

PRETIOX

for Foodstuffs, Cosmetics
and Pharmacy



Clever choice

Titanium dioxide grades PRETIOX for food, cosmetics and pharmacy are exceptionally pure pigments with optimal optical properties.

PRETIOX

Titanium Dioxide



PRECHEZA long-term experience in manufacturing of titanium dioxide **PRETIOX** has been applied to develop special grades of titanium dioxide for food/pharma and cosmetic sector to offer a number of benefits:

- Achieving a high standard of chemical and microbiological purity.
- Manufacturing and handling within the scope of certified Quality Management System.
- Warranting all the legal requirements for foodstuffs, cosmetics and farmaceuticals application.

PRETIOX AV01FG and **PRETIOX AV01PhG** is high purity anatase easy dispersed pigment with high brightness and good opacity.

Identification

INCI name	Titanium dioxide
Chemical formula	TiO ₂
Molecular weight	79.88
CAS No.	13463-67-7
EINECS No.	236-675-5
Colour Index	77891
Colour Name	Pigment White 6
Specific density	3.8 g/cm ³

Compliance with purity standards

	PRETIOX AV01FG	PRETIOX AV01PhG
E-171 Food Colour Specification 231/2012/EC	■	■
Food and Drug Administration FDA 21 CFR	■	■
FAO JECFA Specification Monograph 10 [2010]	■	■
Cosmetic Regulation 1223/2009/EC	■	■
European Pharmacopoeia PhEur		■
US Pharmacopoeia USP/NF		■
Japanese Pharmacopoeia JP		■

Compliance with quality standards

	PRETIOX AV01FG	PRETIOX AV01PhG
FSSC 22 000	■	■
ISO 9001; ISO 14001; OHSAS 18001	■	■
SMETA 4 Pilar Ethical Standard	■	■
KOSHER	■	■
HALAL	■	■
Responsible Care	■	■

Application

	PRETIOX AV01FG	PRETIOX AV01PhG
Foodstuffs		
Confectionery, saucess, dressing	■	■
Baked goods, decoration, potato flakes,	■	■
Beverages, instant drinks, concentrates	■	■
Dairy products, low-fat milk products, mayonnaise,	■	■
coffee whitener, icecream, chewing gum	■	■
Processed meet, fish products, collagen casings	■	■
Cosmetics		
eye and face make-ups	■	■
lipsticks, nail lacquers	■	■
toothpastes	■	■
Pharmaceuticals		
colouring agent for capsules, films, tablets and coated pills		■
medical sticky tapes		■
Pet-Foods		
colouring agent for dry pet-food and wet pet-food	■	

■ Recommended ■ Suitable

PRETIOX AV01FG typical properties

	E-171	FDA 21 CFR	AV01FG typical
TiO ₂ content %	min. 99.0	min. 99.0	99.3
Loss on drying %	max. 0.5	max. 0.5	0.3
Loss on ignition %	max. 1.0	max. 0.5	0.1
Al ₂ O ₃ and/or SiO ₂ %	max. 2.0	-	0.1
Acid soluble salts %	max. 0.5	max. 0.5	0.4
Water soluble salts (hot) %	max. 0.5	-	0.4
Water soluble salts (cold) %	-	max. 0.25	0.20
Cadmium (HCl soluble) mg/kg	max. 1.0	-	0.5
Antimony (HCl soluble) mg/kg	max. 2.0	max. 2.0	1.0
Arsenic (HCl soluble) mg/kg	max. 1.0	max. 1.0	< 1.0
Lead (HCl soluble) mg/kg	max. 10.0	max. 10.0	< 5.0
Mercury (HCl soluble) mg/kg	max. 1.0	max. 1.0	< 0.1
Mercury (total) mg/kg	-	max. 1.0	< 0.1



PRETIOX AV01PhG typical properties

	Ph.Eur.	AV01PhG
Characters	White powder	complies
Identification	A. pale yellowish colour at heating	complies
	B. orange-red colour with H ₂ O ₂	complies
	C. violet-blue colour with zinc	complies
Tests		
Appearance of solution	colourless, not more opalescent than reference solution	complies
Acidity or alkalinity	nmt 1.0 ml 0.01 M HCl or 0.01 M NaOH	complies
Water-soluble substances	max. 0.5 %	0.4 %
Antimony	max. 100 ppm	< 10 ppm
Arsenic	max. 5 ppm	< 5 ppm
Barium	not more opalescent than reference	complies
Iron	max. 200 ppm	10 ppm
Heavy metals	max. 20 ppm	complies
Assay	more than 98.0 and nmt 100.5 %	99.3 %

	USP/NF	AV01PhG
Identification	yellow-red to orange-red colour with H ₂ O ₂	complies
Assay	99.0 – 100.5 % TiO ₂	99.3 %
Arsenic	max. 1 ppm	< 1 ppm
Loss on drying	max 0.5 %	0.3 %
Loss on ignition	max. 0.5 %	< 0.1 %
Water-soluble substances	max. 0.25 %	0.20 %
Acid-soluble substances	max. 0.5 %	0.4 %
Lead (HCl-soluble)	max. 10 ppm	< 5 ppm
Antimony (HCl-soluble)	max. 2 ppm	1 ppm
Mercury (total)	max. 1 ppm	< 0.1 ppm
Organic volatile impurities		
Chloroform	60 µg per g	< 1 µg per g
1,4-Dioxane	380 µg per g	< 20 µg per g
Dichloromethane	600 µg per g	< 1 µg per g
Trichlorethylene	80 µg per g	< 1 µg per g

Packaging

PRETIOX AV01FG and PRETIOX AV01PhG is packed in double layer vent paper bags to a net weight 25,0 kg. It is supplied on wooden pallets (1 tonne per pallet), shrink-wrapped in polyethylene foil.

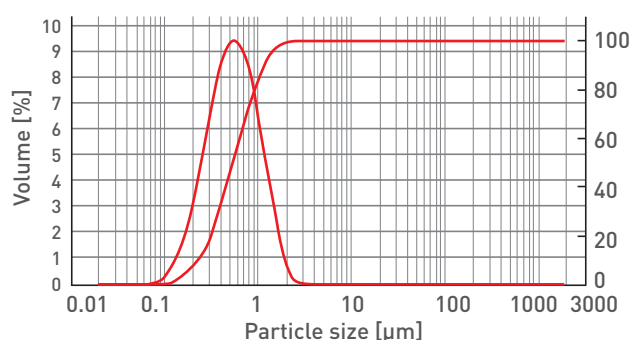


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Typical particle size distribution
PRETIOX AV01FG and PRETIOX AV01PhG



Clever choice

This leaflet is a general guide to the properties and fields of potential application of PRETIOX food/cosmetics/pharmacy grade. Information on application is given in good faith and does not constitute any guarantee. For specific grade selection, see Product Specifications or contact Technical Service at PRECHEZA company. Material Safety Data Sheet and additional information about products and company is available on www.precheza.cz. Control quality of pigments is provided in all steps of production. Samples are available on request. We recommend trial application tests.

