final report

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Foetal blood to serum traceability project

Milestone 1 and 2 report

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1 Nature of the Foetal Blood to Serum Traceability Project

1.1 The problem

Foetal blood is currently received from various abattoirs and processed into foetal bovine serum. The methods used for the identification of the individual bags of foetal blood are by manual markings. Traceability is thus achieved through manually sorting through paper trails both at the abattoirs and at the processing plant. The bovine derived biopharmaceuticals industry is dependent on the integrity of the source material and the quality of the records/ information that support traceability. Paper based records are subject to errors and mistakes that could be hard to identify and correct should a serious audit be required by either a customer or regulatory body.
Any proposed solution must meet the requirements of the regulatory bodies (Australia and countries of destination) that govern biopharmaceuticals and the JRH systems must be compatible with supplier systems (e.g. EAN.UCC). The information must flow from the abattoirs to the foetal bovine serum processing plant and then to the customers. These information flows must occur in a timely and accurate manner. This is necessary in order to make operational decisions about the product and it can be released for use.

1.2 The proposed solution general overview

The basic principle of the proposed solution is the adoption of uniform information standards for identification and information movement from the abattoir all the way through the foetal bovine serum processing plant to the end customer.

The proposed solution to address the problem includes the following functional elements:

1. Electronic messaging between each link in the supply chain for:
    - Consignment information on the bags of foetal blood from suppliers with traceability details about each cow (e.g. body number, NLIS number, property identification code, and kill date).
    - Consignment information sent to customers on the finished foetal bovine serum with references to traceability and analysis report references.
2. EAN numbering and bar coding of bags of foetal blood with unique serial numbers.
3. EAN numbering and labelling of products through the foetal bovine serum processing for traceability.
4. EAN numbering and labelling of finished foetal bovine serum with individual serial numbers for traceability.

Where the abattoir requires electronic messaging tools, the tools being developed for the MLA Electronic Meat Transfer Certificate project (SCT.006) can be used for bags of bovine foetal blood.
The information codification methods and messaging methods are based on the EAN uniform standards and can operate standalone to suit other organisations related to biopharmaceuticals.

One of the benefits of the adoption of the EAN system of codification, identification and electronic messaging is bio-security as any tampering, substitution, etc. can be readily identified through reconciliation of product to electronic records.

The adoption of the EAN.UCC system for management of the identification of product and messaging is consistent with other MLA supply chain projects and will integrate with these projects.

1.3 Benefits to individual organisations and the whole supply chain

The benefits to individual organisations in the biopharmaceuticals supply chain include:

- Improved traceability for foetal bovine blood and the related donor animal.
- Reduced manual recording of information required and a subsequent reduction in the number of transcription errors that occur.
- Transparency through the supply chain and thus higher levels of bio-security.
- Minimum cost and minimum complexity to implement as it is based on the EAN.UCC system and the existing MLA supply chain projects.
- Enhanced export opportunities created by lower cost of production, higher product compliance to specification and product source verification (traceability).
- Compatibility of product codification and messaging with international trading partners by use of the international EAN standards for trade and commerce.

1.4 On Going Operations after Implementation and Wider Acceptance by Industry

The proposed solution is one based on simple tools using standards for product identification and electronic messaging of information. Once operating with a SME or large organisation the methods will continue long after implementation has finished.

There is no on going operational, maintenance or enhancement costs for use of the proposed solutions. Once operating the proposed solutions continue to be relevant and functional for each link in the supply chain.

There is a concerted push from the global customers to source Australian and New Zealand bovine biopharmaceuticals as both of these countries are seen as clean and green. The ability for Australia to capture these markets is dependent on the ability of the companies supplying these products to be able to show a very high level of traceability (from farms and individual animals) and bio-security (identification of substitution).

2 Project Deliverables

The JRH foetal blood to serum traceability project is made up of a series of stages or milestones. These are summarized below and this report sets out each milestone in detail.

Milestone 1:
Analysis and integration of EAN numbering and labelling for foetal blood bags and electronic messaging of product data between suppliers and JRH. Deliver a progress report.

Milestone 2:
Analysis and integration of EAN bar coding through the foetal bovine serum processing sections of JRH for the purpose of traceability from receipt to the finished product. Deliver a progress report.

Milestone 3:
Integration of EAN bar coding of finished foetal bovine serum product and warehousing distribution to customers using EAN serial shipping container codes and electronic messaging from JRH.

Analysis of EAN bar coding of finished foetal bovine serum product and warehousing distribution to customers using EAN serial shipping container codes and electronic messaging from JRH. Deliver a final report and case study detailing the entire implementation of the EAN system for the purpose of tracking and tracing blood serum products and precursors from suppliers to the customer.

2.1 Project Plan and Summary to Achieve Each Project Milestone

This section of the report outlines in a project plan format the expected activities and tasks necessary to achieve the project milestones. To prepare this section of the report a visit and initial analysis was conducted at JRH Bioscience Pty Limited facility at Brooklyn on the 12th of May 2004. The initial analysis identified the following activities, equipment and processors as suitable to fulfil the milestone requirements and to provide a workable cost effective solution for JRH.

2.1.1 Step 1 – Labelling and Sending Foetal Blood Bags – Milestone 1

There will be two methods tested for using EAN system for traceability between the suppliers (Abattoirs) and JRH.

Method 1 – EAN capable abattoir that will produce EAN labels for each bag of foetal blood.

The label would follow the meat industry guidelines for numbering and bar coding of meat products. This abattoir is to record the carcase body number to the foetal blood bag number. This linkage is to be able to go back to the NLIS or other live identification reference. The abattoir would create and send to JRH by simple email an EANCOM despatch advice message (using a tool provided to the abattoir) for the individual bags of foetal blood.

Milestone 3

Method 2 – Non-EAN capable abattoir that will apply pre-printed EAN labels provided by JRH. Each pre-printed label would have an abattoir identification code as well as a unique serial number. The abattoir is to record manually the foetal blood bag serial number to the carcase body number on the nominated form. This linkage is to be able to go back to the NLIS or other live identification reference. If the non-EAN capable abattoir has the facilities they would create and send to JRH by simple email an EANCOM despatch advice message (using a tool provided to the abattoir) for the individual bags of foetal blood.

Milestone 3

2.1.2 Step 2 – Receiving and Recording Foetal Blood Bags – Milestone 1

When bags are received at JRH they are scanned in to the Blood Receiving database at the Weighing/ Printing Station located in the receiving area. The temperature and weight are recorded along with any comments. This creates a traceability record linking the abattoir (and body number and live identification reference) with the date, time and sequence of receiving at JRH. Reports can be generated on the product supplied by abattoir, date (or date range), serial numbers, weights and temperatures.
The bags will then be process in the current work practice method based on segregation by abattoir.

