

## The European Body Base Colors, simplified

(Guppy-Grundfarben)

Combined in the Russian Body Base Color Table MGEX

M = Melanin /dark Melanofores

G = Guanin /metal Iridofores

E = Astaxantin /red Erythrofores

X = Lutein /yellow Xantofores

	Comments:	M	G*	E	X
Wild grey	Full dominant	MM	GG/gg	EE	XX
Blond	recessive	mm	GG/gg	EE/ee	XX/xx
Gold	recessive	MM	GG/gg	EE/ee	XX/xx
Blue I	recessive	mm	GG/gg	ee	xx
Blue II /Asian Blau	recessive	mm	GG/gg	ee**	xx***
Blue III /Hellblau	recessive	mm	GG/gg	ee	xx
Albino I /RRE	recessive	mm	GG/gg	EE/ee	XX/xx
Albino II /WRE	recessive ****	mm	GG/gg	EE/ee	XX/xx
Pink	recessive	mm	GG/gg	XX/ee	XX
Creme	double-recessive	mm	GG/gg	ee	XX/xx
Silver	double-recessive	mm	GG/gg	ee	xx
White	double-recessive	mm	GG/gg	ee	xx
Albino-White	triple-recessive	mm	GG/gg	ee	xx

\* European Base Body Color klassifikation does not differentiate guanin/no guanin. We assume "all fish can produce this"

\*\* Some very small amounts of xantofores (red and/or yellow) have been discovered

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\*\*\*\* Since 1998-2001 there is a debate amongst hobby-breeders if this could be a Lutino.

Many things speak for that. IKGH has decided to register this color form as "Lutino" in the international exhibition-standard IHS. The term Lutino has not yet been confirmed, because of lack of scientific biochemical evidence. It behaves as a body-base color and resembles birds or mammals called "Lutino". The Albino II guppy was considered to be axantistic, but this has been disproven by microscopic studies.

**Note: This table may have to be revised, due to recent research. Stand: Feb. 2011.**

## Comments:

In some cases, ee or xx does not mean total absence of the pigment. Table is somewhat misleading. Please read the individual descriptions of these colors.

In Europe, we assume all fish can show iridofores and the Base Body Color has no impact on display of iridescent color pigments of Guppy. This has been one of the most popular traits of high breeding in Guppy. There are iridescent strains of every Base Body Color. Some are more unusual than others. No difficulty has been reported, on adding this trait on any Base Body color. Only difficulty reported, has been that swords come persistently, also in other lines like deltas. This may have to be investigated further by European hobbyists.

In Europe, we do not distinguish between red and yellow pigments. We consider them basically the same. We classify erythrofores as red xantofores. Considering Body Base colors, xantofores are differentiated only in manner of quantity, not quality. The red color display in Guppy can not be influenced at a very large extent by means of food, for example by feeding astaxanthin or other karotenoids. It is always visible. We have not considered the possibility of separate genetic heritage of red and yellow pigments. This has to be investigated further in Europe.

In Europe, blue and green are considered to be secondary sex colors. They are hues to each other. They are recessive in relation to black and red secondary sex color. They are dominant over yellow and white secondary sex color. Blue and green are considered to come from schematofores, being an effect of iridescent cells in combination of melanine. Blue and green can be affected by water quality, that leaves chemical compounds in the pigment cells. A blue strain can suddenly turn green, in a different environment. This happens quickly, and has been documented on various exhibitions. Usually, the blue strain turns green. Many fake "greens" have been sold to unsuspecting buyers. At home, they quickly turn back to original blue. Blue can also be affected by genes such as fla (=flavus) or Ni1 or Ni2 (=nicrocaudatus 1 or 2) and others, giving a different optic appearance. Moscow-Blue-head gives a very attractive combination, but sometimes lighter colored head instead of the desired darker (controlled by sexual activity).

In Europe the qualifications of a Base Body color is otherwise the same, as in Russia. We have the following rules:

### Body Base colors

- \* They are inherited by the homologue autosomes, and not by the heterologue gonosomes
- \* They are expressed in the same way by both sexes
- \* They have never, which is the case of some top-colors, any affect on the form of the fins
- \* There is never any "crossing-over", as can be seen with top-colors.