



# Maximising potential returns

Natural Extracts Application Note

## Removing heavy metal impurities from plant and animal extracts

Superior  
purification



- Meet increasingly stringent customer requirements
- Opens up new market opportunities
- Fully scalable



## About PhosponicS

PhosponicS actively works with key producers of high value natural extracts to develop new ways to remove unwanted heavy metals from your natural extracts to meet or even exceed your customers' requirements, opening up new market opportunities to increase your return on investment.



## Introducing PhosponicS Metal Removal Products

PhosponicS has developed a range of superior performing silica products to meet the highest standards required by end customer for products intended for human use.

Product name
Mercaptoalkyl 1 functionalised silica
Aminoalkyl 2 functionalised silica
Mercaptoalkyl 4 functionalised silica
Alkyl thiourea functionalised silica
Sodium alkyl phosphonate silica
Alkyl phosphonic acid silica
Amino alkyl, mercapto alkyl functionalised silica
Alkyl sulfonic acid modified silica

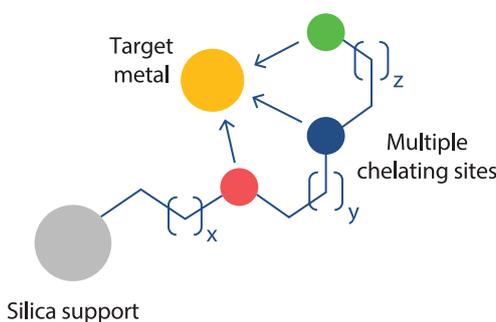


You can order a free 10g sample of your chosen heavy metal removal product by contacting any of our approved regional distributors.



## What Makes PhosponicS Unique?

PhosponicS uses patented technology for attaching powerful ligands to a silica backbone. These ligands provide multiple chelating sites which are designed to remove heavy metal impurities that frequently remain in the product after it has been extracted from its natural source.



### Advantages of PhosponicS heavy metal removal products

- Superior results consistently achieved across a wide range of natural extracts
- Flexibility to remove most types of metal impurities
- Proven track record from lab through to plant scale

### Advantages of silica as a support

- Highly porous for optimised stream flow
- Stable in both aqueous and organic media
- Larger surface area for maximising metal removal



## PhosphonicS supporting the natural extracts industry

Due to the nature of the environment in which the plant and animal based sources of natural extracts grow and mature, unwanted contaminants can find their way into the end product which is destined for human use.

The effective removal of unwanted traces of heavy metals improves the success rate of meeting regulatory customer requirements and opens up new market opportunities for the producers of traditional remedies.

## Ease of use, flexible formats

PhosphonicS can supply functionalised silica products in a wide range of formats for ease of use at different scales of operation.

Our heavy metal impurity removal products are applied either in slurry mode with overhead stirring or in a fixed bed mode. Whatever the scale of your production, we work with you to provide the right solution which is tailored to your needs.

### Ba removal from Ginseng extract



#### Result

- Ba < 0.3 ppm
- In production

#### Stream

- Ba 5-10 ppm
- Aqueous

### Fe removal from Heparin extract



#### Result

- Fe < 5 ppm
- In production

#### Stream

- Fe (80 -120 ppm)
- Aqueous

### Hg removal from Fenugreek extract



#### Result

- < 1 ppm
- In scale up trials

#### Stream

- Hg 10-15 ppm
- Aqueous



## Order Your Free Sample

To order your free 10g sample send an email requesting your choice of Heavy Metal Removal Product to PhosphonicS' approved distributor, details given below, or to [sales@phosphonics.com](mailto:sales@phosphonics.com).



## Contact PhosphonicS

PhosphonicS Ltd  
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For sales enquiries please email: [sales@phosphonics.com](mailto:sales@phosphonics.com)

For technical enquiries please email: [contact@phosphonics.com](mailto:contact@phosphonics.com)

**[www.PhosphonicS.com](http://www.PhosphonicS.com)**



## Contact Distributor



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