NANOSHEL
Creating Miracles in Black

YTTRIUM OXIDE NANOPOWDER

Purity
99.9%

Y_2O_3

NS6130-03-359

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YTTRIUM OXIDE NANOPOWDER

Yttrium oxide or yttria is one of the most important stable or rare-earth compounds with a very wide range of important applications. For the production, some synthesis methods play an important role in the required size and morphology of nanoparticles as the main controlling factors for each application. for the preparation of yttrium oxide nanoparticles, several methods have been suggested such as chemical precipitation, sol-gel, electrothermal decomposition, solvothermal, hydrothermal, combustion synthesis, sonochemical methods, reverse micelle method, microwave hydrothermal, microwave solvothermal and microwave combustion methods. It is being considered for biological applications because of it's high thermal, mechanical, and chemical stability, high corrosion resistance, and low toxicity.

Nowadays, using plant extracts type nanoparticles can be synthesized because of the wide range of natural resources, cost-effective, and non-toxic chemicals. In the field of materials science, these particles find a number of applications such as imparting color to the television picture tubes. These are also used in the making of plasma and flat panel displays. The property of red light emission is utilized in making fluorescent lamps and they are also used as additives in the coatings used in high-temperature applications, paints, and plastics for guarding against UV degradation. Moreover, these are also employed also for making permanent magnets. In ultrafast sensors that are used in g-ray and x-rays. Some of the other applications include additives in steel, non-ferrous alloys, and iron.

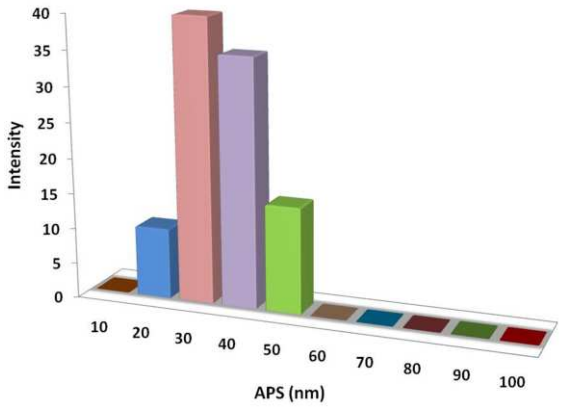
Quick FACTS

Product	:	Yttrium Oxide Nanopowder
Stock No	:	NS6130-03-359
CAS	:	1314-36-9
Color	:	White
Form	:	Powder
Symbol	:	Y_2O_3
Group	:	Yttrium 3/Oxygen 16

Electronic Configuration:

Yttrium [Kr] 4d1 5s2

Oxygen [He] 2s2 2p4



ADDITIONAL POWDER CHARACTERISTICS

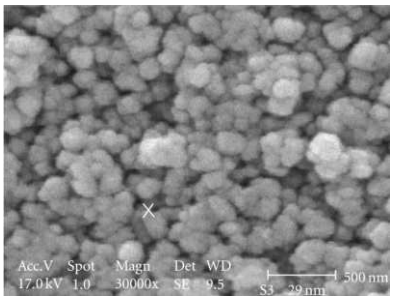
Stock No.	Purity	APS
NS6130-03-359	99.9%	40nm

TECHNICAL SPECIFICATION

Molecular Formula	Molecular Weight	Density	Melting Point
Y_2O_3	225.81 g/mol	5.01 g/cm³	2425 °C

CHEMICAL COMPOSITION

Product	Weight Percent (nominal)	
	Y_2O_3	Other Metal
Yttrium Oxide Nanopowder	99.9%	1000ppm



APPLICATIONS

- Used in displays such as field-emission displays
- In material production
- Used as a catalysts
- Lighting
- UV protection
- Magnets
- Sensors
- Metallurgy industry applications
- Red emitting materials in fluorescent lamps
- Dilutes for atomic pile fuel
- Cathode ray tube screens
- Engine parts
- Dopants in SrZrO3

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ISO 9001:2015
CERTIFIED COMPANY

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