2.1.3 Step 3 – Initial Processing of Foetal Blood Bags into 4L Bottles – Milestone 2

As each batch of bags (defined as an abattoir and date) are process and used to fill bottles, a number of labels are printed at the Weighing/ Printing Station located in the receiving area. The labels are printed out of the Access Database and have the abattoir name, date, time (of printing), serial number, lot code (made up of a 2 letter abattoir code, 3 digit day of year and 2 digit year and processing location code, eg AC2795N being from abattoir AC on the 279 day in 2005 and processed in Melbourne) and a bar code of the serial number.
If the serum is second grade it has an “S” added to the end of the serial number and is also printed on the label.
If the bottles are only part full the weight is also recorded on the label.
The bottles are then placed in to the freezer.
The database also has a facility to record the testing status of each batch.
The Microsoft Access Database can generate reports showing the number of bottles produced for each lot/ batch, the weight of part full bottles, the serial number of the bottles and grouping information about traceability eg serial numbers of bags that went into each batch of bottles. A report can also be generated to show bottles to be used for processing (eg nominated batches that have completed test results).
Information can be summarised out of the database for entry into the SAP system where necessary.

2.1.4 Step 4 – Processing of Frozen Foetal 4L Bottles into Serum – Milestone 3

When foetal serum is to be produced from frozen 4 L bottles a “Batches Released for Processing” report is to be generated out of the database showing the batches that can be used for processing.
The batched codes are then manually entered into the Pocket PC based scanner or scanned off the bar codes on the “Batches Released for Processing” report. The Pocket PC based scanner has a simple application that checks for the batch code and then records the serial number of each bottle selected. If an incorrect batch is scanned the scanner beeps and indicates that the bottle is not of the correct batch. If the same bottle is scanned twice the scanner beeps and indicates that the bottle has already been scanned.

Once all the required bottles have been scanned the Scanner is plugged into the Weighing/ Printing Station located in the receiving area. The record of the scanned bottles is downloaded into the Microsoft Access Database. The bottle records in the database are automatically updated with the production batch details. A report can be generated that shows the specific bottles and batches that went into a production batch as well as the number of bottles of a specific batch that are still in the freezer. A traceability report can be generated that shows the possible bag serial numbers, received dates and abattoirs that are in a specific production batch. This information can be linked to the individual livestock animal references.

2.1.5 Step 5 – Packaging and Carton Packing of Finished Serum – Milestone 3

When processed foetal serum is placed in to bottles, a series of labels are to be printed. The labels will include an EAN barcode with the product code, production batch and serial number. The labels will be printed on the Production/ Packing Station that includes a suitable bar code label printer. The labels will then be applied as required to the individual bottles.
When the bottles are to be placed in to cartons the individual bottle will be moved in front of a wide angle bar code scanner [Symbol LS9208 Omnidirectional Projection Scanner] (like the common retail scanners) that is connected to the Production/ Packing Station. Each EAN barcode with the product code, production batch and serial number will be recorded into a

Microsoft Access Database. An EAN SSCC Carton Label will be printed to be placed on to the carton. The label will show the product code(s), Batches and serial numbers in the carton, along with an 18 digit unique carton serial number.
Reports can be generated from the database that show the number of bottles of each batch packed, the cartons that each bottle has been place in, the number of cartons produced and the linkage information to show the 4L bottle batches that are included in each carton. This can provide the traceability linkage to show what possible bag serial numbers are in what cartons.

2.1.6 Step 6 – Shipping of Carton Product – Milestone 3

When cartons are picked to fill orders the SSCC bar code is to be scanned. This scanning function is either to be integrated into SAP or as a standalone picking database located on a Work Station in the despatch area. The despatch scanning process will record what cartons were sent to what customers, on what date and for what orders. This shipment information can then be used for traceability information and for recall if required.

The EANCOM Despatch Advice messaging tool can be used to create and send an electronic message of the shipment details (including carton serial numbers, production batch details and bottle serial numbers) by email to the destination for receiving and traceability purposes.
Traceability reports could be generated that could show for a given shipment what final product batches went into the shipment, the possible 4 L batches that were used for the final product batches, the individual bags (including abattoir and dates) that were included in the 4 L bottle batches and even the possible live animal references that went into the 4 L bottle batches.

2.1.7 Systems and Equipment Necessary for the Above Steps

The proposed systems and equipment necessary for the above steps is defined below:

- Pre-printed EAN labels for supply to the non-EAN abattoirs. Each abattoir would have its own set prepared with unique serial numbers.
- EANCOM Despatch Advice message creation and sending tool (provided as part of the project)
- EANCOM Despatch Advice message decoding, printing and export tool (provided as part of the project)
- Computer (Weighing/ Printing Station located in the receiving area) with bar code wedge scanner, simple Microsoft Access Database and small thermal label printer.
- Pocket PC based scanner with simple application for scanning and checking frozen bottles out of freezer for processing.
- Computer (Production/ Packing Station located at the packing/ carton packing area) with bar code label printer, simple Microsoft Access Database and wide angle bar code scanner.
- Computer (Despatch Station located in the despatch area) with bar code scanner for scanning carton labels on despatch as well as creating/ sending EANCOM despatch Advice Messages.

