

# Batch Detail Report

Batch : 13540U  
Owner :MH/HB du Toit  
Farm :Osbosch  
Account : DUTH01  
Origin : PRIVATE  
Invoice To : Owner

Created : 2023-05-31

| SAMPLE    | ANIMAL           | SPECIES | BREED        | DAM | SIRE | TEST    | Tissue Type | RESULT                | INVOICE |
|-----------|------------------|---------|--------------|-----|------|---------|-------------|-----------------------|---------|
| 13540U003 | HBT20-0064 (M,1) | CATTLE  | BONSMARA (1) |     |      | SNP50_C | Hair        | IG50 :<br>IGENITY 50K |         |
| 13540U004 | HBT20-0108 (M,1) | CATTLE  | BONSMARA (1) |     |      | SNP50_C | Hair        | IG50 :<br>IGENITY 50K |         |
| 13540U018 | HBT21-0069 (M,1) | CATTLE  | BONSMARA (1) |     |      | SNP50_C | Hair        | IG50 :<br>IGENITY 50K |         |
| 13540U021 | HBT21-0095 (M,1) | CATTLE  | BONSMARA (1) |     |      | SNP50_C | Hair        | IG50 :<br>IGENITY 50K |         |

Report Date : 27-Jun-2023 15:57

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**CHARNÉ ROSSOUW**  
DIVISION MANAGER

# Batch Detail Report

Batch : 13540U  
Owner :MH/HB du Toit  
Farm :Osbosch  
Account : DUTH01  
Origin : PRIVATE  
Invoice To : Owner

Created : 2023-05-31

0068961 BON

| SAMPLE    | ANIMAL           | SPECIES | BREED        | DAM | SIRE | TEST    | Tissue Type | RESULT                                  | INVOICE |
|-----------|------------------|---------|--------------|-----|------|---------|-------------|-----------------------------------------|---------|
| 13540U001 | HBT20-0056 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-1_C | Hair        | F94NOR :<br>Myostatin - F94L<br>Normal  |         |
| 13540U001 | HBT20-0056 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-2_C | Hair        | Q20NOR :<br>Myostatin - Q204X<br>Normal |         |
| 13540U001 | HBT20-0056 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-3_C | Hair        | nt8NOR :<br>Myostatin - nt821<br>Normal |         |
| 13540U002 | HBT20-0062 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-1_C | Hair        | F94NOR :<br>Myostatin - F94L<br>Normal  |         |
| 13540U002 | HBT20-0062 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-2_C | Hair        | Q20NOR :<br>Myostatin - Q204X<br>Normal |         |
| 13540U002 | HBT20-0062 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-3_C | Hair        | nt8NOR :<br>Myostatin - nt821<br>Normal |         |
| 13540U005 | HBT20-0109 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-1_C | Hair        | F94NOR :<br>Myostatin - F94L<br>Normal  |         |
| 13540U005 | HBT20-0109 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-2_C | Hair        | Q20NOR :<br>Myostatin - Q204X<br>Normal |         |
| 13540U005 | HBT20-0109 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-3_C | Hair        | nt8NOR :<br>Myostatin - nt821           |         |

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DIVISION MANAGER

| SAMPLE    | ANIMAL           | SPECIES | BREED        | DAM | SIRE | TEST    | Tissue Type | RESULT                                           | INVOICE |
|-----------|------------------|---------|--------------|-----|------|---------|-------------|--------------------------------------------------|---------|
| 13540U006 | HBT20-0119 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-1_C | Hair        | Normal<br>F94NOR :<br>Myostatin - F94L<br>Normal |         |
| 13540U006 | HBT20-0119 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-2_C | Hair        | Q20NOR :<br>Myostatin - Q204X<br>Normal          |         |
| 13540U006 | HBT20-0119 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-3_C | Hair        | nt8NOR :<br>Myostatin - nt821<br>Normal          |         |
| 13540U007 | HBT20-0136 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-1_C | Hair        | F94NOR :<br>Myostatin - F94L<br>Normal           |         |
| 13540U007 | HBT20-0136 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-2_C | Hair        | Q20NOR :<br>Myostatin - Q204X<br>Normal          |         |
| 13540U007 | HBT20-0136 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-3_C | Hair        | nt8NOR :<br>Myostatin - nt821<br>Normal          |         |
| 13540U008 | HBT21-0004 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-1_C | Hair        | F94NOR :<br>Myostatin - F94L<br>Normal           |         |
| 13540U008 | HBT21-0004 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-2_C | Hair        | Q20NOR :<br>Myostatin - Q204X<br>Normal          |         |
| 13540U008 | HBT21-0004 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-3_C | Hair        | nt8NOR :<br>Myostatin - nt821<br>Normal          |         |
| 13540U009 | HBT21-0011 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-1_C | Hair        | F94NOR :<br>Myostatin - F94L<br>Normal           |         |
| 13540U009 | HBT21-0011 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-2_C | Hair        | Q20NOR :<br>Myostatin - Q204X<br>Normal          |         |

