



AMBERCHROM® CG1000S

Chromatographic Grade Resin

For Chromatographic Purification

PRODUCT DATA SHEET

AMBERCHROM chromatographic media are macroporous, polymeric resins useful for adsorption and reversed phase liquid chromatography. They are designed for laboratory and process scale purifications of proteins, peptides, nucleic acids, antibiotics, and small molecular weight pharmaceuticals.

AMBERCHROM CG1000S chromatographic grade resin is an insoluble polystyrene divinylbenzene polymer manufactured for high value chromatographic applications. Its high surface area, unique pore size and pore volume distribution make it ideally suited for separation of peptides. AMBERCHROM CG1000S has high capacity for many pharmaceutical compounds and have been commercially proven for many years. It is an excellent technical and economical alternative to RPC silica, and can be used in high resolution, low pressure chromatography.

AMBERCHROM CG1000S is suitable for use in many pharmaceutical applications in the front end capture, purification, and desalting modes of operation depending on the particle size selected.

AMBERCHROM CG1000S is available in one particle size range (35 microns), and is supplied as a slurry in 20 % ethanol.

AMBERCHROM CG1000S is ideally suited for operation with the entire pH range, and can be easily cleaned in place (CIP) with most organic solvents and dilute acids and bases.

REGULATORY STATUS

A Material Regulatory Support (MRS) package is maintained for AMBERCHROM CG1000S resin. It is available upon request under CDA for users of this product. This material is manufactured under strict controls, and plant audits by potential customers are welcomed.

CLEAN IN PLACE

Unlike RPC silica, AMBERCHROM CG1000S, due to its polymeric nature and lack of bonded phase, can be cleaned in place (CIP) with most organic solvents and low concentrations of acids and bases. As the graph below demonstrates, there is no loss in capacity for BSA when CG1000S is exposed to 0.5 M NaOH at ambient temperature for >180 days or 60 °C for 100 days.

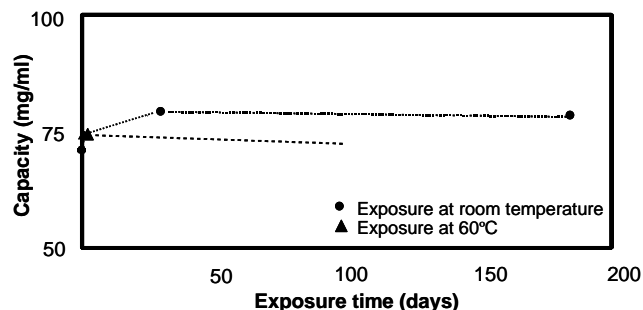


Figure 1: BSA Adsorption

In addition to the excellent chemical resistance of AMBERCHROM CG1000S, it also exhibits low swelling in common solvents as shown below:

Solvent	Swelling
Water	100
Methanol	105
Isopropanol	106
Acetone	107
Toluene	106
Dry	90

PEPTIDE AND PROTEIN SEPARATIONS

Due to its large (1000 Å) average pore diameter, AMBERCHROM CG1000S is ideally suited for the purification and separation of peptides and proteins.

The separation of a complex mixture of peptides is readily achieved with AMBERCHROM CG1000S under low pressure chromatographic conditions.

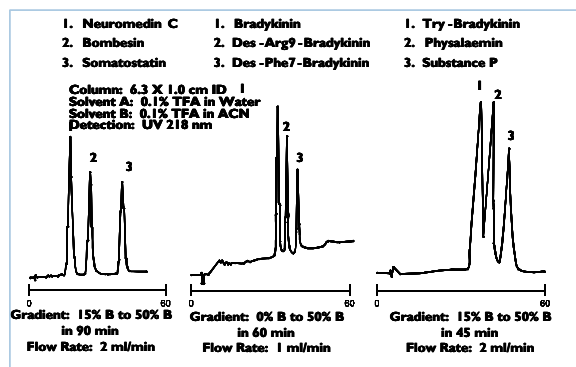


Figure 2: Peptide Separations

Figure 3 illustrates the separation efficiency of AMBERCHROM CG1000S for a series of proteins using low pressure chromatographic conditions.

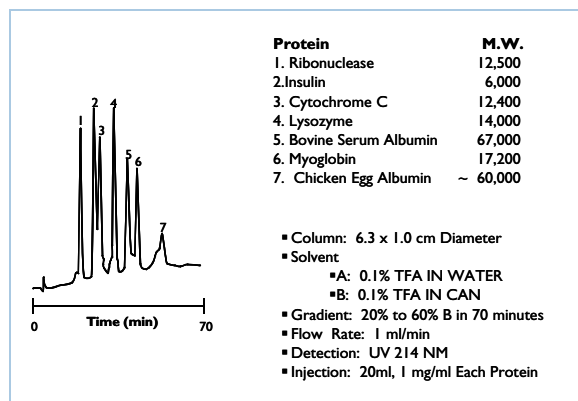


Figure 3: Separations of Proteins on CG1000S

IR SPECTRUM OF AMBERCHROM CG1000S

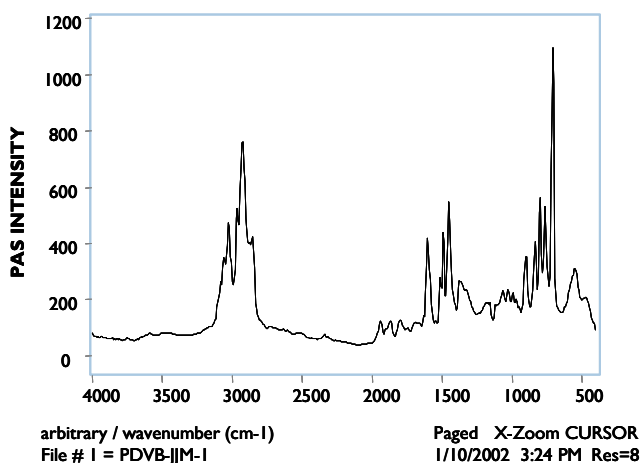


Figure 4: AMBERCHROM CG1000S IR Spectrum

TYPICAL PHYSICAL PROPERTIES

Matrix _____
 Functional groups _____
 Physical form _____
 Shipping solvent _____
 Surface area _____
 Pore size ^[1] _____
 Mean diameter _____
 Uniformity coefficient _____
 Chemical resistance _____

Polystyrene/Divinylbenzene adsorbent
 None
 Opaque white beads
 20% ethanol
 200 m²/g
 1000 Å
 S grade : 35 microns
 1.7
 Insoluble in dilute solutions of acids or bases
 and common solvents : IPA, ACN, MeOH.

^[1] Test methods are available on request.

SELECTED REFERENCES

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ORDERING INFORMATION

Part Number	Description	Particle Size	Packaging
10235582	Amberchrom CG1000S	35 µm	25 ml
10235583	Amberchrom CG1000S	35 µm	100 ml
10235584	Amberchrom CG1000S	35 µm	1000 ml
10071490	Amberchrom CG1000S	35 µm	5 L
10071489	Amberchrom CG1000S	35 µm	50 L

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