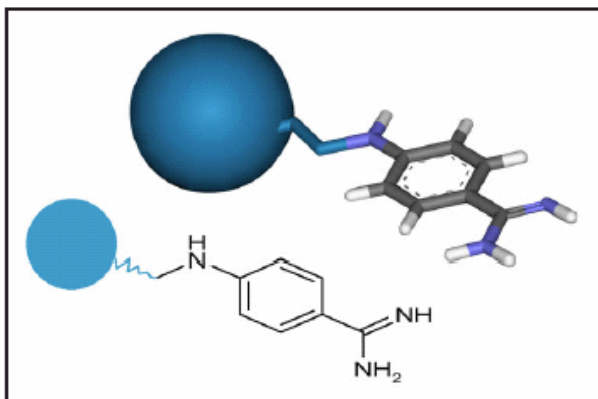


p-Aminobenzamidine Agarose 6XL



p-Aminobenzamidine Agarose 6XL is an affinity adsorbent for purification of serine proteases and esterases such as trypsin, thrombin, kallikrein, urokinase, acetyl cholinesterase and alkaline phosphatase. p-Aminobenzamidine Agarose 6XL can be used in the separation of closely related proteases, for example, trypsin from chymotrypsin, or in the removal of trace protease contamination from a final product.

p-Aminobenzamidine Agarose 6XL is immobilized onto 6% cross-linked agarose via an epoxy linked spacer arm to provide a robust adsorbent. This product is manufactured in a controlled environment to ISO 9001:2008 Quality Standard and is designed for use in cGMP manufacturing.

- Affinity purification and removal of serine proteases
- High purity p-aminobenzamidine ligand
- Ligand binds selectively to the active site of serine proteinases
- High dynamic binding capacity
- Sanitisable with 20% ethanol/1.0M acetic acid or 8M urea allowing multiple cycles
- Highly reproducible batch-to-batch manufacture to ISO 9001 standard
- Supported with a comprehensive Regulatory Support File
- Multiple end users in regulated bio-pharmaceutical development and manufacturing scale processes

Advantages of p-Aminobenzamidine Agarose 6XL:

Optimised product: p-Aminobenzamidine Agarose 6XL has been optimised for use in bioseparation applications using robust coupling chemistry and optimal ligand density.

Support matrix: p-Aminobenzamidine Agarose 6XL is available on 6% cross-linked beaded agarose with mean particle size of 90µm.

Adsorbent Stability: p-Aminobenzamidine Agarose 6XL is stable across the range pH 3 – 12 without significant ligand loss. However, this adsorbent must not be subjected to pH's above 12.0 as the benzamidine ligand is degraded at very high pH. This means p-Aminobenzamidine Agarose 6XL should not be treated with cleaning or sanitisation solutions containing sodium hydroxide.

pH Stability

p-Aminobenzamidine Agarose 6XL stable across the pH range 3 -12 (continuous exposure)

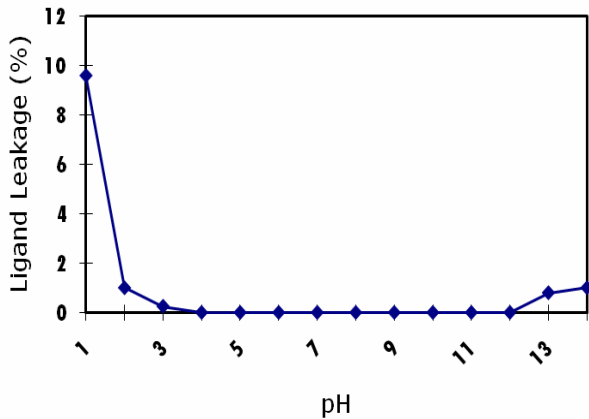


Figure 1: pH stability profile for p-Aminobenzamidine Agarose 6XL incubated in a range of test solutions from pH 0.0 (1 M HCl) to pH 14.0 (1 M NaOH) at ambient room temperature. Samples of supernatant were collected and assayed for the presence of adsorbent degradation (carbohydrate).

Flow rates

p-Aminobenzamidine Agarose 6XL can be used at flow rates up to 300 cm/hr at a pressure of 1 bar.