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DIVISION MANAGER

| SAMPLE    | ANIMAL           | SPECIES | BREED        | DAM | SIRE | TEST    | Tissue Type | RESULT                                  | INVOICE |
|-----------|------------------|---------|--------------|-----|------|---------|-------------|-----------------------------------------|---------|
| 13540U009 | HBT21-0011 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-3_C | Hair        | nt8NOR :<br>Myostatin - nt821<br>Normal |         |
| 13540U010 | HBT21-0016 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-1_C | Hair        | F94NOR :<br>Myostatin - F94L<br>Normal  |         |
| 13540U010 | HBT21-0016 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-2_C | Hair        | Q20NOR :<br>Myostatin - Q204X<br>Normal |         |
| 13540U010 | HBT21-0016 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-3_C | Hair        | nt8NOR :<br>Myostatin - nt821<br>Normal |         |
| 13540U011 | HBT21-0019 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-1_C | Hair        | F94NOR :<br>Myostatin - F94L<br>Normal  |         |
| 13540U011 | HBT21-0019 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-2_C | Hair        | Q20NOR :<br>Myostatin - Q204X<br>Normal |         |
| 13540U011 | HBT21-0019 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-3_C | Hair        | nt8NOR :<br>Myostatin - nt821<br>Normal |         |
| 13540U012 | HBT21-0030 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-1_C | Hair        | F94NOR :<br>Myostatin - F94L<br>Normal  |         |
| 13540U012 | HBT21-0030 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-2_C | Hair        | Q20NOR :<br>Myostatin - Q204X<br>Normal |         |
| 13540U012 | HBT21-0030 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-3_C | Hair        | nt8NOR :<br>Myostatin - nt821<br>Normal |         |
| 13540U013 | HBT21-0035 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-1_C | Hair        | F94NOR :<br>Myostatin - F94L<br>Normal  |         |
| 13540U013 | HBT21-0035 (M,1) | CATTLE  | BONSMARA (1) |     |      | DMG-2_C | Hair        | Q20NOR :<br>Myostatin - Q204X           |         |

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**DIVISION MANAGER**

| SAMPLE    | ANIMAL           | SPECIES | BREED           | DAM | SIRE | TEST    | Tissue Type | RESULT                                            | INVOICE |
|-----------|------------------|---------|-----------------|-----|------|---------|-------------|---------------------------------------------------|---------|
| 13540U013 | HBT21-0035 (M,1) | CATTLE  | BONSMARA<br>(1) |     |      | DMG-3_C | Hair        | Normal<br>nt8NOR :<br>Myostatin - nt821<br>Normal |         |

**Report Date : 28-Jun-2023 15:30**

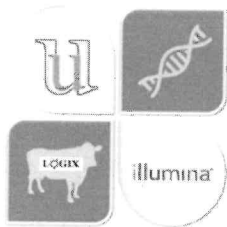
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DIVISION MANAGER



Unistel Medical Laboratories  
**Genetic Report**  
 BOVINESNP50-24 v3 BeadChip

MH/HB du Toit  
 Osbosch  
 Bonsmara  
**HB20-0064**  
**13540U003**

Animal Tested:

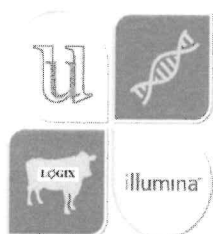
Sample type:

