

INDION® 464

Description

INDION 464 is an insoluble, weakly acidic cation exchange resin supplied as a dry, fine powder in the hydrogen form. INDION 464 is suitable for pharmaceutical applications as carrier for basic (cationic) drugs.

INDION 464 is derived from a porous co-polymer of Methacrylic acid and divinylbenzene. The exchangeable cation is hydrogen which can be exchanged for, or replaced by virtually any cationic species. INDION 464 is manufactured in a FDA approved manufacturing facility. The parent material is manufactured in an ISO 9001 and ISO 14001 certified facility.

Applications

When used as a drug carrier, INDION 464 provides a means for binding medicinal agents onto an insoluble polymeric matrix.

This can be an effective technique to minimize odour problems associated with the drugs.

Controlled or sustained release properties also can be imparted to oral dosage formulations through the formation of resin complexes (drug resinates).

The drug is released from the resin *in vivo* as the resinate reaches equilibrium with the high electrolyte concentrations typically found in the gastrointestinal tracts.

The amount of drug loaded onto INDION resin will be influenced by such factors as the affinity between the ion exchange resin and the drug, the concentration of the drug in loading solution and the concentration and selectivity of competing cations. The rate of loading will be affected by the activity of the drug, its molecular dimensions as well as the extent to which the polymer phase is hydrated during loading.

Characteristics

| | | |
|------------------------|---|--|
| Appearance | : | White to off white powder |
| Matrix | : | Crosslinked methacrylic acid - DVB polymer |
| Functional Group | : | Carboxylic acid |
| Ionic form as supplied | : | Hydrogen |
| Solubility | : | Insoluble in water and in common solvents |

Specifications

| | | |
|--|---|------------------------|
| Particle size distribution | | |
| Retained on 100 BSS mesh (150 microns) | : | 1.0%, maximum |
| Retained on 200 BSS mesh (75 microns) | : | 30%, minimum |
| Moisture content | : | 5 %, maximum |
| Iron content as Fe | : | 100 ppm, maximum |
| Heavy metals content as Pb | : | 20 ppm, maximum |
| Arsenic content as As | : | 3 ppm, maximum |
| Total exchange capacity | : | 9.5 meq/dry g, minimum |

Toxicity

INDION 464 is a high molecular weight polymer. It is therefore not absorbed by body tissues and is totally safe for human consumption.

Experiments on mice have shown LD50 value of INDION 464 to be approximately 5,000 mg/kg body weight.

Packing

HDPE carboys with inner double plastic liner bags 6 / 20 / 40 kgs

Storage

INDION 464 is hygroscopic in nature. It is therefore essential to store it in a tightly packed container to prevent absorption of atmospheric moisture. If moisture is absorbed, the INDION 464 can be dried at 90° C to 100° C for approximately six hours to reduce the moisture content below 5 %.

INDION range of Ion Exchange resins are produced in a state of the art ISO 9001 and ISO 14001 certified manufacturing facilities at Ankleshwar, in the state of Gujarat in India. This product data sheet (issue 09/2008) replaces previous issues.

To the best of our knowledge the information contained in this publication is accurate. Ion Exchange (India) Ltd. maintains a policy of continuous development and reserves the right to amend the information given herein without notice.

INDION is the registered trademark



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