

Discolouration

Translations

German : NC

English : NC

Spanish : NC

French : altération chromatique

Italian : NC

Portuguese : NC

Definition : Change of the stone colour in one to three of the colour parameters : hue, value and chroma.
- hue corresponds to the most prominent characteristic of a colour (blue, red, yellow, orange etc..).
- value corresponds to the darkness (low hues) or lightness (high hues) of a colour.
- chroma corresponds to the purity of a colour. High chroma colours look rich and full. Low chroma colours look dull and grayish. Sometimes chroma is called saturation.

Relationship with the substrate : It may affect the surface and/or be present in depth of the stone.

Synonym(s) : Chromatic alteration.

Other orthograph : Discoloration (US)

Sub-type(s) : - Colouration (to be preferred to colouring) : change in hue, value and/or a gain in chroma
- Bleaching (or fading) : gain in value due to chemical weathering of minerals (e.g. reduction of iron and manganese compounds) or extraction of coloring matter (leaching, washing out), or loss of polish, generally very superficial. Dark and bright color marbles often show bleaching as a result of exposure to weather.
- Moist area : corresponds to the darkening (lower hue) of a surface due to dampness. The denomination moist area is preferred to moist spot, moist zone or visible damp area.
- Staining : kind of discolouration of limited extent and generally of unattractive appearance.

Not to be confused with : - Patina : superficial modification of the material perceivable as a discolouration, in often having a favourable connotation.
- Soiling : refers to a tangible deposit and has a negative connotation
- Deposit : refers to the accumulation of material of variable thickness, possibly having a color different from that of the stone.

Other remarks : Discolouration is frequently produced by salts, by the corrosion of metals (e.g. iron, lead, copper), by micro-organisms, or by exposure to fire. Some typical yellow, orange, brown and black discolouration patterns are due to the presence of carotenoids and melanins produced by fungi and cyanobacteria.

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Darkened areas due to moistening may have different shapes and extension according to their origin : pipe leakage, rising damp, hygroscopic behaviour due to the presence of salts, condensation.

References : Fitzner, MDDS, NORMAL

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Red colouration on a bas-relief marble figure.



Stains on limestone pediment underneath a bronze sculpture

Italy, Certosa di Pavia, 1992. height : ca. 0,5m, KDC. Olching / S. Simon



Moist area on a sandstone rubble built wall as a result of a concentrated discharge of rain water from a broken downpipe.

best, 2001. Sculpture ca 3m height. LNEC/J. Delgado-Rodrigues



Iron oxides are driven by water from the rusting railing, and induce the development of a brown staining on the underlying stones.

Scotland, New Lanark, South Lanarkshire, Long Row residential block, 1996.
Rainwater downpipe 100mm in diameter. Pers. archive Ref XM 12 / Ingval Maxwell

France, Chartres, Cathedral, 2004. LRMH / V. Vergès-Belmin