شیشه زیست فعال (Bioactive Glass)

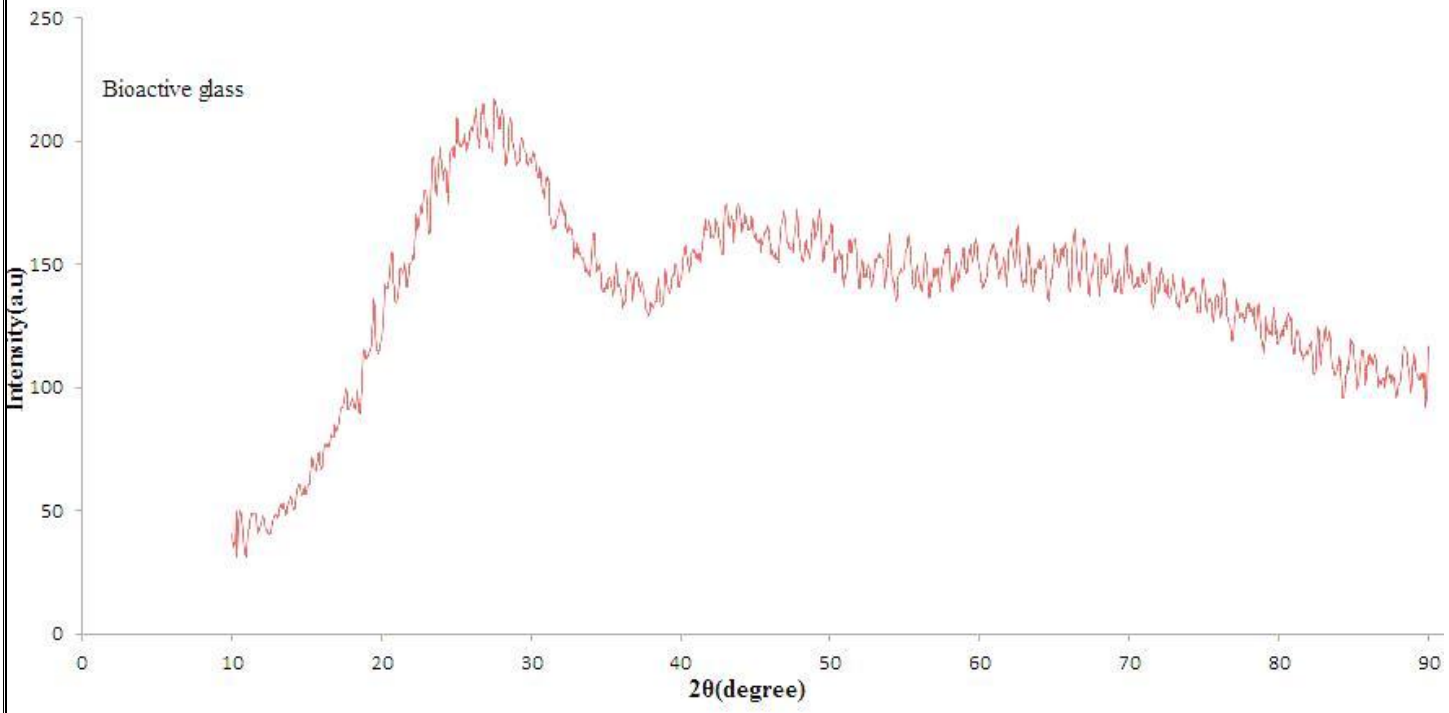
حالت ماده : پودر

رنگ : سفید

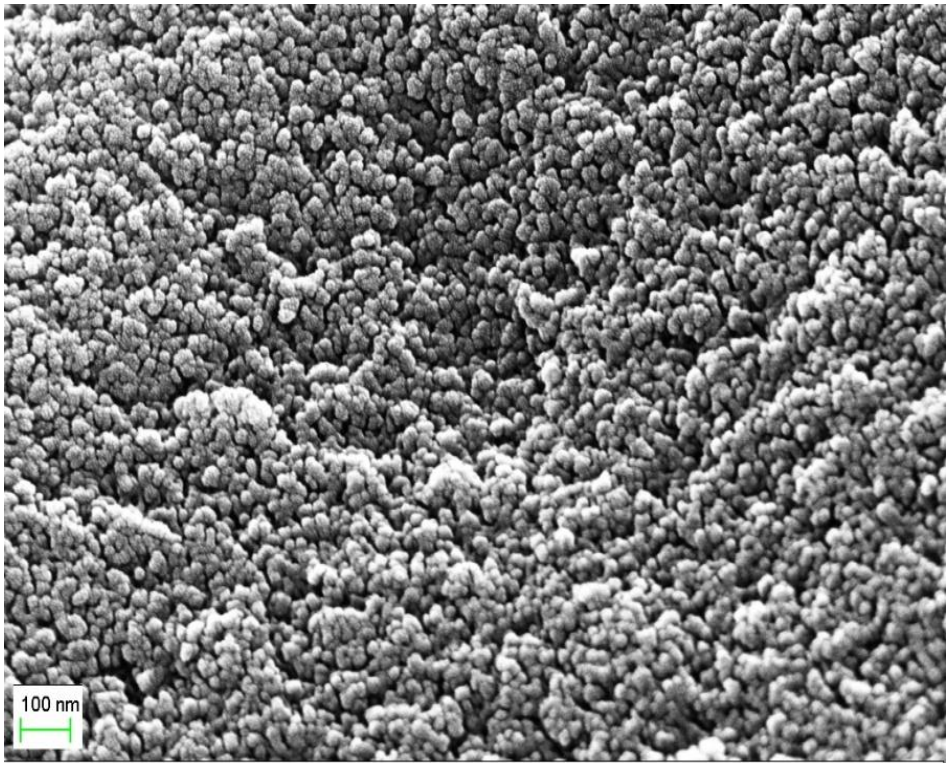
روش تولید: سل- ژل

اندازه ذرات: کمتر از ۱۰۰ نانومتر

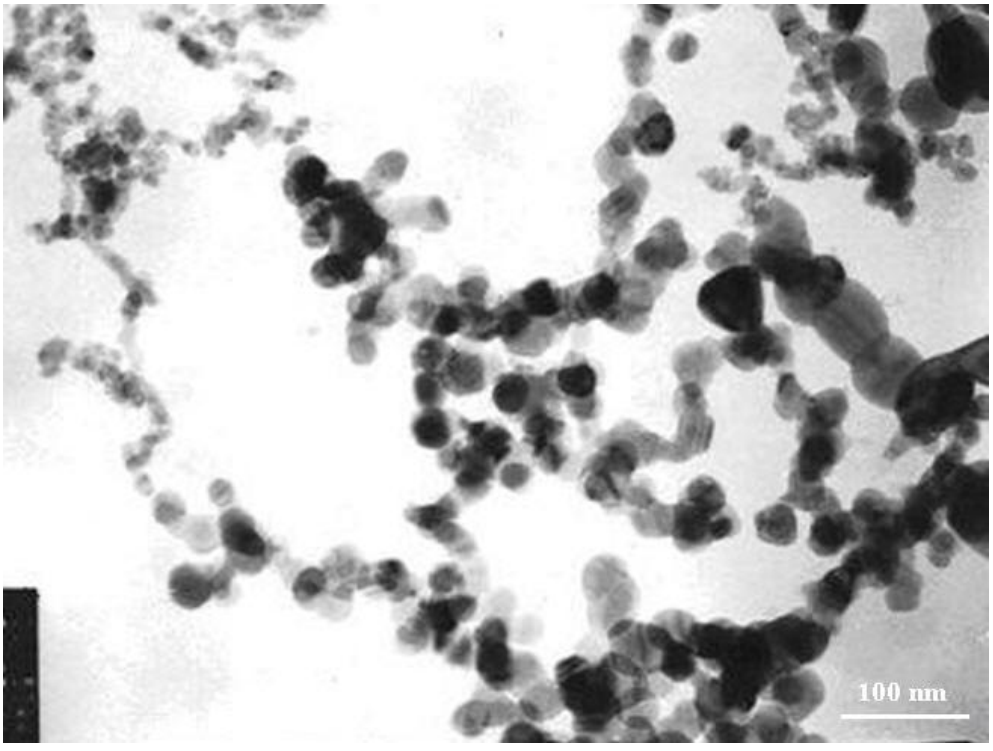
خلوص : ۱۰۰٪



الگوی پراش پرتو ایکس



تصویر SEM



تصویر TEM

ارزیابی هیستوپاتولوژی

Material Safety Data Sheet
Bioactive Glass MSDS

Bioactive glass, Nano powder

Hazards Identification

Potential Acute Health Effects:

Hazardous in case of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (irritant), of ingestion.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Classified None. for human. TERATOGENIC EFFECTS:

Not available. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male, Development toxin [None.]. Repeated or prolonged exposure is not known to aggravate medical condition.

First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Fire Hazards in Presence of Various Substances:

Slightly flammable to flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks, of oxidizing materials.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Slightly explosive in presence of open flames and sparks.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.

Special Remarks on Explosion Hazards:

Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Handling and Storage

Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 24°C (75.2°F).

Stability and Reactivity Data

Stability: The product is stable.

Conditions of Instability: Excess heat, dust generation

Polymerization: Will not occur.

Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Chronic Effects on Humans:

MUTAGENIC EFFECTS: Classified None. for human. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male, Development toxin [None.].

Other Toxic Effects on Humans:

Hazardous in case of inhalation. Slightly hazardous in case of skin contact (irritant), of ingestion.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: It is unlikely to cause skin irritation or injury. Eyes: May cause eye irritation. Inhalation:

This material is a dust or may produce dust. It may cause respiratory tract irritation. Breathing small amounts of this material during normal industrial handling is not likely to be harmful. Ingestion. Swallowing small amounts of this material during normal industrial handling is not likely to be harmful.

Other Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. INTELLIGENT MATERIALS shall not be held liable for any damage resulting from handling or from contact with the above product.