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HORSE COAT COLOR TEST RESULTS

CYNTHIA M. KEHOE 10049 CHATEAU RD SULLIVAN, MO 63080	Case: DT21080
	Date Received: 16-Mar-2009
	Report Date: 18-Mar-2009
	Report ID: 7146-7000-7667-3077
Horse: BLONDYSCLASSICREDFRD	Reg: 4500077
YOB: 04 Breed: QH Sex: M	Alt. ID:
Sire: IMA STYLISH KID	Reg: 3786533
Dam: BLONDYS KING TIREA	Reg: 3600259

RED FACTOR	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	
AGOUTI	Only recessive allele detected. Black pigment distributed uniformly. Basic color is black in the absence of other modifying genes.
a/a	
CREAM DILUTION	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/N	
PEARL DILUTION	Not requested.
SILVER DILUTION	Not requested.
LETHAL WHITE OVERO	Not requested.
SABINO 1	Not requested.
TOBIANO	Not requested.
CHAMPAGNE	Not requested.
GRAY	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. Horse 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/Prl - One copy of the altered sequence detected. If Cream dilution is also present, a pseudo-double Cream dilute phenotype will result.

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

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.

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.

Champagne

N/N - No evidence of altered sequence detected.

N/Ch - One copy of the altered sequence detected. Chestnut color (red) is diluted to gold, bay to tan with brown points and black to darker tan with brown points.

Ch/Ch - Two copies of the altered sequence detected. All offspring are expected to be Champagne diluted.

Gray

N/N - No copies of the gray gene. Horse will not turn gray.

N/G - One copy of the gray gene. Horse will turn gray and approximately 50% of offspring will be gray.

G/G - Two copies of the gray gene. Horse will turn gray and all offspring will be gray.



Search:

Coat Color Calculator

NEW

Offspring Coat Color Calculator

New Tests:

- Gray
- Champagne
- HERDA

Sire Color: Palomino		Dam Color: Grullo (Black Dun)	
Agouti: aa, Aa, AA	Tobiano: nn	Agouti: aa	Tobiano: nn
Red Factor: ee	LWO: nn	Red Factor: Ee, EE	LWO: nn
Cream: nCr	Sabino: nn	Cream: nn	Sabino: nn
Silver: nn	Splash: nn	Silver: nn	Splash: nn
Dun: dd	Roan: rr	Dun: Dd	Roan: rr
Champagne: nn	Gray: gg	Champagne: nn	Gray: gg

Shown below are the possible offspring coat colors and the probability of each determined using the given information of the sire and dam. Accuracy of the calculations are increase when more genetic information is known of the parents.

Offspring Color Probability	Details: All
8.33% - Smoky Grullo	Ee/aa = 8.3338%
8.33% - Smoky Black	Ee/Aa/nCr = 8.3338%
8.33% - Grullo	Ee/Aa/Dd = 8.3338%
8.33% - Dunskin	Ee/Aa = 8.3338%
8.33% - Buckskin	Ee/aa/nCr/Dd = 8.3338%
8.33% - Black	Ee/aa/nCr = 8.3338%
8.33% - Bay Dun	Ee/aa/Dd = 8.3338%
8.33% - Bay	Ee/Aa/nCr/Dd = 8.3338%
8.33% - Red Dun	ee/aa/Dd = 4.1663%
8.33% - Palomino	ee/aa/nCr = 4.1663%
	ee/aa/nCr/Dd = 4.1663%
	ee/Aa = 4.1663%
	ee/Aa/Dd = 4.1663%
	ee/aa = 4.1663%
	ee/Aa/nCr/Dd = 4.1663%
	ee/Aa/nCr = 4.1663%

Time = 0.125 sec

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Search:

Coat Color Calculator

NEW

Offspring Coat Color Calculator

New Tests:

- Gray
- Champagne
- HERDA

Sire Color: Palomino		Dam Color: Black	
Agouti: aa, Aa, AA	Tobiano: nn	Agouti: aa	Tobiano: nn
Red Factor: ee	LWO: nn	Red Factor: Ee	LWO: nn
Cream: nCr	Sabino: nn	Cream: nn	Sabino: nn
Silver: nn	Splash: nn	Silver: nn	Splash: nn
Dun: dd	Roan: rr	Dun: dd	Roan: rr
Champagne: nn	Gray: gg	Champagne: nn	Gray: gg

Shown below are the possible offspring coat colors and the probability of each determined using the given information of the sire and dam. Accuracy of the calculations are increase when more genetic information is known of the parents.

Offspring Color Probability	Details: All
25.00% - Palomino	Ee/Aa/nCr = 12.5000%
25.00% - Chestnut	Ee/Aa = 12.5000%
12.50% - Smoky Black	Ee/aa/nCr = 12.5000%
12.50% - Buckskin	Ee/aa = 12.5000%
12.50% - Black	ee/Aa/nCr = 12.5000%
12.50% - Bay	ee/Aa = 12.5000%
	ee/aa/nCr = 12.5000%
	ee/aa = 12.5000%

Time = 0.09375 sec

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