

# SHIMSEN Oligo micro-SPE plate

## Sample Preparation Product for Oligonucleotide Drugs in Biological Samples



SHIMSEN Oligo micro-SPE plate

### Product Features

- Special mixed-mode ion-exchange sorbent dedicated for oligonucleotides, featuring excellent specificity and high recovery
- Zero-dead-well chamber, free of solvent residue to minimize analyte loss
- Compatible with positive-pressure manifolds and common automated liquid-handling instruments

Transfer 200μL plasma sample into a 1mL centrifuge tube.



Add digestion solution, mix, vortex for digestion, then dilute with 360μL water (1:1 dilution) to obtain the sample solution for purification.



Condition and equilibrate the SPE plate with 500μL methanol followed by 500μL ammonium acetate solution.



Load the prepared sample solution onto the plate; apply positive pressure for a flow rate of one drop every 3-5seconds, and hold for 2min.



Washing step 1: add 1mL 50mM ammonium acetate solution (pH=5.5), discard the effluent.



Washing step 2: add 1mL 50% acetonitrile-ammonium acetate solution, discard the effluent.



Elute twice using 500μL of 5:4:1 (V:V:V) mixture of 100mM ammonium bicarbonate (pH adjusted to 11 with triethylamine)-acetonitrile-tetrahydrofuran under positive pressure at a flow rate of one drop every 3-5seconds; collect the eluate.



The collected eluate is ready for instrumental analysis. If concentration is required, evaporate to near-dryness under nitrogen flow, then reconstitute with 150μL of 10mM tris-HCl solution (containing 1 mmol EDTA and 0.1% ammonia water).

Sample Preparation Workflow for SHIMSEN Oligo micro-SPE plate

### UHPLC Conditions

Column: Shim-pack Scepter Claris C18  
(1.9 μm, 2.1×50 mm; P/N: 227-31210-01)

| Analyte    | Spiked at 500ng/mL |                   |         | Spiked at 100ng/mL |                   |         |
|------------|--------------------|-------------------|---------|--------------------|-------------------|---------|
|            | Recovery (%)       | Mean Recovery (%) | RSD (%) | Recovery (%)       | Mean Recovery (%) | RSD (%) |
| Fomivirsen | 90.1               |                   |         | 77.4               |                   |         |
|            | 86.7               | 87.2              | 3.13    | 76.7               | 76.9              | 0.61    |
|            | 84.7               |                   |         | 76.5               |                   |         |

### Product Information

| P/N          | Product Description                                      |                            |
|--------------|----------------------------------------------------------|----------------------------|
| 380-05120-06 | SHIMSEN Oligo micro-SPE plate, 30mg-2mL/well, 1/pkg      | Sample preparation plate   |
| 380-00813-01 | SHIMSEN 96-Well Plate LA-Sample plate                    | Low-adsorption empty plate |
| ORPSP HT 96  | Orochem EZYPRESS HT 96 Positive Pressure Processor       | Positive-pressure manifold |
| QUIKVap-192  | Orochem QUIKVap-192, two 96-well plate format evaporator | Nitrogen evaporator        |