

Welchrom® 96-Well Plate Product Care and Use Manual

1. Product Overview

Welchrom® 96-well plates product is divided into 2 main series: Deep Well Extraction Plates and Micro Well Extraction Plates.

Welchrom® 96 Deep Well Extraction Plates feature an integrated design, ideal for processing large-volume biological samples. They allow for concentration after elution of large-volume samples, enhancing detection sensitivity. Each well is loaded with 10 mg to 60 mg of filler.

Welchrom® 96 Micro Well Extraction Plates also utilize an integrated design, suitable for extracting target compounds from small-volume biological samples. Each well can be loaded with 2 mg to 5 mg of filler, enabling elution of target substances with a minimal amount of elution solvent. This design eliminates the need for concentration and reconstitution steps.

2. Applicability

Welchrom® 96-well plates series is a high-throughput pre-processing product introduced by Welch Materials. Primarily designed for sample pre-processing in industries such as biotechnology and pharmaceuticals, these plates play a crucial role in purifying complex matrices like blood and urine. Their function is to reduce matrix interference with instruments, enhancing the reliability and accuracy of analytical results.

3. Application

Determination of Hydrocortisone, Testosterone, and Progesterone levels in serum.

Product: Welchrom® BRP 96-well plates, 5mg/1mL

Procedure:

Activation: Add 200µL of methanol, followed by 200µL of water.

Sample Loading: Load 100µL of serum sample mixed with 100µL of methanol-water (1% formic acid, 50/50).

Washing: Wash with 400µL of methanol-water solution (35/65).

Elution: Elute with 200µL of 1% formic acid in methanol, collect in a 96-well collection plate. Perform HPLC-MS/MS detection.

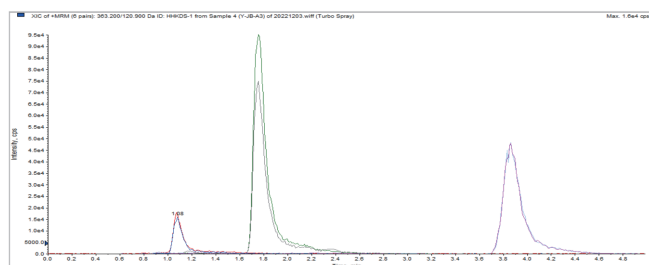


Figure 1: Spiked Chromatogram of Serum(Concentration: 50 ng/mL)

Test Results:

	Spiking Concentration	Average Recovery Rate	RSD(N≥50)
Hydrocortisone	50ng/mL	100.80%	7.49%
Testosterone	50ng/mL	104.38%	9.63%
Progesterone	50ng/mL	90.63%	9.00%

4. Storage Conditions and Shelf Life

Store at room temperature; effective for a period of 3 years under these conditions.

5. Precautions

- (1) 96-well plate is available with various adsorbent types such as BRP, P-SCX, P-SAX, P-WCX, P-WAX, C18E, C18, PLR, etc. Choose according to your specific requirements.
- (2) Specifications of the 96-well plate: Adsorbent masses range from 2mg to 60mg, offering multiple options.
- (3) Customization is available for all specifications of the 96-well plate.