Hair

| Description      | Mutations                   | Status              | Description  | Mutations Tested                 | Status                                                                   |
|------------------|-----------------------------|---------------------|--------------|----------------------------------|--------------------------------------------------------------------------|
| Coat colouration | MC1R - e                    | E+/E+               | Meat         | Calpain 1 - 316                  | G/G                                                                      |
|                  | MC1R - ED                   | E+/E+               | Tenderness   | Calpain 1 - 4751                 | T/T                                                                      |
|                  | Dun Dexter Dilution (TYPR1) | +/+                 |              | Calpain 1 - 530                  | Insufficient data                                                        |
|                  | Silver Dilution type 1      | +/+                 |              | Calpastatin - 282                | G/C                                                                      |
|                  | Silver Dilution type 2      | +/+                 |              | Calpastatin - 2870               | A/G                                                                      |
| Myostatin Status | Myostatin C313Y             | Clear               |              | Calpastatin - 2959               | A/G                                                                      |
|                  | Myostatin E226X             | Clear               |              |                                  |                                                                          |
|                  | Myostatin E291X             | Clear               | Milk status  | Beta Casein - 245                | A2/A2                                                                    |
|                  | Myostatin nt419             | Clear               |              | Beta Casein - 411                | B/B                                                                      |
|                  | Myostatin nt821             | Clear               |              | Kappa Casein - 352               | A/A                                                                      |
|                  | Myostatin Q204X             | Clear               |              | Kappa Casein - 467               | A/G1                                                                     |
|                  | Myostatin D182N             | Clear               |              | Kappa Casein - 470               | A/A                                                                      |
|                  | Myostatin F94L              | Clear               |              | Kappa Casein - 506               | B/B                                                                      |
|                  | Myostatin S105C             | Clear               |              | Kappa Casein - 526               | A/A                                                                      |
| POMPE Status     | E13 mutation                | Clear               |              |                                  |                                                                          |
|                  | E18 mutation                | Clear               | Milk quality | Growth Hormone F279Y             | Increased milk, casein & lactose yield;<br>decreased protein & fat yield |
|                  | E7 mutation                 | Clear               |              | Growth Hormone 2141              | Decreased milk protein & fat yield                                       |
| Hornedness       | Polled Celtic               | Heterozygous Polled |              | Growth Hormone 2291              | Normal milk fat yield, fat & protein %                                   |
| Heat Tolerance   | SLICK                       | No added resistance |              | ABCG2 - protein yield milk       | Normal fat, protein & milk yield; normal<br>fat & protein %              |
| Eye Disorders    | Pinkeye resistance          | Reduced risk 16-26% |              | AcylCoA - milk fat percentage    | Slightly increased milk yield. Slightly<br>decreased fat & protein %.    |
| Bone Disorder    | Osteopetrosis               | Clear               |              | Trimethylaminuria excess in milk | Clear                                                                    |
|                  |                             |                     |              | Yellow milk fat                  | Normal yellow fat                                                        |

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# Unistel Medical Laboratories Genetic Report

BOVINESNP50-24 v3 BeadChip

MH/HB du Toit  
Osbosch  
Bonsmara

Animal Tested:

**HBT20-0108**

**13540U004**

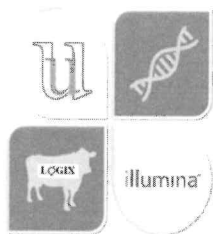
Sample type:

