

FAQ for SupelMIPs

I will use a SupelMIP SPE. Are there any general recommendations?

Be careful to follow closely the SPE method attached to the product. Make sure that you have the most recent version of the data sheet by checking on the product pages at <http://www.miptechnologies.com/analytical.asp> or at www.sial.com/supelmip. Special tips and tricks can be found on each product page at [miptechnologies.com](http://www.miptechnologies.com) and in the application notes.

Generally, it is important to notice the loading volumes and conditions, follow the recommended washing and drying recommendations.

I want to read more about the SupelMIPs. Where do I go to find more information?

You find general background description and literature references at the product page at <http://www.miptechnologies.com/analytical.asp> and at each product at www.sial.com/supelmip.

Can I use the SupelMIP in matrices other than those stated in the application note?

The SupelMIP can be applied to other matrices too but some method development may be needed. Initially, try some of the recommended methods on your specific sample. Make sure that you load aqueous samples with adjusted pH, no organic modifiers like methanol or acids should be present because these may elute the analyte. If you do not achieve the desired results contact us for support.

I will use the SupelMIP Beta agonist SPE. Do you have any general recommendations for the SPE method?

Generally, as a start, follow the procedure in the "easy to use application note" (www.miptechnologies.com/pdf/CustomerSupport/2008-04-23%20SupelMIP%20Beta%20agonists,%20urine.pdf). Regarding the loading volumes; we advise you to start loading 2 mL of diluted sample. This will facilitate the analysis of a broader range of Beta agonists. If the sensitivity then is too low, the loaded amount can be increased. Very polar Beta agonists are more sensitive to higher loading volumes. To adjust pH of your loaded sample you can use either acetic acid or ammonia. Samples with high ionic strength may be diluted. Be careful not to increase the acid content in the acetonitrile wash step and be careful to dry the column whenever stated. Information about the SupelMIP SPE Beta agonists can be found at <http://www.miptechnologies.com/betaagonist.asp> and at www.sial.com/supelmip

I will use the SupelMIP Beta agonist SPE. Do you have any recommendations for any enzymatic sample pre-treatment method?

Take 5 mL urine. Add 2 ml 0.25 M sodium acetate pH 5.2, 25 µl Helix Pomatia Juice and let hydrolyse overnight at 37°C. Centrifuge for 15 min at 3000 rpm and then load optimized volume on column.

I will use a SupelMIP SPE and need specific advice?

For technical support for your specific problem please fill out the [Technical Support Request Form](#) ([http://www.sigmaaldrich.com/analytical-chromatography/sample-preparation/spe/supelmip-spe-](http://www.sigmaaldrich.com/analytical-chromatography/sample-preparation/spe/supelmip-spe-technical.html)

[technical.html](#)) and a scientist skilled in molecularly imprinted polymer method development will contact you.

There is no MIP phase for my application? How do I develop a MIP protocol for my application?

If you think that your application merits the development of a molecularly imprinted polymer SPE application, you can submit a SupelMIP SPE Application Request Form (www.sigmaaldrich.com/analytical-chromatography/sample-preparation/spe/supelmip-application.html). Scientists from both Supelco and MIP Technologies AB will evaluate your application through a short feasibility stage. If your application is prioritized to move through feasibility, the next stages will be development and optimization. The latter two stages can often take several months; however, we are in the process of streamlining how we develop and approach new SupelMIP applications.

Can I re-use the SupelMIP cartridges?

The MIP polymers are stable materials and in process purification processes the material can be used several times. Extracting an analyte from a clean buffer using the MIP makes it possible to re-use the cartridges. However, in analytical use where the polymers are used for trace analysis in complex matrixes this is not recommended. This is because the applications of the materials are in the analysis of food, drinking water etc and in these types of analysis it is very important to ensure high safety of the process. In trace analysis in complex matrixes the interactions with the MIP material are complex and therefore the performance of re-used materials cannot be guaranteed and is therefore not recommended.

What is the capacity of the SupelMIPs?

The rule of thumb capacity in clean solvents or buffers is that for 25 mg of MIP the capacity is usually 25 µg analyte in clean solvents or buffers. However in real matrix the situation may be different. In such cases the capacity of the SupelMIPs are highly dependent on the exact matrix composition and chemical profile.

I would like to change elution solvent for the SupelMIP Riboflavin. Any recommendations?

In the recommended method 70 % Acetonitrile/30 % water is recommended and while 50% Water/50% Acetonitrile elutes riboflavin just as well, 70% is chosen for ease of evaporation after elution. If there is a need to avoid water in the elution, methanol is better to use than acetonitrile, but for mixtures with water acetonitrile is better. Riboflavin can also be eluted with >50% water if required but then higher volumes are needed as the elution solvent is not as strong. Be aware that changing the elution solvent might introduce different interferences in the elution as well. So when changing the elution solvent also check that the cleanliness of the eluent remains the same.

Where do I find further FAQs for the SupelMIPs?

Further FAQs can be found at <http://www.sigmaaldrich.com/analytical-chromatography/sample-preparation/spe/supelmip/faqs.html>