

We assist you with your drug discovery and chemical biology research.

# TAMAGAWA SEIKI Bio Screening System

Magnetic nanoparticles fish up target proteins/chemical substances.

Magnetic nanoparticles developed by a group from Tokyo Institute of Technology have remarkably enhanced the purity and the speed of the screening process compared to conventional screening systems.

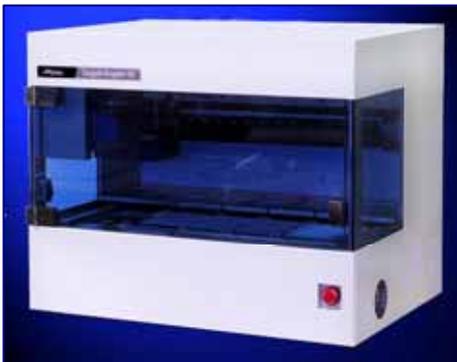
We at Tamagawa Seiki have developed a line of automated screening equipment named "Target Angler" using this magnetic nanoparticle technology. We ensure that this equipment will deliver successful results to you in your drug discovery and chemical biology research.

## SCREENING SYSTEM LINE UP

### Screening Equipment

- You can select screening equipment according to your needs.
- You can perform screening under optimal temperatures.

#### Target Angler 96



High-throughput equipment handling 96 samples at a time.

Dimensions: W605 × D460 × H480 mm

#### Target Angler 24



Equipment handling 24 samples at a time.

Dimensions: W700 × D605 × H800 mm

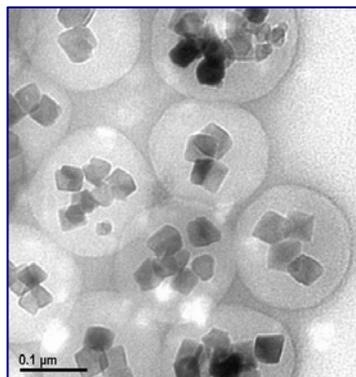
#### Target Angler 8



Small & low cost equipment handling 8 samples at a time.

Dimensions: W330 × D320 × H370 mm

### Magnetic Nanoparticles

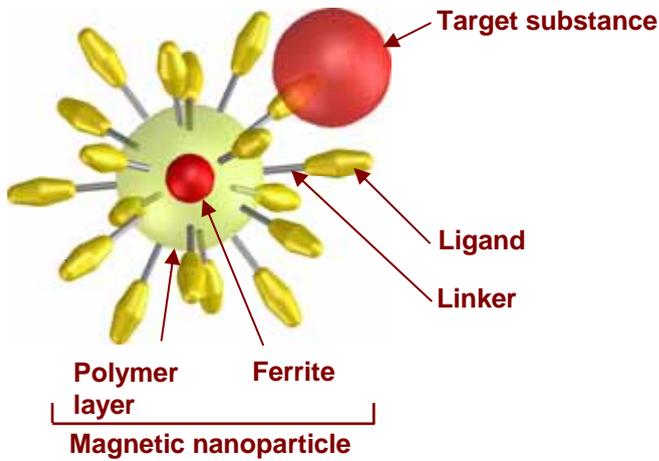


TEM image



Surface structure of the magnetic nanoparticles can be modified depending upon your needs.

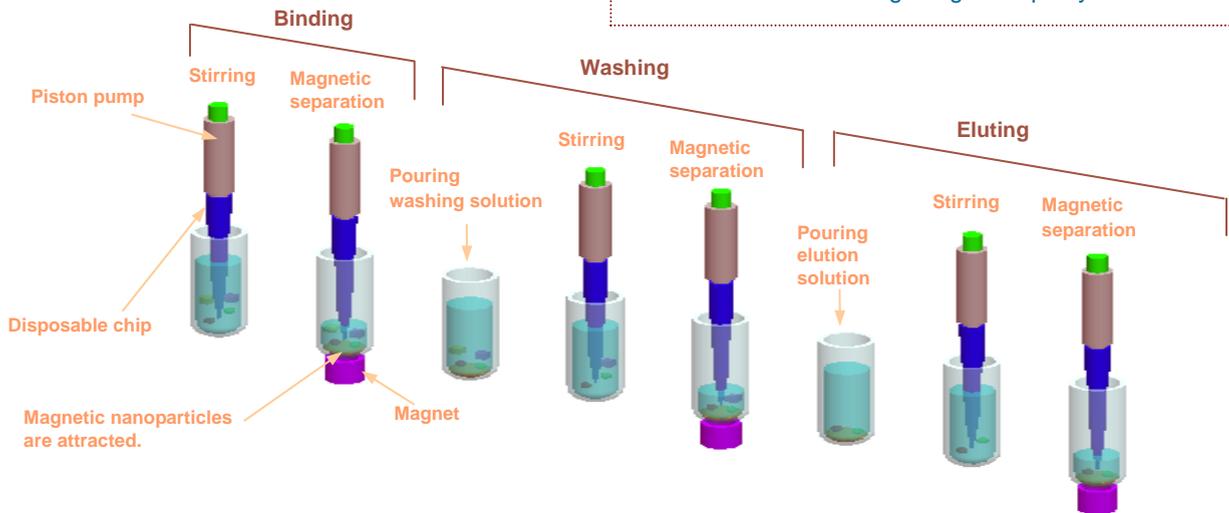
Magnetic nanoparticles (FG beads)



A magnetic nanoparticle consists of ferrite nanoparticles coated firmly with a polymer layer, and its diameter is approx. 200 nm. It forms chemical bonds with various ligands through the linker attached to the surface of the polymer layer.

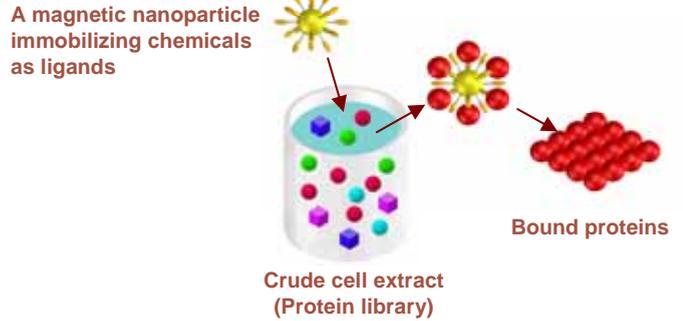
Screening process of our equipment

Our "Target Angler" automated screening equipment precisely repeats the screening process based on proven principles. It effectively carries out sequential processes such as; 1) a binding process to bind target substances, 2) a washing process to remove unwanted substances, and 3) an eluting process to separate the bound substances from the magnetic nanoparticles. Thus, the bound substances are obtainable with high purity.



Screening using magnetic nanoparticles

Screening of target protein



Screening of chemical



When magnetic nanoparticles immobilizing ligands are reacted in a solution containing various proteins (or chemicals), target proteins (or chemicals) are selectively bound to the magnetic nanoparticles through ligands.

By attracting the target samples via magnetism and then washing off unwanted proteins (or chemicals) attached to the surface of the magnetic nanoparticles, the target samples are obtained with a high degree of purity.

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