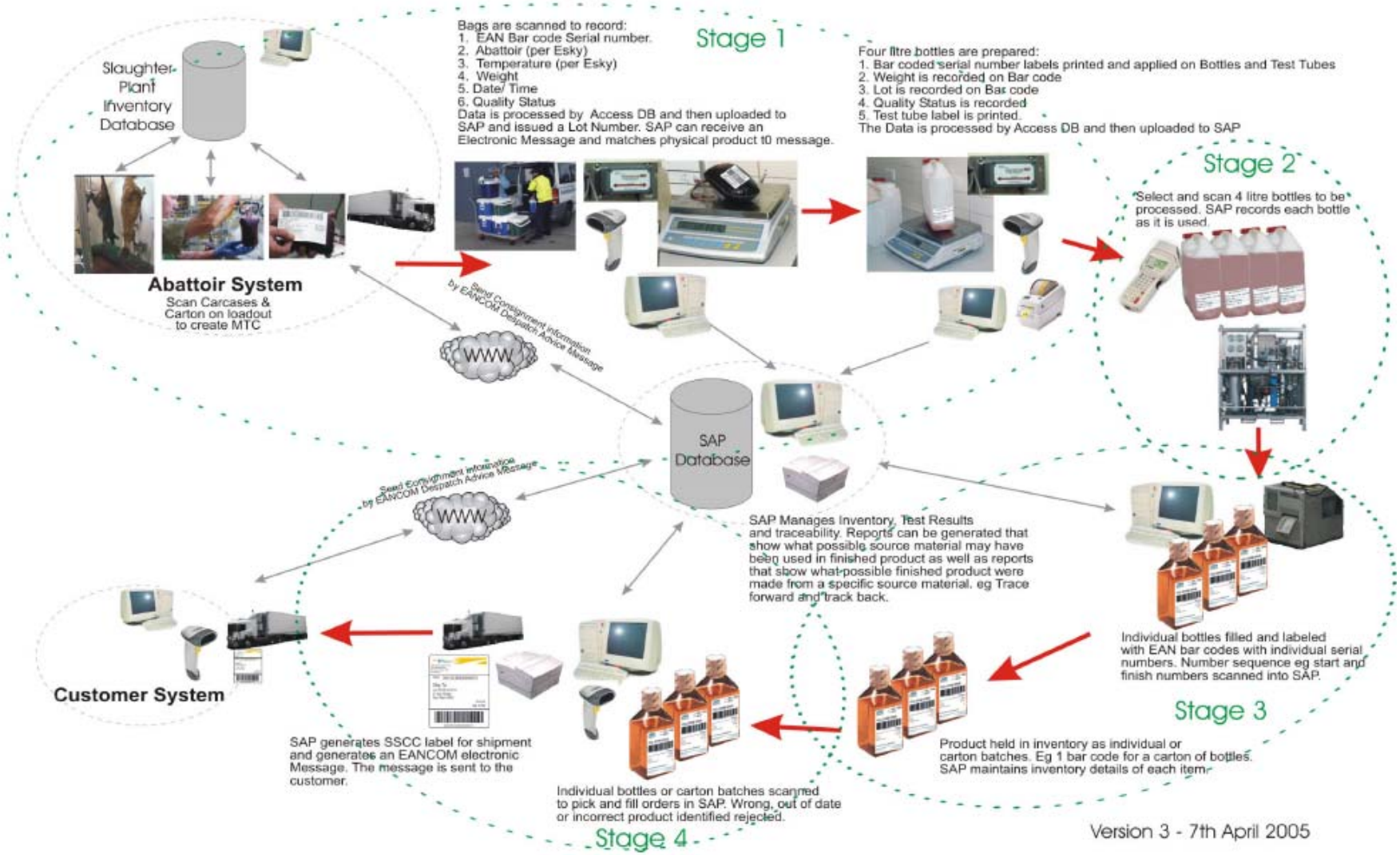
2.1.8 Time Frame for the Steps

The time frame for the various steps has been prepared as an indicative guide only. The time frame will greatly depend on the priority given by JRH management to each step. The time frame guide is shown below:

- Step 1 – Completed by 20 October 2005
- Step 2 – Completed by 20 October 2005

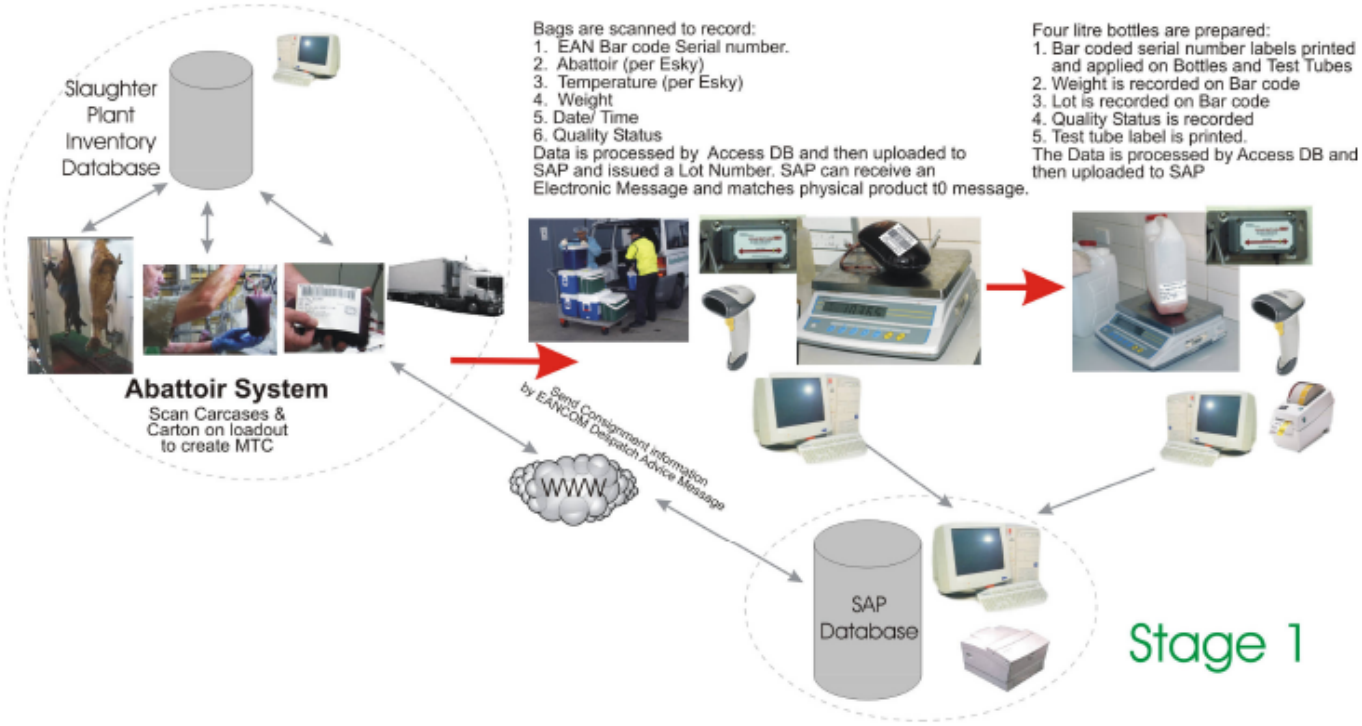
- Step 3 – Completed by 20 October 2005
- Step 4 – Completed by 30 May 2006
- Step 5 – Completed by 30 May 2006
- Step 6 – Completed by 30 May 2006

2.1.9 Proposed New Process Flow Diagram for JRH for Traceability (Indicative Only)



3 Analysis and Integration of EAN Numbering and Labelling for Foetal Blood Bags and Electronic Messaging– Milestone1

The diagram below, defined as Stage 1 processes include Milestone 1 (Process Step 1 and Process Step 2) and Milestone 2 (Process Step 3).



The operational processes cover the labelling of the bags at the abattoir, receiving the bags at JRH and processing the bags to 4 litre bottles. This also includes the associated receiving messaging activities. Duplicate systems have been installed in both Brisbane and Melbourne and are operational.

3.1.1 Step 1 – Labelling and Sending Foetal Blood Bags – Milestone 1

There will be two methods tested for using EAN system for traceability between the suppliers (Abattoirs) and JRH.

Method 1 – EAN capable abattoir that will produce EAN labels for each bag of foetal blood.
The label followed the meat industry guidelines for numbering and bar coding of meat products. This abattoir is to record the carcase body number to the foetal blood bag number. This linkage is to be able to go back to the NLIS or other live identification reference.

Method 2 – Non-EAN capable abattoir have been applying pre-printed EAN labels provided by JRH. Each pre-printed label has an abattoir identification code as well as a unique serial number.

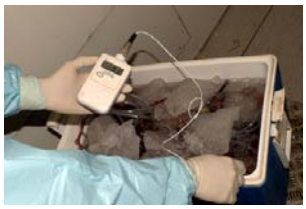
The abattoir records manually the time where practical on the label. If the non-EAN capable abattoir has the facilities they would create and send an EANCOM despatch advice message (using a tool provided to the abattoir) for the individual bags of foetal blood to JRH by simple email.

The label is applied to the tube on the bag.

3.1.2 Step 2 – Receiving and Recording Foetal Blood Bags – Milestone 1

When bags in eskies are received at JRH the eskies are placed in the receiving room.

The temperature is measured and recorded for each esky. The temperature is recorded in the Bag Receiving section of the Traceability Database for the esky.



The bags are taken out the esky and placed in the sink.

The bags are placed in a tray to dry. The labels are visible on the tubes

The bags are counted and an “Esky Lot” records are created in the Bag Receiving section of the Traceability Database for the esky. This includes the following:

Number of bags,
- Operator code,
- Abattoir code,
- Kill date,
- Delivery docket number,
- MTC number,
- Temperature, and;
- Any comments.

