PRODUCT INFORMATION

DYNASPHER DB620

ADSORBENT RESIN

FOOD TREATMENT SOLUTION

DESCRIPTION

DYNASPHER DB620 is highly porous styrenic adsorbent based on polystyrene-divinylbenzene matrix. The distribution of the pores and the large surface area allows the adsorption of a wide range of molecules such as small petides and large proteins.

In the food industry DYNASPHER DB620 is widely used for the removal of bitter substances present in citrus juices.

SYSTEM DESIGN

Co - current / Counter current / Floating bed / Blocked bed

PRINCIPAL APPLICATIONS

- Peptides, oligonucleotides, proteins
- Polyphenols, anthocyanins, Tannins, flavonoids
- Vitamins, antibiotics, enzyme
- Fruit juices decolorization
- Citrus juices de bittering
- Natural extracts
- Perfumes adsorbtion

REGULATORY

- Codes Alimentarius – Inventory of Processing Aids – CAC/MISC3
- European Resolution AP (97) – 1 regarding the TOC (Total Organic Carbon) realeased according AFNOR method (method T90 – 601)

TYPICAL PACKAGING

- 1 ft³ Sack
- 25 lt Sack
- 5 ft³ Drum (Fiber)
- 1 m³ Supersack
- 42 ft³ Supersack

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PRODUCT INFORMATION

DYNASPHER DB620

ADSORBENT RESIN

TYPICAL CHARAPTERISTICS

PHYSICAL AND CHEMICAL PROPERTIES

Copolymer	Polystyrene / divinylibenzene
Matrix	Highly porous
Type	Adsorbent
Physical form	White spherical beads
Whole beads count	98 min
Shipping density	690 – 700 g/lt
Particle density	1,02 mg/ml
Water retention	45.0 - 55.0 %
Particle diameter	0.250 – 1.250 mm
Uniformity Coefficient	≤ 1.6
Specific Surface Area	580 m²/g
Pore Volume	1.3 ml/g
Pore Radius	320 Å

SWELLING RATIO IN VARIOUS SOLVENTS

Methanol	1.15
Ethanol	1.22
Acetone	1.24
Toluene	1.25
Acetonitrile	1.15
Water	1.00

REGENERANT

Organic solvent

Bases for acid compound

Buffer solution for pH sensitive compound

Hot steam for volatile compounds

SUGGESTED OPERATING CONDICTIONS

Temperature Range	5 - 130 °C (41 - 266 °F)
pH Range	0 - 14
pH Stability	0 - 14

For additional size in formation, please refer to the our Technical Dept.

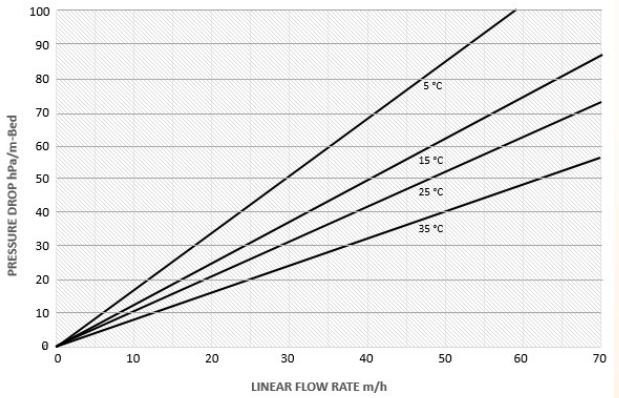
For additional praticle size information regarding recommended minimum bed depth, operating conditions, and regeneration conditions for Layered or Mixed bed, please refer to our tecnical dept.

HYDRAULIC CHARACTERISTIC

Estimated pressure drop for DYNASPHER DB620 as a function of service flowrate and temperature is show in figure 2.

These pressure drop expectations are valid at the start of the service run with clean water and well – classified bed.

Figure 1: Pressure Drop of DB620
Temperature = 5 - 35 °C (41 - 95 °F)



CUSTOMER NOTICE

STORAGE

It is recommended to store ion exchange resins at temperatures above the freezing point of water under roof in dry conditions whithout exposure to direct sunlight. If resin should become frozen, it should not be mechanically handled and left to thaw out gradually at ambient temperature. It must be completely thawed before handling or use. No attempt should be made to accelerate the thawing process.

DISPOSAL

In the European Community Ion exchange resins have to be disposed, according to the European waste nomenclature which can be accessed on the internet – site of the European Union.

TOXICITY

The safety data sheet must be observed. It contains additional data on product description, transport, storage, handling, safety and ecology.

WARNING

Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.