# Dilute Coat Colour

## About the Colour

A mutation in the Dilute gene (Melanophilin, *MLPH*) causes dilution of coat colours. The wild-type (D) allele is dominant to the dilute (d) allele, meaning that two copies of the dilute (d) allele are required to produce the dilute colouration.

The Dilute coat colour test can be used to detect carriers of, or to confirm, the following diluted coat colour phenotypes:

Black, which is diluted Blue
Chocolate, which is diluted Lilac
Cinnamon, which is diluted to Fawn
Red, which is diluted Cream

Certain cat breeds only have the D allele (Bombay, Egyptian Mau and Singapura) or the d allele (Chartreux, Korat and Russian Blue), but most breeds have both alleles.

## Interpretation of results

| Test Result | Interpretation |
|---|---|
| Dilute (d/d) | Has two copies of the Dilute allele (d/d) Coat colour is diluted as follows:<br>Black is diluted to Blue<br>Chocolate is diluted to Lilac<br>Cinnamon is diluted to Fawn<br>Red is diluted to Cream |
| Carrier of Dilute (D/d) | Has one copy of the Dilute allele (D/d).<br>No dilution of coat colour. |
| Does not carry Dilute (D/D) | Has no copies of the Dilute allele (D/D).<br>No dilution of coat colour. |

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## FAQs

### How do I test for lilac in my Ragdolls?

Lilac is the result of the Dilute gene working on the Chocolate gene.

The results must be Chocolate (b/b) and Dilute (d/d) for the Ragdoll to be Lilac.

### How do I test for Lilac in my British Shorthair?

Lilac is the result of the Dilute gene working on the Chocolate or Chocolate and Cinnamon genes.

The results must be Chocolate (b/b) and Dilute (d/d) or Chocolate carrying Cinnamon (b/b$^{l}$) and Dilute (d/d) for the British Shorthair to be Lilac.

### How does Dilute work?

The Dilute gene has two alleles (D and d), with D dominant to d. When D is present (DD or Dd) the coat colour is not diluted. If a cat is dd the coat colour is diluted:

Black is diluted to Blue

Chocolate is diluted to Lilac

Cinnamon is diluted to Fawn

Red is diluted to Cream

**Reception Hours**
Mon-Fri 9am - 5pm

Contact Us
T: 0117 394 0510
E: labs@langfordvets.co.uk
catgenetics@langfordvets.co.uk

langfordvets.co.uk

Langford Vets

University of BRISTOL

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## Chocolate, Cinnamon and Dilute Colours

| Chocolate/Cinnamon | Dilute | Coat colour |
|---|---|---|
| BB or Bb or Bb$^{l}$ | DD or Dd | Black/Brown |
| BB or Bb or Bb$^{l}$ | dd | Blue |
| bb or bb$^{l}$ | DD or Dd | Chocolate |
| bb or bb$^{l}$ | dd | Lilac |
| b$^{l}$b$^{l}$ | DD or Dd | Cinnamon |
| b$^{l}$b$^{l}$ | dd | Fawn |