Create Esky Batch

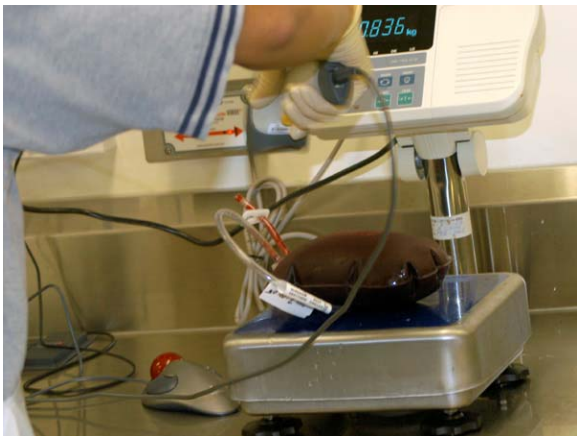
Abattoir Name: E C THROSBY PTY LTD — Abattoir Code: 12
Bag Type: Double Plastic with Band — HGP Free — Code: BBAG9
Operator: Justin
Collection Date: 15-Nov-05 15-Nov-05 (Double Click for today -1 day)
Temp: 1.5 — No. of Bags — Weight
D/ Docket: DD34565
Comment:
Create Batch

Blood Receiving Entry

Bag Bar

Operator	Abattoir Code	Abattoir Name	HGP Free	Temp.	Collection Date	Report Date	Delivery Docket	Bar Code	Weight kgs
Louise	12	E C THROSBY PTY L	☑	2.4	15-Nov-05	15-Nov-05	ac447665	2113032804	0.688
Louise	12	E C THROSBY PTY L	☑	2.4	15-Nov-05	15-Nov-05	ac447665	2113032782	0.817
Louise	12	E C THROSBY PTY L	☑	2.4	15-Nov-05	15-Nov-05	ac447665	2113032787	0.848
Louise	12	E C THROSBY PTY L	☑	2.4	15-Nov-05	15-Nov-05	ac447665	2113032794	0.835
Louise	12	E C THROSBY PTY L	☑	2.4	15-Nov-05	15-Nov-05	ac447665	2113032781	0.833
Louise	12	E C THROSBY PTY L	☑	2.4	15-Nov-05	15-Nov-05	ac447665	2113032805	0.649
Louise	12	E C THROSBY PTY L	☑	2.4	15-Nov-05	15-Nov-05	ac447665	2113030874	0.814
Louise	12	E C THROSBY PTY L	☑	2.4	15-Nov-05	15-Nov-05	ac447665	2113030852	0.558
Louise	12	E C THROSBY PTY L	☑	2.4	15-Nov-05	15-Nov-05	ac447665	2113030862	0.912
Louise	12	E C THROSBY PTY L	☑	2.4	15-Nov-05	15-Nov-05	ac447665	2113030872	0.855

The abattoir code and the (collection date) kill date and serial number create a unique code for each bag of blood



Once the bags are rinsed they are scanned and weighed. The weight is entered into the Bag Receiving section of the Traceability Database for the esky. The weight can either be manually entered or the scales can be connected to a virtual bar code interface and the weight scanned into the database. Bags weight are 200 –1450 Max (nom 800 – 920).
Any comments for each bag are also recorded. If the bag label has manual data written on the label, this information is also recorded against the bag record. This creates a traceability record linking the abattoir (and body number or numbers and live identification reference) with the date, time and sequence of receiving at JRH.

The Raw Serum Supervisor can print a series of reports, these reports include:

- Bags Received for a Date Range Report.
  - Grouped by date
  - Rejects
- Bags Received for a Date Range for an Abattoir.
  - Grouped by date
  - Rejects

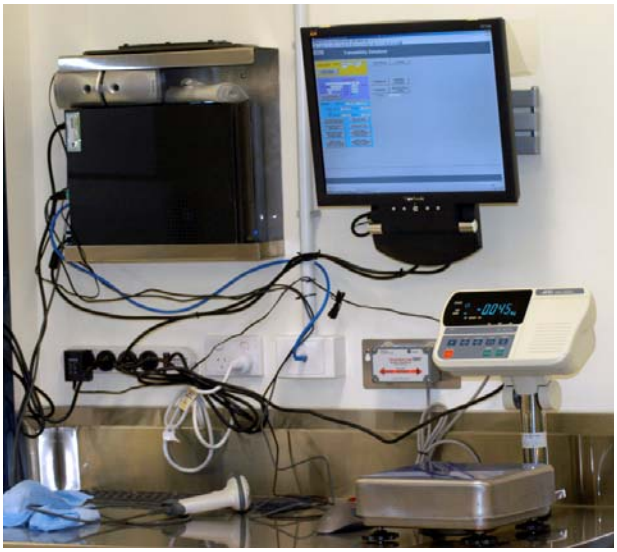
Samples of the reports are shown in the appendix.

To the 20/11/05 there have been over 15,000 bags processed using the systems through the Brisbane facility.

The bags will then be processed in the current work practice method based on segregation by abattoir.

The technology requirement for the Bag Receiving process was as follows:

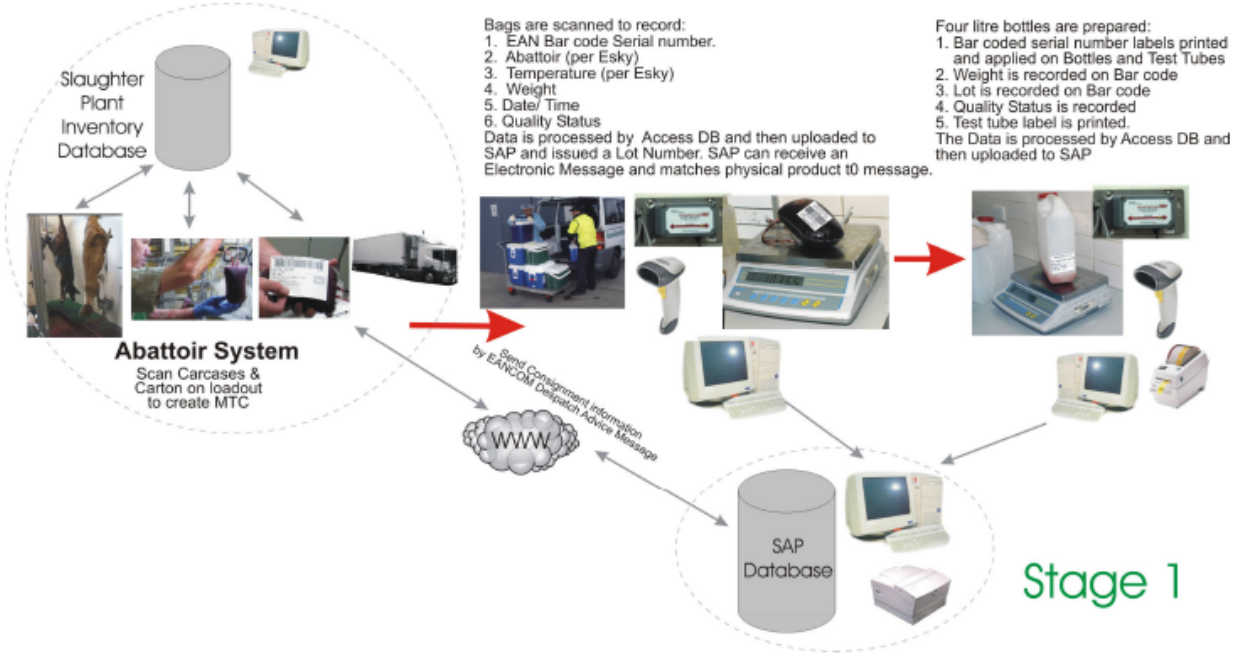
- A computer and flat panel screen mounted high enough to be protected from blood and water spray.
- A waterproof keyboard.
- Scanner (USB eg Symbol LS2208) mounted suitable to be away from blood and water.
- Optional Virtual Bar Code Interface connected via RS232 to the scale.
- Network connection.
- Microsoft Office Professional 2003.