**Hair**

| Description      | Mutations                   | Status              | Description  | Mutations Tested                 | Status                                                                   |
|------------------|-----------------------------|---------------------|--------------|----------------------------------|--------------------------------------------------------------------------|
| Coat colouration | MC1R - e                    | E+/E+               | Meat         | Calpain 1 - 316                  | G/G                                                                      |
|                  | MC1R - ED                   | E+/E+               | Tenderness   | Calpain 1 - 4751                 | C/T                                                                      |
|                  | Dun Dexter Dilution (TYPR1) | +/+                 |              | Calpain 1 - 530                  | A/G                                                                      |
|                  | Silver Dilution type 1      | +/+                 |              | Calpastatin - 282                | C/C                                                                      |
|                  | Silver Dilution type 2      | +/+                 |              | Calpastatin - 2870               | G/G                                                                      |
| Myostatin Status | Myostatin C313Y             | Clear               |              | Calpastatin - 2959               | A/A                                                                      |
|                  | Myostatin E226X             | Clear               |              |                                  |                                                                          |
|                  | Myostatin E291X             | Clear               | Milk status  | Beta Casein - 245                | A2/A2                                                                    |
|                  | Myostatin nt419             | Clear               |              | Beta Casein - 411                | B/B                                                                      |
|                  | Myostatin nt821             | Clear               |              | Kappa Casein - 352               | A/A                                                                      |
|                  | Myostatin Q204X             | Clear               |              | Kappa Casein - 467               | A/A                                                                      |
|                  | Myostatin D182N             | Clear               |              | Kappa Casein - 470               | A/B                                                                      |
|                  | Myostatin F94L              | Clear               |              | Kappa Casein - 506               | A/B                                                                      |
|                  | Myostatin S105C             | Clear               |              | Kappa Casein - 526               | A/A                                                                      |
| POMPE Status     | E13 mutation                | Clear               |              |                                  |                                                                          |
|                  | E18 mutation                | Clear               | Milk quality | Growth Hormone F279Y             | Increased milk, casein & lactose yield;<br>decreased protein & fat yield |
|                  | E7 mutation                 | Clear               |              | Growth Hormone 2141              | Decreased milk protein & fat yield                                       |
| Hornedness       | Polled Celtic               | Heterozygous Polled |              | Growth Hormone 2291              | Normal milk fat yield, fat & protein %                                   |
| Heat Tolerance   | SLICK                       | No added resistance |              | ABCG2 - protein yield milk       | Normal fat, protein & milk yield; normal<br>fat & protein %              |
| Eye Disorders    | Pinkeye resistance          | Reduced risk 16-26% |              | AcylCoA - milk fat percentage    | Slightly increased milk yield. Slightly<br>decreased fat & protein %.    |
| Bone Disorder    | Osteopetrosis               | Clear               |              | Trimethylaminuria excess in milk | Clear                                                                    |
|                  |                             |                     |              | Yellow milk fat                  | Normal yellow fat                                                        |

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**Genetic Report**  
 BOVINESNP50-24 v3 BeadChip

MH/HB du Toit  
 Osbosch  
 Bonsmara

Animal Tested:

**HB21-0069**

**13540U018**

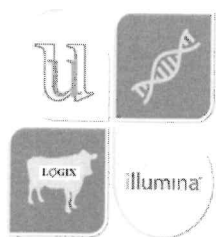
Sample type:

**Hair**

| Description      | Mutations                   | Status              | Description  | Mutations Tested                 | Status                                                                   |
|------------------|-----------------------------|---------------------|--------------|----------------------------------|--------------------------------------------------------------------------|
| Coat colouration | MC1R - e                    | Insufficient data   | Meat         | Calpain 1 - 316                  | G/G                                                                      |
|                  | MC1R - ED                   | E+/E+               | Tenderness   | Calpain 1 - 4751                 | C/T                                                                      |
|                  | Dun Dexter Dilution (TYPR1) | +/+                 |              | Calpain 1 - 530                  | G/G                                                                      |
|                  | Silver Dilution type 1      | +/+                 |              | Calpastatin - 282                | G/C                                                                      |
|                  | Silver Dilution type 2      | +/+                 |              | Calpastatin - 2870               | A/G                                                                      |
| Myostatin Status | Myostatin C313Y             | Clear               |              | Calpastatin - 2959               | A/A                                                                      |
|                  | Myostatin E226X             | Clear               | Milk status  | Beta Casein - 245                | A2/A2                                                                    |
|                  | Myostatin E291X             | Clear               |              | Beta Casein - 411                | B/B                                                                      |
|                  | Myostatin nt419             | Clear               |              | Kappa Casein - 352               | A/A                                                                      |
|                  | Myostatin nt821             | Clear               |              | Kappa Casein - 467               | A/A                                                                      |
|                  | Myostatin Q204X             | Clear               |              | Kappa Casein - 470               | A/B                                                                      |
|                  | Myostatin D182N             | Clear               |              | Kappa Casein - 506               | A/B                                                                      |
|                  | Myostatin F94L              | Clear               |              | Kappa Casein - 526               | A/A                                                                      |
|                  | Myostatin S105C             | Clear               | Milk quality | Growth Hormone F279Y             | Increased milk, casein & lactose yield;<br>decreased protein & fat yield |
| POMPE Status     | E13 mutation                | Clear               |              | Growth Hormone 2141              | Decreased milk protein & fat yield                                       |
|                  | E18 mutation                | Clear               |              | Growth Hormone 2291              | Increased milk fat yield, fat & protein %                                |
|                  | E7 mutation                 | Clear               |              | ABCG2 - protein yield milk       | Normal fat, protein & milk yield; normal<br>fat & protein %              |
| Hornedness       | Polled Celtic               | Homozygous Polled   |              | AcylCoA - milk fat percentage    | Slightly increased milk yield. Slightly<br>decreased fat & protein %.    |
| Heat Tolerance   | SLICK                       | No added resistance |              | Trimethylaminuria excess in milk | Clear                                                                    |
| Eye Disorders    | Pinkeye resistance          | Reduced risk 16-26% |              | Yellow milk fat                  | Normal yellow fat                                                        |
| Bone Disorder    | Osteopetrosis               | Clear               |              |                                  |                                                                          |

