

#### **General Description**

VariPure IPE is chemically and physically stable across the complete pH range. This data sheet describes recommended methods for ion-pair removal in peptide purification applications.

#### Introduction

The following are guidelines for using VariPure IPE devices and loose material for ion-pair removal and freebasing applications.

#### Personnel

These guidelines have been written for personnel having a good knowledge of the methodologies used in solid phase extraction.

### Safety

Please read the MSDS provided with the VariPure IPE material before opening the bottle or blister pack. The person, or persons, using the VariPure IPE material must comply with the Health and Safety Regulations in force in the Country and Establishment where the material is being used.

#### **Product Odor**

When using products from the VariPure IPE range the end-user may detect a slight amine odor. This is due to a very low level of trimethylamine present in the material. Trimethylamine has an odor threshold at sub ppb levels, a concentration which is at least one order of magnitude below its OEL.

# The Importance of VariPure IPE Sorbent Preconditioning

In order for this product to work effectively, the sorbent needs to be preconditioned effectively prior to use. The recommended preconditioning solvent is methanol, followed by the solvent or mobile phase used in the end-users specific application.

#### **Recommended Use**

VariPure IPE is highly effective in removing organic acids, such as TFA and AcOH, from preparative HPLC eluent fractions and in the freebasing of isolated peptide salts. The flow path diagram outlines our recommended generic procedure for the removal of ion-pairing species from peptide samples. The sorbent has a nominal loading

of 1.8 mmol/g of acid removal sites. We recommend that in all applications, the sorbent should be used as a two-fold excess relative to the total acid concentration.

#### Condition

Precondition the tube with 2-3 bed volumes of MeOH, followed by 2-3 bed volumes of desired mobile phase

#### Sample

Apply preparative HPLC eluent fractions directly, or if isolated solid apply in a suitable solvent (i.e.  $ACN/H_2O$ )

#### Washing

Wash the device with 1 bed volume of a good polar solvent, such as MeOH or ACN, to allow all the peptide to be collected

## Isolate

Combine the desired fractions and isolate peptide according to standard procedure (e.g. lypholization or rotary evaporation)

#### **Peptide Compatibilities**

Due to the anionic-exchange properties of this sorbent, peptides containing multiple acid residues (e.g. Asp, Glu) may experience poor yield or retention. The use of VariPure IPE is recommended for the purification of polar basic, hydrophobic and neutral peptide amides and acids.



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