

**Customer:** Marek Kučera, Na Betonce 1361/3, 15300 Praha 16- Radotín, Czech Republic

**Sample:**

Sample: 21-42684

Date received: 06.10.2021

Sample type: buccal swab

Information provided by the customer

**Name:** Naleks Treasure Uilsiya

**Breed:** German Pinscher

Microchip: 643 093 333 008 521

Reg. number: CMKU/NP/2387/-21/20

Date of birth: 10.09.2020

Sex: female

Date of sampling: 02.10.2021

The identity of the animal has been checked by Ing. Jana Kůsová,  
Genomia s.r.o.

Result: D/D

### Explanation

It has been examined the presence of gene variants c.-22G>A of MLPH-gene (melanophilin gene) causing coat colour dilution in dogs. The dilution is caused by d1-allele at D-locus (Dilution). The MLPH-gene is responsible for the density of pigment granules (eumelanine) in a hair. The presence of the gene variant c.-22A, d1-allele, causes the loss of pigment granules in a hair; the original black colour is diluted to blue and brown colour to lilac.

The phenotypic expression of d1-allele is inherited autosomal recessively. The colour dilution occurs only in d1/d1-dogs that inherit d1-allele from each of its parents. The dilution is not expressed in heterozygous dogs D/d1, however these dogs are carriers of this trait. Dogs with D/D result do not carry dilution.

There is other MLPH-gene variant c.705C (d2-allele) that is responsible for colour dilution in various dog breeds. The diluted dogs are also compound heterozygous d1/d2, where the d1-allele is inherited from one parent and d2-allele from the other parent.

There will be probably discovered other gene variants responsible for colour dilution. The final colour of a dog is affected by the presence of alleles at other loci (E, B, A, K and other).

Method: SOP175-MLPH, real-time PCR-ASA

Date of issue: 12.10.2021

Date of testing: 06.10.2021 - 12.10.2021

Approved by: Mgr. Lucie Magoči, Analyst



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