Bag processing equipment as installed in Brisbane and Melbourne.

4 Analysis and Integration of EAN Bar Coding through the Foetal Bovine Serum Processing – Milestone 2

The diagram below, defined as Stage 1 processes include Milestone 1 (Process Step 1 and Process Step 2) and Milestone 2 (Process Step 3).



The operational processes cover the labelling of the bags at the abattoir, receiving the bags at JRH and processing the bags to 4 litre bottles.

Duplicate systems have been installed in both Brisbane and Melbourne and are operational.

4.1.1 Step 3–Initial Processing (Extraction) of Foetal Blood Bags into 4L Bottles– Milestone 2

Each lot of bags (defined as an abattoir and date) are processed and used to fill bottles.

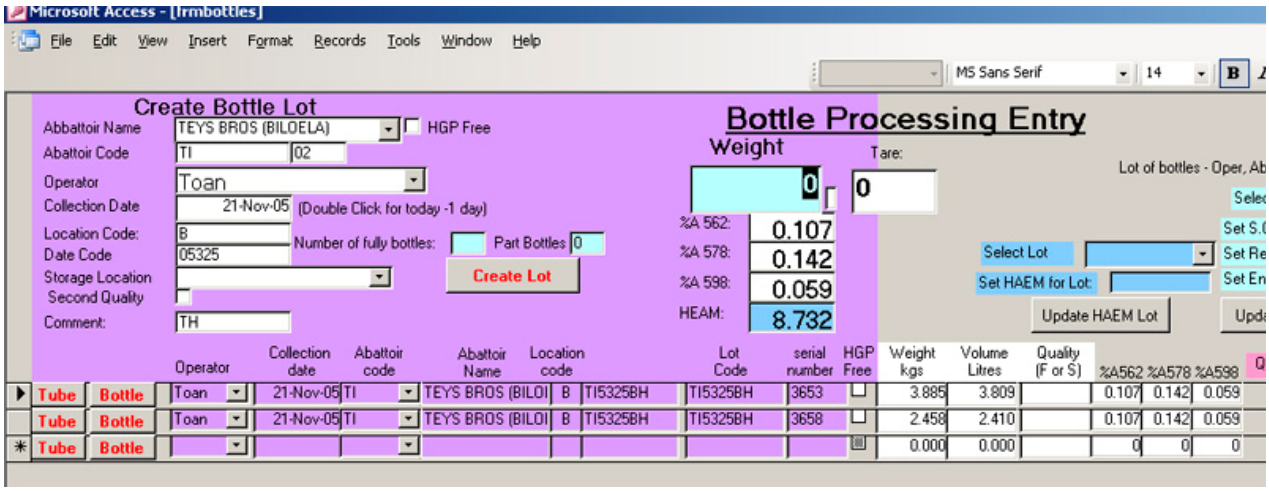
Old labels on bottles


New label being printed

When the bottles are being filled a label is created for each bottle. The label is created using the Bottle Extraction section of the Traceability Database. The label is created by entering the following information:

- Operator code,

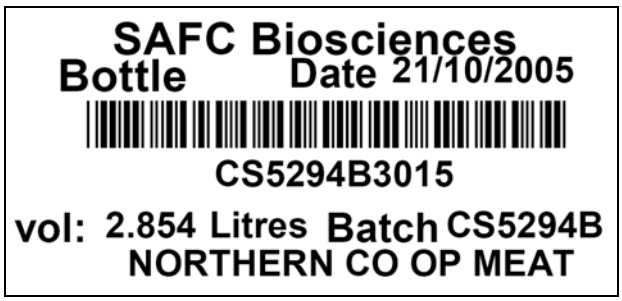
- Abattoir code,
- Kill date,
- First/ Second Grade



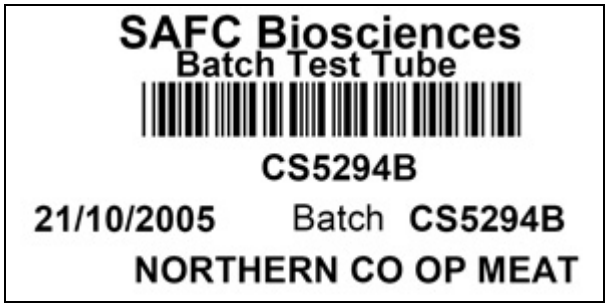
Tare labels for the bottle can be printed for the empty bottles.

The weight is recorded by default and can be by Virtual Bar Code Interface to the scale for part filled bottles. There are validation rules for the weight to ensure that entry errors can be readily detected.

The lot code is created automatically by the abattoir code, kill date and first or second grade.
The label includes the abattoir name, lot code, bar code of lot code and serial number concatenated, weight, volume, date and other general information. The abattoir name is on the label. This is to ensure quick recognition by the operators when part filled bottles need to be topped up.



If a bottle is only partly filled it has a weight entered and the label printed and attached. The bottle can be topped up with the same grade from the same abattoir. When this occurs as second label is printed and stuck to the bottle.
The database can print two types of labels for bottles and for test tubes. The bar code on the label is the abattoir code, date code, location code, grade and serial number.
The test tube label is shown below:



The labels are printed out of the Access Database and has the abattoir name, date, serial number, lot code (made up of a 2 letter abattoir code, 3 digit day of the year, 2 digit year and processing location code, eg ABC32004N being from abattoir CS on day 249 in 2005 and processed in Brisbane) and a bar code of the batch code.
If the serum is second grade it has an “S” added to the end of the serial number and is also printed on the label.
The bottles are then placed in the freezer.
For storage purposes the bottles can be placed in cartons and the cartons placed in storage. The cartons can have labels printed showing the bottle in the cartons. The database can record the carton number and storage location.
The database also has a facility to record the testing status of each batch.
The Microsoft Access Database can generate reports showing the number of bottles produced for each lot/ batch, the weight of part full bottles, the serial number of the bottles and grouping information about traceability eg serial numbers of bags that went into each batch of bottles. A report can also be generated to show bottles to be used for processing (eg nominated batches that have completed test results).
A series of reports can be created, see the appendix for samples.

