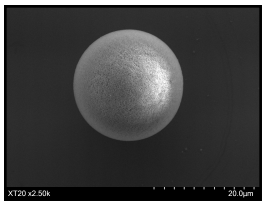
Product Data Sheet

AmberChrom™ XT20 Chromatography Resin

Chromatographic-grade Resin for Purification and Polishing of Proteins, Peptides, and Oligonucleotides

Description



AmberChrom™ XT20 Chromatography Resin is a macroporous polymeric resin used for high-value reversed-phase chromatography (RPC). AmberChrom™ XT20 is specifically designed for the cost-effective separation of proteins, peptides, and oligonucleotides. The product is suitable for use in many pharmaceutical applications in downstream purification and polishing steps.

AmberChrom™ XT20 is a 20-µm, rigid, insoluble polystyrene-divinylbenzene polymer that is mechanically stable and chemically robust to standard reversed-phase solvents and cleaning agents, allowing it to be operated up to a maximum pressure of 60 bar. Its high surface area, unique pore size, and pore volume distribution make it ideally suited for the separation of peptides and oligonucleotides. Its narrow, controlled particle size distribution and mechanical stability enable high flow which, coupled with its high capacity for many pharmaceutical compounds, provide excellent process throughput in operation.

Its high degree of chemical stability enables AmberChrom™ XT20 to be operated within a very broad pH range (up to pH 14), and the product can be easily cleaned in place (CIP) with most organic solvents and dilute acids and bases. It is an excellent technical and economical alternative to RPC silica, and can be used in high-resolution, high-pressure chromatography.

Applications

- Capture, separation, and purification of proteins, peptides, and oligonucleotides

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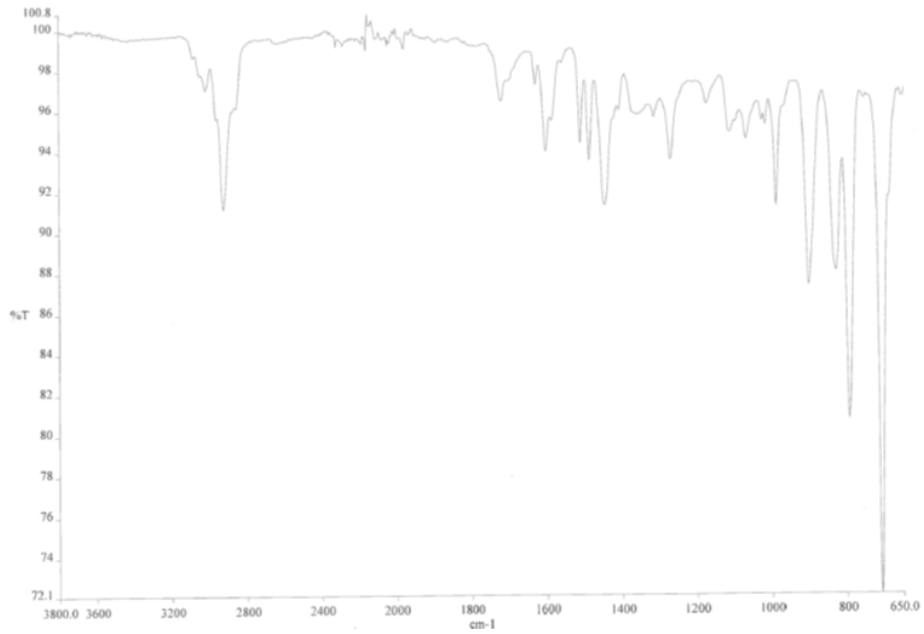
Typical Properties

Physical Properties	
Copolymer	Styrene-divinylbenzene
Matrix	Macroporous
Type	Adsorbent
Physical Form	White, opaque, spherical beads
Nitrogen BET	
Surface Area	560 – 580 m^2/g
Total Pore Volume	0.61 mL/mL
Average Pore Diameter	300 Å
Chemical Properties	
Functional Group	None
Shipping Form	Dry
Chemical Resistance	Insoluble in dilute solutions of acids or bases and common solvents: IPA, ACN, MeOH
Particle Size	
Particle Diameter, mean	20 µm
15 – 30 µm	≥ 85%
Stability	
Swelling (in solvent):	
Water	0%
Methanol	1%
Isopropanol	1%
Acetone	2%
Toluene	2%

Suggested Operating Conditions

Temperature Range	4 – 60°C (39 – 140°F)
pH Range	1 – 14
Pressure Range	≤ 60 bar (870 psi)

IR Spectrum



Regulatory Status

DuPont can provide regulatory support for AmberChrom™ XT20 Chromatography Resin to end users under confidentiality, upon request.

Product Stewardship

DuPont has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with DuPont products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

DuPont strongly encourages its customers to review both their manufacturing processes and their applications of DuPont products from the standpoint of human health and environmental quality to ensure that DuPont products are not used in ways for which they are not intended or tested. DuPont personnel are available to answer your questions and to provide reasonable technical support. DuPont product literature, including safety data sheets, should be consulted prior to use of DuPont products. Current safety data sheets are available from DuPont.

Please be aware of the following:

- **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.

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