



VETERINARY GENETICS LABORATORY  
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**HORSE COAT COLOR TEST RESULTS**

FRIESIAN QUEST, LLC 38573 CALLE DE LOBO MURRIETA, CA 92562	<b>Case:</b> DT19169 <b>Date Received:</b> 21-May-2008 <b>Report Date:</b> 22-May-2008 <b>Report ID:</b> 0583-6104-9047-3104
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Horse: <b>ULTIMO RRL</b> YOB: <b>01</b> Breed: <b>LU</b> Sex: <b>S</b>	Reg: <b>6148(P)</b> Microchip: <b>43134E4876</b>
Sire: MODICO Dam: NESPERA	Reg: 4932(P) Reg: 3691(P)

<b>RED FACTOR</b>	Not requested.
<b>AGOUTI</b>	Not requested.
<b>CREAM DILUTION</b>	Double dilute (two copies of Cream gene). Typical colors are cremello, perlino and smoky cream in the absence of other modifying genes.
<b>Cr/Cr</b>	
<b>PEARL DILUTION</b>	No evidence of the altered sequence detected.
<b>N/N</b>	
<b>SILVER DILUTION</b>	No evidence of the altered sequence detected.
<b>N/N</b>	
<b>LETHAL WHITE OVERO</b>	Not requested.
<b>SABINO 1</b>	Not requested.
<b>TOBIANO</b>	Not requested.

# Horse Coat Color Results with Explanations

## Red Factor

**e/e** - Only the red factor detected. Basic color is sorrel or chestnut in the absence of other modifying genes.

**E/e** - Both black and red factors detected. Either E or e transmitted to offspring. Basic color is black, bay or brown in the absence of other modifying genes.

**E/E** - No red factor detected. It cannot have red foals regardless of the color of mate. Basic color is black, bay or brown in the absence of other modifying genes.

## Agouti

**A/A** - Black pigment distributed in points pattern. Basic color is bay or brown in the absence of other modifying genes.

**A/a** - Black pigment distributed in points pattern. Basic color is bay or brown in the absence of other modifying genes.

**a/a** - Only recessive allele detected. Black pigment distributed uniformly. Basic color is black in the absence of other modifying genes.

## Cream

**N/N** - No evidence for the Cream dilution altered sequence detected. Basic color is sorrel or chestnut, bay or black in the absence of other modifying genes.

**N/Cr** - Heterozygous, dilute, one copy of Cream gene. Typical colors are palomino, buckskin and smoky black in the absence of other modifying genes.

**Cr/Cr** - Double dilute (two copies of Cream gene). Typical colors are cremello, perlino and smoky cream in the absence of other modifying genes.

## Pearl

**N/N** - No evidence of the altered sequence detected.

**N/Pr1** - One copy of the altered sequence detected. If Cream dilution is also present, a pseudo-double Cream dilute phenotype will result.

**Pr1/Pr1** - Two copies of the altered sequence detected. On a chestnut base color, a uniform apricot color of body hair, mane and tail will result.

## Silver

**N/N** - No evidence of the altered sequence detected.

**N/Z** - One copy of the altered sequence detected. Black-based horses will be chocolate with flaxen or lightened mane and tail. Bay-based horses will have lightened black pigment on lower legs, mane and tail. No effect on chestnut color.

**Z/Z** - Two copies of altered sequence detected. Black-based horses will be chocolate with flaxen or lightened mane and tail. Bay-based horses will have lightened black pigment on lower legs, mane and tail. No effect on chestnut color.

## Lethal White Overo

**N/N** - No evidence for the altered sequence detected.

**N/O** - One copy of the altered sequence detected. If bred to another N/O horse, there is a 25% chance of producing a lethal white overo foal. The N/O type has been detected in Paints (including breeding stock), Pintos, Thoroughbreds, Miniatures, Quarter Horses and Tennessee Walking Horses.

**O/O** - Only the altered sequence in the EDNRB gene detected. This result has only been obtained with samples from lethal white overo foals.

## Sabino 1

**N/N** - No evidence of altered sequence detected.

**N/SB1** - One copy of the Sabino 1 gene detected. Horse typically may have 2 or more white legs, blaze, spots or roaning in the midsection and jagged margins around white areas.

**SB1/SB1** - Two copies of the Sabino 1 gene detected. Complete or nearly complete white phenotype expected.

## Tobiano

**N/N** - No evidence of altered sequence detected. Horse is not Tobiano.

**N/TO** - One copy of altered sequence. Approximately 50% of the offspring will inherit Tobiano.

**TO/TO** - Two copies of altered sequence. Horse is Homozygous for Tobiano. All offspring will inherit Tobiano.