Information can be summarised out of the database for entry into the SAP system where necessary.
The technology requirement for the Bag Receiving process is as follows:

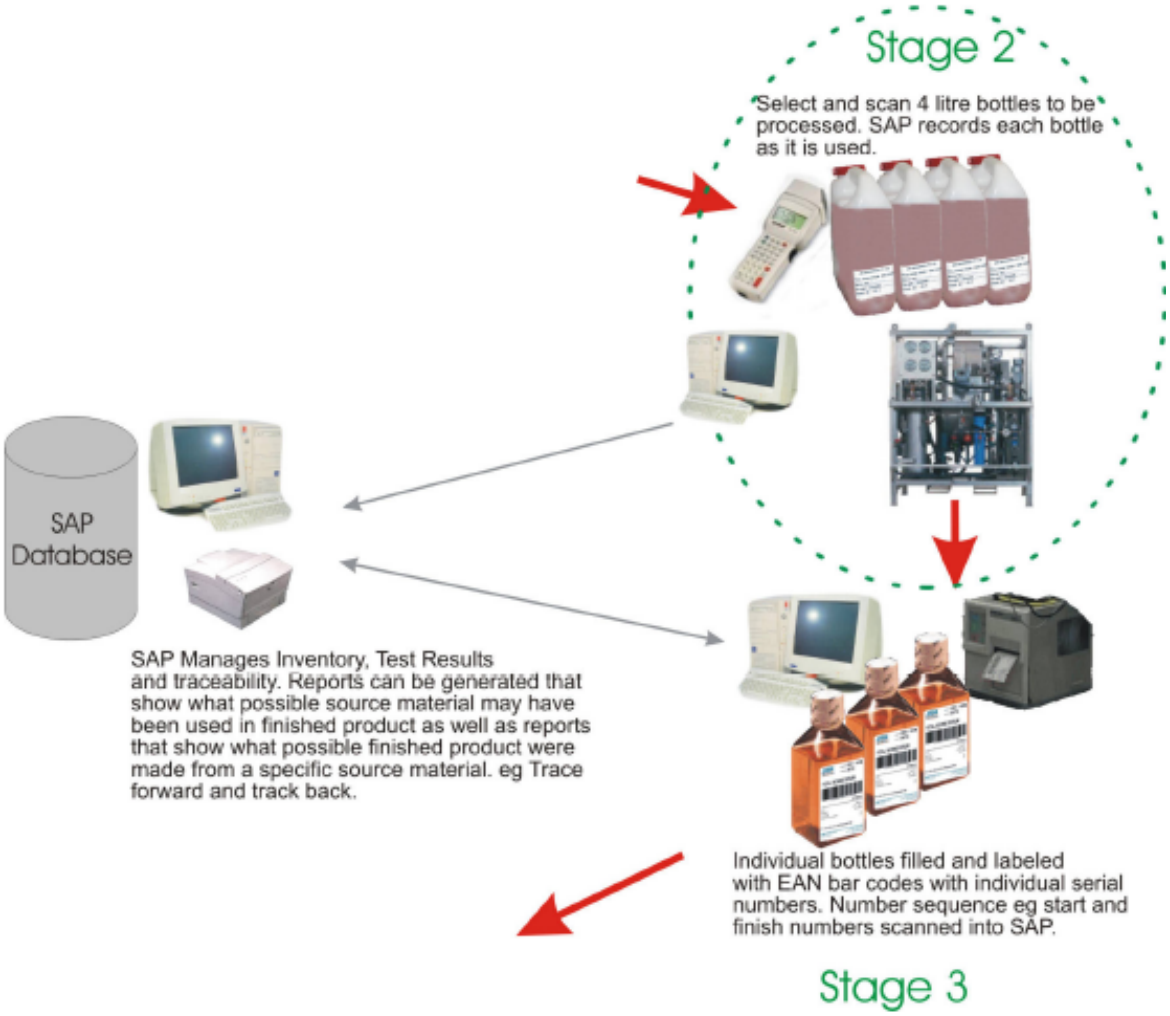
- A computer and flat panel screen mounted high enough to be protected from blood and water spray.
- A waterproof keyboard.
- Small label printer (2 inch wide eg Zebra 2824) mounted suitable to be away from blood and water.

- Optional scanner (USB eg Symbol LS2208) mounted suitable to be away from blood and water. This is used for the scale weight and for checking bag records.
- Optional Virtual Bar Code Interface connected via RS232 to the scale.
- Network connection.
- Microsoft Office Professional 2003.

Equipment in the bottle processing section of Brisbane and Melbourne.

4.1.2 Step 4 – Processing of Frozen Foetal 4L Bottles into Serum – Milestone 3

The diagram below, defined as Stage 2 processes include Milestone 3 (Process Step 4).



When foetal serum is to be produced from frozen 4 L bottles a “Batches Released for Processing” report is to be generated out of the database showing the batches that can be used for processing.

The batched codes are then manually entered into the Pocket PC based scanner or scanned off the bar codes on the “Batches Released for Processing” report. The Pocket PC based scanner has a simple application that checks for the batch code and then records the serial number of each bottle selected. If an incorrect batch is scanned the scanner beeps and indicates that the bottle is not of the correct batch. If the same bottle is scanned twice the scanner beeps and indicates that the bottle has already been scanned.

Once all the required bottles have been scanned the Scanner is plugged into the Weighing/ Printing Station located in the receiving area. The record of the scanned bottles is downloaded into the Microsoft Access Database. The bottle records in the database are automatically updated with the production batch details. A report can be generated that shows the specific bottles and batches that went into a production batch as well as the number of bottles of a specific batch that are still in the freezer. A traceability report can be generated that shows the possible bag serial numbers, received dates and abattoirs that are in a specific production batch. This information can be linked to the individual livestock animal references.

5 Appendix – Sample Reports

Bags Report for 11/11/2005

Date/time Record Created	Collection Date	Abattior Name	Abattior 2 digit Code	hgp free	Barcode	Weight	Temp	Reject	Unclaim Reject	Quarantine	Bag Type
11/11/2005 6:15:32 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003217	1.052	1.1	☐	☐	☐	BBAG6
11/11/2005 6:15:45 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003197	0.911	1.1	☐	☐	☐	BBAG6
11/11/2005 6:15:54 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003222	0.899	1.1	☐	☐	☐	BBAG6
11/11/2005 6:16:07 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003201	1.076	1.1	☐	☐	☐	BBAG6
11/11/2005 6:16:18 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003194	0.906	1.1	☐	☐	☐	BBAG6
11/11/2005 6:16:25 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003227	0.862	1.1	☑	☐	☐	BBAG6
11/11/2005 6:16:33 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003206	0.908	1.1	☐	☐	☐	BBAG6
11/11/2005 6:16:43 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003210	0.844	1.1	☐	☐	☐	BBAG6
11/11/2005 6:16:51 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003188	0.918	1.1	☐	☐	☐	BBAG6
11/11/2005 6:17:02 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003223	0.9	1.1	☐	☐	☐	BBAG6
11/11/2005 6:17:10 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003196	1	1.1	☐	☐	☐	BBAG6
11/11/2005 6:17:19 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003193	0.911	1.1	☐	☐	☐	BBAG6
11/11/2005 6:17:31 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003186	0.849	1.1	☐	☐	☐	BBAG6
11/11/2005 6:17:37 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003208	0.882	1.1	☐	☐	☐	BBAG6
11/11/2005 6:17:47 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003209	0.655	1.1	☐	☐	☐	BBAG6
11/11/2005 6:17:56 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003202	0.916	1.1	☐	☐	☐	BBAG6
11/11/2005 6:18:12 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003213	0.916	2.3	☐	☐	☐	BBAG6
11/11/2005 6:18:37 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003190	0.911	2.3	☐	☐	☐	BBAG6
11/11/2005 6:18:47 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003203	0.853	2.3	☐	☐	☐	BBAG6
11/11/2005 6:19:02 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003191	0.956	2.3	☐	☐	☐	BBAG6
11/11/2005 6:19:18 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003226	0.808	2.3	☑	☐	☐	BBAG6
11/11/2005 6:19:23 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003225	0.923	2.3	☐	☐	☐	BBAG6
11/11/2005 6:19:32 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003216	0.892	2.3	☐	☐	☐	BBAG6
11/11/2005 6:19:46 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003192	0.988	2.3	☐	☐	☐	BBAG6
11/11/2005 6:19:56 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003199	0.919	2.3	☐	☐	☐	BBAG6
11/11/2005 6:20:06 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003220	0.898	2.3	☑	☐	☐	BBAG6
11/11/2005 6:20:19 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003218	0.878	2.3	☐	☐	☐	BBAG6
11/11/2005 6:20:26 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003207	0.897	2.3	☐	☐	☐	BBAG6
11/11/2005 6:20:36 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003221	0.908	2.3	☐	☐	☐	BBAG6
11/11/2005 6:20:45 AM	10-Nov-05	TEYS BROS (BEENLEIGH) PTY LTD	01	☐	2101003211	0.854	2.3	☐	☐	☐	BBAG6

