

How to form a MIP!

All cancer cells bind specific molecules. The molecules (for example a protein or sugar molecule) are called biomarkers and differ between different forms of cancer. The nanoparticle / MIP created to target cancer cells is molded to fit this specific molecule.

What is a MIP ?

MIP (molecularly imprinted polymer) is a plastic nanoparticle that you mold to perfectly fit the biomarker you want to find. The small plastic antibodies are about 100 nanometers, that is less than 1 thousand millimeters.



Spagetti = Plastic material

(Entangled polymer chains – they are sticky and can bind to the biomarker)

Tomato = Biomarker

(molecule that indicates cancer)

HEAT ☺☺☺



This will make the plastic chains start to grow and make the plastic to a stiff polymer network

HEAT AGAIN ☺☺☺
or add ACID
OR BASE

This break the bonds between the biomarker and the plastic form



THE RESULT:

A plastic shape that will fit the specific biomarker perfectly – a MIP