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# Unistel Medical Laboratories Genetic Report

BOVINESNP50-24 v3 BeadChip

MH/HB du Toit  
Osbosch  
Bonsmara  
HBT21-0095  
13540U021

Animal Tested:

Sample type:

Hair

| Description      | Mutations                   | Status              | Description  | Mutations Tested                 | Status                                                                     |
|------------------|-----------------------------|---------------------|--------------|----------------------------------|----------------------------------------------------------------------------|
| Coat colouration | MC1R - e                    | Insufficient data   | Meat         | Calpain 1 - 316                  | G/G                                                                        |
|                  | MC1R - ED                   | E+/E+               | Tenderness   | Calpain 1 - 4751                 | C/T                                                                        |
|                  | Dun Dexter Dilution (TYPR1) | +/+                 |              | Calpain 1 - 530                  | G/G                                                                        |
|                  | Silver Dilution type 1      | +/+                 |              | Calpastatin - 282                | G/C                                                                        |
|                  | Silver Dilution type 2      | +/+                 |              | Calpastatin - 2870               | A/G                                                                        |
| Myostatin Status | Myostatin C313Y             | Clear               |              | Calpastatin - 2959               | A/A                                                                        |
|                  | Myostatin E226X             | Clear               | Milk status  | Beta Casein - 245                | A1/A1                                                                      |
|                  | Myostatin E291X             | Clear               |              | Beta Casein - 411                | B/B                                                                        |
|                  | Myostatin nt419             | Clear               |              | Kappa Casein - 352               | A/A                                                                        |
|                  | Myostatin nt821             | Clear               |              | Kappa Casein - 467               | A/G1                                                                       |
|                  | Myostatin Q204X             | Clear               |              | Kappa Casein - 470               | A/A                                                                        |
|                  | Myostatin D182N             | Clear               |              | Kappa Casein - 506               | B/B                                                                        |
|                  | Myostatin F94L              | Clear               |              | Kappa Casein - 526               | A/A                                                                        |
|                  | Myostatin S105C             | Clear               |              |                                  |                                                                            |
| POMPE Status     | E13 mutation                | Clear               | Milk quality | Growth Hormone F279Y             | Increased milk, casein & lactose yield;<br>decreased protein & fat yield   |
|                  | E18 mutation                | Clear               |              | Growth Hormone 2141              | Normal milk protein & fat yield                                            |
|                  | E7 mutation                 | Clear               |              | Growth Hormone 2291              | Normal milk fat yield, fat & protein %                                     |
| Hornedness       | Polled Celtic               | Heterozygous Polled |              | ABCG2 - protein yield milk       | Normal fat, protein & milk yield; normal<br>fat & protein %                |
| Heat Tolerance   | SLICK                       | No added resistance |              | AcylCoA - milk fat percentage    | Increased milk & protein yeild. Decreased<br>fat yeild, fat % & protein %. |
| Eye Disorders    | Pinkeye resistance          | Reduced risk 16-26% |              | Trimethylaminuria excess in milk | Clear                                                                      |
| Bone Disorder    | Osteopetrosis               | Clear               |              | Yellow milk fat                  | Normal yellow fat                                                          |

Disclaimer: Unistel reports these results on the premise that the biological samples received are from the individuals nominated by the owner/breeder/requestee. This certificate replaces all previous issued certificates. While every effort is made to prevent incorrect results, Unistel Medical Laboratories does not accept any responsibility for any losses that may occur as a result of human or technical error.

Should gross negligence be proven, the claim shall not exceed the value of the contract.