Bottle Report for 11/11/2005

Date/time Record Created	Collection Date	Abattior Name	Abattior 2 digit Code	hgp free	Batch Code	Serial Number	Weight	Volume	HAEM	Quarantin
11/11/2005 1:29:51 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3428	0.117	0.115	12.3	☐
11/11/2005 1:31:04 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3429	4.080	4.000	12.3	☐
11/11/2005 1:32:07 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3430	4.080	4.000	12.3	☐
11/11/2005 1:32:58 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3431	4.080	4.000	12.3	☐
11/11/2005 1:33:33 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3432	4.080	4.000	12.3	☐
11/11/2005 1:34:38 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3433	4.080	4.000	12.3	☐
11/11/2005 1:35:33 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3434	4.080	4.000	12.3	☐
11/11/2005 1:36:30 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3435	4.080	4.000	12.3	☐
11/11/2005 1:37:59 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3436	4.080	4.000	12.3	☐
11/11/2005 1:39:04 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3437	4.080	4.000	12.3	☐
11/11/2005 1:40:05 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3438	4.080	4.000	12.3	☐
11/11/2005 1:41:03 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3439	4.080	4.000	12.3	☐
11/11/2005 1:41:55 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3440	4.080	4.000	12.3	☐
11/11/2005 1:42:55 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3441	4.080	4.000	12.3	☐
11/11/2005 1:43:52 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3442	4.080	4.000	12.3	☐
11/11/2005 1:44:51 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3443	4.080	4.000	12.3	☐
11/11/2005 1:45:55 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3444	4.080	4.000	12.3	☐
11/11/2005 1:46:43 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3445	4.080	4.000	12.3	☐
11/11/2005 1:55:23 PM	10/11/2005	WINGHAM ABATTOIRS PTY LTD	WB	☑	WB5314B	3446	3.044	2.984	13.3	☐
11/11/2005 2:01:24 PM	10/11/2005	T&R (MURRAY BRIDGE) PTY LTD	TR	☑	TR5314B	3447	0.086	0.084	10.5	☐
11/11/2005 2:03:22 PM	10/11/2005	T&R (MURRAY BRIDGE) PTY LTD	TR	☑	TR5314B	3448	4.080	4.000	10.5	☐
11/11/2005 2:16:57 PM	10/11/2005	JOHN DEE WARWICK PTY LTD	JD	☑	JD5314B	3449	1.075	1.054	8.7	☐
11/11/2005 2:18:53 PM	10/11/2005	JOHN DEE WARWICK PTY LTD	JD	☑	JD5314B	3450	4.080	4.000	8.7	☐
11/11/2005 2:20:00 PM	10/11/2005	JOHN DEE WARWICK PTY LTD	JD	☑	JD5314B	3451	4.080	4.000	8.7	☐
11/11/2005 2:21:06 PM	10/11/2005	JOHN DEE WARWICK PTY LTD	JD	☑	JD5314B	3452	4.080	4.000	8.7	☐
11/11/2005 2:22:03 PM	10/11/2005	JOHN DEE WARWICK PTY LTD	JD	☑	JD5314B	3453	4.080	4.000	8.7	☐
11/11/2005 2:36:03 PM	10/11/2005	RALPHS MEAT COMPANY PTY L	RM	☑	RM5314BS	3454	2.846	2.790	26.4	☐
11/11/2005 2:40:00 PM	10/11/2005	NORTHERN CO OP MEAT CO	CS	☑	CS5314B	3455	0.443	0.434	13.1	☐
11/11/2005 2:53:03 PM	10/11/2005	TEYS BROS (BEENLEIGH) PTY L	TE	☐	TE5314BHS	3456	2.384	2.337	22.0	☐
11/11/2005 2:54:12 PM	10/11/2005	TEYS BROS (BEENLEIGH) PTY L	TE	☐	TE5314BHS	3457	4.080	4.000	22.0	☐
11/11/2005 2:55:00 PM	10/11/2005	TEYS BROS (BEENLEIGH) PTY L	TE	☐	TE5314BHS	3458	4.080	4.000	22.0	☐
11/11/2005 2:55:42 PM	10/11/2005	TEYS BROS (BEENLEIGH) PTY L	TE	☐	TE5314BHS	3459	4.080	4.000	22.0	☐
11/11/2005 2:59:18 PM	10/11/2005	TEYS BROS (BILOELA)	TI	☐	TI5314BH	3460	0.134	0.131	12.2	☐

Date/time Record Created	Collection Date	Abattior Name	Abattior 2 digit Code	hgp free	Batch Code	Serial Number	Weight	Volume	HAEM	Quarantine
11/11/2005 3:01:30 PM	10/11/2005	TEYS BROS (BILOELA)	TI	☐	TI5314BH	3461	4.080	4.000	12.2	☐
11/11/2005 3:10:13 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3462	4.080	4.000	12.3	☐
11/11/2005 3:11:54 PM	10/11/2005	WINGHAM ABATTOIRS PTY LTD	WB	☑	WB5314B	3463	4.080	4.000	13.3	☐
11/11/2005 3:12:25 PM	10/11/2005	WINGHAM ABATTOIRS PTY LTD	WB	☑	WB5314B	3464	0.663	0.650	13.3	☐
11/11/2005 3:49:27 PM	10/11/2005	JOHN DEE WARWICK PTY LTD	JD	☑	JD5314B	3465	1.504	1.475	8.7	☐
11/11/2005 3:50:00 PM	10/11/2005	E C THROSBY PTY LTD	TH	☑	TH5314B	3466	1.483	1.454	12.3	☐
11/11/2005 3:50:28 PM	10/11/2005	T&R (MURRAY BRIDGE) PTY LTD	TR	☑	TR5314B	3467	3.210	3.147	10.5	☐
11/11/2005 3:51:05 PM	10/11/2005	RALPHS MEAT COMPANY PTY L	RM	☑	RM5314BS	3468	1.977	1.938	26.4	☐
11/11/2005 3:51:30 PM	10/11/2005	NORTHERN CO OP MEAT CO	CS	☑	CS5314B	3469	1.439	1.411	13.1	☐
11/11/2005 3:52:20 PM	10/11/2005	TEYS BROS (BILOELA)	TI	☐	TI5314BH	3470	4.080	4.000	12.2	☐
11/11/2005 3:52:38 PM	10/11/2005	TEYS BROS (BILOELA)	TI	☐	TI5314BH	3471	0.103	0.101	12.2	☐
11/11/2005 3:54:21 PM	10/11/2005	TEYS BROS (BEENLEIGH) PTY L	TE	☐	TE5314BHS	3473	4.080	4.000	22.0	☐
11/11/2005 3:54:43 PM	10/11/2005	TEYS BROS (BEENLEIGH) PTY L	TE	☐	TE5314BHS	3474	0.654	0.641	22.0	☐
						Total 46		140.747		

