

INDION[®] 464

Polacrilex Resin

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 most of cationic species. INDION 464 is manufactured in a WHO-GMP certified & USFDA compliant manufacturing facility. The parent material is manufactured in on 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 odor 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 464 resin will be influenced by factors such as affinity between ion exchange resin and the drug, the concentration of the drug in loading solution as well as 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%, maximum
Identification by IR	:	Conforms to reference spectrum
Loss on Drying	:	5%, maximum
Iron content as Fe	:	10 ppm, maximum
Heavy metals content as Pb	:	10 ppm, maximum
Sodium Content	:	≤ 0.2%
Arsenic content as As	:	3 ppm, maximum
Methacrylic acid content	:	≤ 300 ppm
Water extractable impurities	:	≤ 2.0%
Ion exchange capacity	:	≥ 10 meq / dry gm

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 food grade polythene bags 5 / 10 / 25 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 state-of-the-art ISO 9001, ISO 14001 & WHO-GMP certified & USFDA compliant manufacturing facility at Ankleshwar, Gujarat.

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 of Ion Exchange (India) Ltd.



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