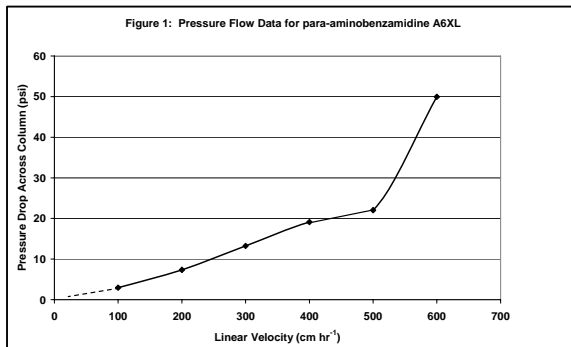


Figure 2: Pressure-flow curve for p-Aminobenzamidine Agarose 6XL (1 cm dia x 15cm bed length).

Binding Capacities

p-Aminobenzamidine Agarose 6XL provides binding capacities up to 40 mg/ml for serine proteases.

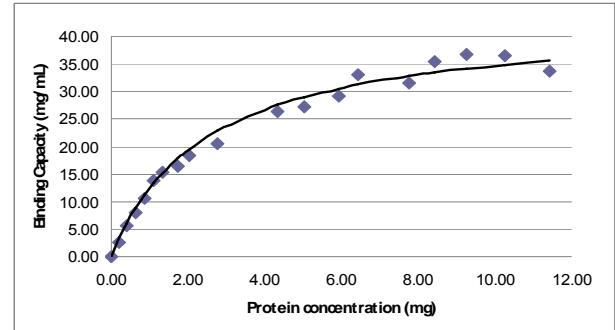


Figure 3: Static binding capacity of p-Aminobenzamidine Agarose 6XL for serine protease, trypsin (20mM phosphate buffer, pH 7.0 containing 0.5M NaCl).

Applications

p-Aminobenzamidine Agarose 6XL may be used to purify trypsin from bovine pancreas and to resolve trypsin from chymotrypsin. Other applications include the purification or removal of trypsin-like serine proteases, the resolution of plasminogen subspecies and the purification of aldehyde oxidase. Many proteases are prone to autodigestion and rapid purification provides significantly higher yield of the active protein. Because of its unique specificity, the adsorbent may also be used to remove trace protease contamination without compromising the yield of the final product.

Regulatory Support

p-Aminobenzamidine Agarose 6XL is supported by a regulatory support file.

Bulk Manufacture

ProMetic BioSciences can provide p-Aminobenzamidine Agarose 6XL in volumes sufficient to meet the requirements of the largest biomanufacturing processes. Single batches of up to 275 litres are produced in ProMetic's controlled environment manufacturing facility under an ISO 9001 quality system.

Technical Support

ProMetic has comprehensive knowledge of the properties and applications of p-Aminobenzamidine Agarose 6XL. We can provide full support for the development of new applications and their implementation for biopharmaceutical manufacture.

Properties of p-Aminobenzamidine Agarose 6XL

Ligand: p-Aminobenzamidine

Matrix: 6% cross-linked agarose)

Particle size: 45 – 165 µm 85% of beads within this range

Binding capacity: 25 – 40 mg trypsin/ml

Operational Flow rate: Up to 300 cm/hr

Operating pressure: Up to 3 bar (45 psi)

Operating pH: .pH 3 – 12

pH stability: . . . Long term (3 months)
pH 2 – 12

Chemical stability: All commonly used aqueous buffers and co-solvents.

Sanitization: . 20% ethanol/1 M acetic acid pH 2.3 for 3 hours

Storage: 24% ethanol/76% 0.1M NaCl

Ordering Information

p-Aminobenzamidine Agarose 6XL slurry for column packing

p-Aminobenzamidine Agarose6XL (25 ml): .0320-00025

p-Aminobenzamidine Agarose 6XL (100 ml): 0320-00100

p-Aminobenzamidine Agarose 6XL (500 ml): 0320-00500

p-Aminobenzamidine Agarose 6XL (1000ml):0320-01000

p-Aminobenzamidine Agarose 6XL pre-packed columns (for attachment to chromatography workstations)

p-Aminobenzamidine Agarose 6XL (5x1 ml):1320-00001

p-Aminobenzamidine Agarose 6XL(1x10 ml):1320-00010

p-Aminobenzamidine Agarose 6XL PuraPlate™ (96 column plate for rapid screening and purification method development)

p-Aminobenzamidine Agarose 6XL PuraPlate™: 2206

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ProMetic offers a range of larger pack sizes for supply of bulk resins into development and regulated cGMP manufacturing processes. For more information on p-Aminobenzamidine 6XL and supply related matters please do not hesitate to contact us.