WEEKLY SERUM PRODUCTION SUMMARY REPORT BY HGP AND PLANT

	Processing Date	hgp free	No. Bags	Total Blood (kg)	Claimed Blood Reject (KG)	UnClaimed Blood Reject (KG)	Blood Volume (L)	Total Export Blood (L)	Total Blood Processed	1 St Grade Serum (L)	2nd Grade Serum (L)	Total Serum (L)	Yeild
E C THROSBY PTY LT	14/11/2005	☑	35	30.273			28.831	28.831	28.831	16.724	0.000	16.724	58.005
NORTHERN CO OP ME	14/11/2005	☑	4	3.461			3.296	3.296	3.296	1.932	0.000	1.932	58.624
T&R (MURRAY BRIDG	14/11/2005	☑	30	22.968			21.874	21.874	21.874	13.310	0.000	13.310	60.847
TEYS BROS (BEENLEI	14/11/2005	☑	2	1.557			1.483	1.483	1.483	0.925	0.000	0.925	62.347
TEYS BROS (BEENLEI	14/11/2005	☐	19	17.360			16.533	16.533	16.533	9.510	0.000	9.510	57.519
TEYS BROS (BILOELA)	14/11/2005	☑	8	6.537	0.817		6.226	5.448	5.448	0.000	3.341	3.341	61.333
TEYS BROS (BILOELA)	14/11/2005	☐	4	3.385			3.224	3.224	3.224	1.843	0.000	1.843	57.173
WINGHAM ABATTOIRS	14/11/2005	☑	15	12.164			11.585	11.585	11.585	6.671	0.000	6.671	57.581
E C THROSBY PTY LT	15/11/2005	☑	81	66.232			63.078	63.078	63.078	36.056	0.000	36.056	57.161
T&R (MURRAY BRIDG	15/11/2005	☑	28	21.571			20.544	20.544	20.544	11.683	0.000	11.683	56.870
TEYS BROS (BEENLEI	15/11/2005	☑	1	0.836			0.796	0.796	0.796	0.000	0.554	0.554	69.571
TEYS BROS (BEENLEI	15/11/2005	☐	20	17.820			16.971	16.971	16.971	0.000	9.775	9.775	57.594
TEYS BROS (BILOELA)	15/11/2005	☑	3	2.404			2.290	2.290	2.290	1.301	0.000	1.301	56.824
TEYS BROS (BILOELA)	15/11/2005	☐	3	1.745			1.662	1.662	1.662	0.960	0.000	0.960	57.753
WINGHAM ABATTOIRS	15/11/2005	☑	19	15.707			14.959	14.959	14.959	8.723	0.000	8.723	58.310
E C THROSBY PTY LT	16/11/2005	☑	101	85.023			80.974	80.974	80.974	38.618	7.888	46.506	57.433
NORTHERN CO OP ME	16/11/2005	☑	6	5.214			4.966	4.966	4.966	0.000	2.688	2.688	54.136
T&R (MURRAY BRIDG	16/11/2005	☑	18	13.816			13.158	13.158	13.158	7.853	0.000	7.853	59.681
TEYS BROS (BEENLEI	16/11/2005	☑	3	2.737			2.607	2.607	2.607	1.393	0.000	1.393	53.445
TEYS BROS (BEENLEI	16/11/2005	☐	1	0.910			0.867	0.867	0.867	0.531	0.000	0.531	61.312
TEYS BROS (BILOELA)	16/11/2005	☑	19	15.567			14.826	14.826	14.826	8.497	0.000	8.497	57.313
TEYS BROS (BILOELA)	16/11/2005	☐	3	2.136			2.034	2.034	2.034	1.228	0.000	1.228	60.383
WINGHAM ABATTOIRS	16/11/2005	☑	30	24.438			23.274	23.274	23.274	12.748	0.000	12.748	54.773
E C THROSBY PTY LT	17/11/2005	☑	26	20.786			19.796	19.796	19.796	0.000	11.156	11.156	56.354
E C THROSBY PTY LT	17/11/2005	☐	19	14.518			13.827	13.827	13.827	8.549	0.000	8.549	61.830
JOHN DEE WARWICK	17/11/2005	☑	42	29.634			28.223	28.223	28.223	17.597	0.000	17.597	62.350

	Processing Date	hgp free	No. Bags	Total Blood (kg)	Claimed Blood Reject (KG)	UnClaimed Blood Reject (KG)	Blood Volume (L)	Total Export Blood (L)	Total Blood Processed	1 St Grade Serum (L)	2nd Grade Serum (L)	Total Serum (L)	Yeild
NORTHERN CO OP ME	17/11/2005	☑	5	4.508			4.293	4.293	4.293	2.402	0.000	2.402	55.946
T&R (MURRAY BRIDG	17/11/2005	☑	26	19.959			19.009	19.009	19.009	11.103	0.000	11.103	58.410
TEYS BROS (BEENLEI	17/11/2005	☑	16	13.809			13.151	13.151	13.151	6.639	0.000	6.639	50.483
TEYS BROS (BEENLEI	17/11/2005	☐	5	3.707			3.530	3.530	3.530	2.440	0.000	2.440	69.121
TEYS BROS (BILOELA)	17/11/2005	☐	21	17.120			16.305	16.305	16.305	9.438	0.000	9.438	57.886
WINGHAM ABATTOIRS	17/11/2005	☑	48	39.046			37.187	37.187	37.187	20.338	0.000	20.338	54.692
E C THROSBY PTY LT	18/11/2005	☑	64	53.615			51.062	51.062	51.062	29.175	0.000	29.175	57.137
NORTHERN CO OP ME	18/11/2005	☑	5	4.483			4.270	4.270	4.270	2.407	0.000	2.407	56.375
T&R (MURRAY BRIDG	18/11/2005	☑	26	19.883			18.936	18.936	18.936	10.868	0.000	10.868	57.391
TEYS BROS (BEENLEI	18/11/2005	☐	22	19.721			18.782	18.782	18.782	10.449	0.000	10.449	55.633
TEYS BROS (BILOELA)	18/11/2005	☐	16	12.553			11.955	11.955	11.955	6.621	0.000	6.621	55.378
WINGHAM ABATTOIRS	18/11/2005	☑	11	8.582			8.173	8.173	8.173	0.000	4.299	4.299	52.598
	Total		**805**	**655.785**	**0.817**		**624.557**	**623.779**	**623.779**	**318.532**	**39.701**	**358.232**	**57.429**