



## TECHNICAL DATA SHEET

1087-TDS-ENG-2019

HIDROQUINONA USP		
DESCRIPTION DCI: HYDROQUINONE		DESCRIPTION DOE: HIDROQUINONA
CAS Nº: 123-31-9	EC Nº: 204-617-8	AEMPS CODE: 2024A
MOL. WEIGHT: 110.11	MOL. FORMULA: C <sub>6</sub> H <sub>6</sub> O <sub>2</sub>	ARTICLE CODE: 1087

ATTRIBUTES	SHOULD BE
Identification A	Complies
Identification B	Complies
Identification C	Complies
Melting range	between 172°C and 174°C
Water	=< 0.5 %
Residue on ignition	=< 0.5 %
Assay	99.0 - 100.5 %

### COMPLIES WITH

USP 41

### STORAGE

Keep container tightly closed, in a dry place and protected from the light.

### REMARKS

**Product only suitable for industrial, cosmetic and nutraceutical purposes.**

HYDROQUINONE is subjected to the requirements of the ICH Q3D "Elemental Impurities" guideline.

Certificates of residual solvents, allergens, non-GMO and BSE-TSE are available upon request.

#### Properties and uses

HYDROQUINONE is a depigmenting agent that acts by interfering with the synthesis of melanin by inhibiting the tyrosinase-aminoglycine system. Due to this mechanism of action, the depigmentation is not immediate, but appears after 1 month. In addition, depigmentation is reversible, and sunscreen must be used during and after treatment. It is used topically in the treatment of alterations in skin pigmentation (hyperpigmentation), such as melasma, chloasma, freckles, senile pigmentations, lentigo, berloque dermatitis (photodermatitis due to perfumes), etc. use alone or associated with keratolytic substances (such as resorcinol, salicylic acid, glycolic acid, etc ...), retinoids, corticoids, or other depigmenting substances. It may take several weeks until some improvement is seen, but if no beneficial effects are seen in 2 months, treatment should be discontinued. In hydroalcoholic solutions it presents its maximum solubility once the hydroalcoholic mixture is made.

#### Dosage

Topical route, 2 - 5% for facial area and up to 6 - 8% on trunk and limbs, in the form of alcohol solutions, O / W creams and lotions, ointments, or gels, applied twice a day for 2 - 3 maximum months, on intact skin, and protecting it from exposure to solar radiation (a sunscreen is often included in the same preparation). Higher concentrations may be used in some severe cases (up to 10%). Allowed its use as a stabilizer in hair dyes. Prohibited its use as a cosmetic asset (depigmentation, etc ...).

#### Side effects

Repeated use or excessively high concentrations can cause local irritation, transient erythema, burning sensation, dryness, cracking of treated areas, and hyperpigmentation in areas with excessive exposure to sunlight, and therapy should be discontinued. Occasionally, hypersensitivity reactions occur, and a cutaneous tolerance test is recommended before use.

#### Precautions

It should not be used in areas close to mucous membranes, wounds, erythematous areas due to sun exposure or sunburn, eyes and surroundings, due to the risk of systemic toxicity, which may cause staining and opacity of the cornea on the eye. It should not be used to whiten lashes or eyebrows. Its use should be avoided in children, especially in children under 12



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years of age.

### Compounding examples

#### *Depigmenting creams*

HYDROQUINONE - **2 %**

Retinoic acid - **0.05 %**

Triamcinolone acetonide - **0.1 %**

Antioxidant c.s.

Cream Lanette c.s.p - **50 g**

HYDROQUINONE - **3 %**

Kojic acid - **2 %**

Antioxidant c.s.

Cream Lanette c.s.p. - **30 g**

Modus operandi: Spray the solids and the antioxidant in a mortar. Add a little propylene glycol to make a paste. Gradually add the cream Lanette in the mortar, working well with the pistil, until homogeneous. Pack quickly in opaque bottle.

#### *Hydrophilic ointment with HYDROQUINONE*

HYDROQUINONE - **2 %**

Retinoic acid - **0.05 %**

Triamcinolone acetonide - **0.1 %**

Antioxidant c.s.

Hydrophilic ointment c.s.p. - **100 mL**

Modus operandi: Spray the solids and the antioxidant in a mortar. Add a little propylene glycol to make a paste. Add little by little the ointment in the mortar, working well with the pistil, until homogeneous. Pack quickly in opaque bottle.

#### *Solution for chloasma*

HYDROQUINONE - **2 %**

Retinoic acid - **0.05 %**

Triamcinolone acetonide - **0.5 %**

Propylene glycol - **100 mL**

Antioxidant c.s.

Ethyl alcohol 96% c.s.p. - **200 mL**

Modus operandi: Spray the retinoic acid, the HYDROQUINONE, and the triamcinolone acetonide, mix with the propylene glycol, and add the 96% alcohol little by little. Add the antioxidant predisposed in the water.