: [Empty text box]

Example (2) Only 1 sample of 3 taken

**Sample Information**

**Carcasses Tested**

No Samples: 1 Sample

Comment: Only 1 sample of 3 was taken

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**Common Attributes**

Method of Drainage	Air chilled	1% Tween 80	<input type="radio"/> Yes <input checked="" type="radio"/> No
Carcass rinse Location	Laboratory	Ecoli Incubation temp	35°C (+/- 1) (42°C for Campylobacter)

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**Carcass 1**

Sample Time:	7 : 50	Time of Drainage	100 (secs)
Temp of Carcass Rinse Sample	5.6 (°C, <=10 °C)	Carcass to lab period	10 (mins, <= 30)
Analysis initiated	6.30 (<= 24 hrs)	Farm Reference No.:	Farm 2
		Shed Number:	101

**Ecoli and Salmonella Results**

Salmonella  Not Tested  Detected  Not Detected Serotype Detected

Carcass Tested

Carcass  Ecoli Results

**Campylobacter enumeration**

**Carcass 1**

Count Method:

Dilution  (0=1:1 dilution, 1=1:10 dilution etc.)

1 2

Plate Counts: enter the counts or the a code in plate 1:  
'nd' for not detected  
'ntc' = to numerous to count  
'tf' = technical failure

Colony Ratio: No. Confirmed:  / No. Examined:

Log CFU / Carcass:  (nd = 2.00)

## VTEC Data Entry

The data must be authorised on the same day as a screen test negative result has been entered, or confirmation is received from ESR in the case of a screen positive result. Prompt authorisation of results will prevent delays in product disposition.

sel=VTEC  Links >>

[New Sample](#)

Display only rows containing   57 documents

Sample Date	Shift	Status	Class	Type	Screen	Confirm.	Disp. Se
08-Dec-2008	1	Provisional	Bull	Fores/hinds/chu	Negative		
07-Dec-2008	1	Completed	Prime	Trim	Negative		
06-Dec-2008	1	Completed	Prime	Trim	Negative		
05-Dec-2008	1	Completed	Bull	Fores/hinds/chu	Negative		
04-Dec-2008	1	Completed	Bull	Fores/hinds/chu	Negative		

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## Submission of data to ESR

The **production date the sample was collected** must be clearly stated. If it was a frozen sample then indicate the production date and the date of sampling. The production date means the date of further processing, not the slaughter and dressing date.

## Pathogen Data

The transcription of confirmatory data from ESR reports must be accurate. Do not abbreviate, vary or mis-spell the entry from that written on the ESR report. If *Salmonella Brandenburg* is reported, then that is what you write in the serotype space. Ensure that the phage type, if given, is also recorded with the serotype. For example *Salmonella Typhimurium* phage type 156. The same applies for *E. coli* O157 identifications.

## Listing of n60 Bulk Samplers

NZFSA NMD administration is now developing a section in the Certified and Associate Trainers website listing to include n60 bovine and bobby calf bulk samplers as the NMD and n60 bulk sampling methods are completely different. This will be in addition to NMD bulk samplers. Laboratory authorised representatives need to document all *E. coli* O157 programme n60 bulk samplers as well as NMD bulk samplers. A further notification will follow.

### **Disclaimer:**

*This publication is not a legal interpretation of the Animal Products Act or the Animal Products (Ancillary and Transitional Provisions) Act and is intended only as a guide.*