

APPLICATION

Extraction of NSAIDs from Plasma by Novum[™] Simplified Liquid Extraction (SLE)

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Overview

In this application we use the Novum SLE MAX 96-well plate to extract an eight compound NSAID or Non-Steroidal Anti-Inflammatory drugs suite from plasma. The recovery ranges was from 77-96% with low % CVs.

Analytes

1. Ibuprofen
2. Diclofenac
3. Naproxen
4. Ketoprofen
5. Mefenamic Acid
6. Flurbiprofen
7. Sulindac
8. Salicylic Acid

Sample Pre-treatment Step

- Dilute 200 μ L of human plasma with 200 μ L of 1 % Formic acid in water. Vortex briefly (3-5 seconds).

Extraction Procedure

Sample Loading

- Load the sample from pre-treatment step above onto the Novum SLE MAX 96-well plate (part no. 8E-S138-5GA) and apply a short and gentle pulse of vacuum (~ 5" of Hg) for 5-10 seconds or until the sample has completely entered the media.

Elution

- Dispense 900 μ L of 10 % Ethyl acetate in dichloromethane (DCM) onto the Novum SLE media and allow the solvent to elute by gravity (~ 5 minute elution time) and collect the eluant in a collection plate.
- Repeat with another 900 μ L of 10 % Ethyl acetate in DCM and collect the eluant in the collection plate, pooling the two fractions.
- Apply vacuum at 5" of Hg for 20-30 seconds to complete the extraction.

NOTE: Prolonged application of vacuum will result in elution of plasma out of the Novum SLE media and into the final extracted solvent.

Dry Down

- Evaporate the final extract to complete dryness under a slow stream of N₂ at 40 °C for about 60 minutes.
- Reconstitute with 200 μ L of Methanol/Water (10:90) by vortexing the plate at 1400 rpm for 2 minutes.

Analyte	Average Recovery	% CV
Ibuprofen	82 %	6.70
Diclofenac	79 %	3.20
Naproxen	96 %	2.80
Ketoprofen	96 %	3.10
Mefenamic Acid	77 %	12.6
Flurbiprofen	82 %	12.0
Sulindac	87 %	10.1
Salicylic Acid	93 %	7.30



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Ordering Information

Novum™ Simplified Liquid Extraction (SLE)

Part No.	Description	Unit/Box
8E-S138-FGA	Novum SLE MINI 96-Well Plate	1/Box
8E-S138-5GA	Novum SLE MAX 96-Well Plate	1/Box

Accessories

Collection Plates (deep well, polypropylene)		Unit
AHO-7192	96-Well Collection Plate, 350 µL/well	50/pk
AHO-7193	96-Well Collection Plate, 1 mL/well	50/pk
AHO-7194	96-Well Collection Plate, 2 mL/well	50/pk
AHO-8635	96-Well Collection Plate, 2 mL Square/Round-Conical	50/pk
AHO-8636	96-Well Collection Plate, 2 mL Round/Round, 8 mm	50/pk
AHO-7279	96-Well Collection Plate, 1 mL/well Round, 7 mm	50/pk

Sealing Mats		Unit
AHO-8597	Sealing Mats, Pierceable, 96-Square Well, Silicone	50/pk
AHO-8598	Sealing Mats, Pre-Slit, 96-Square Well, Silicone	50/pk
AHO-8631	Sealing Mats, Pierceable, 96-Round Well 7 mm, Silicone	50/pk
AHO-8632	Sealing Mats, Pre-Slit, 96-Round Well 7 mm, Silicone	50/pk
AHO-8633	Sealing Mats, Pierceable, 96-Round Well 8 mm, Silicone	50/pk
AHO-8634	Sealing Mats, Pre-Slit, 96-Round Well 8 mm, Silicone	50/pk
AHO-7362	Sealing Tape Pad	10/pk

Vacuum Manifold		Unit
AHO-8950	96-Well Plate Manifold, Universal with Vacuum Gauge	ea



If Novum SLE products do not perform as well or better than your current SLE product, return the product with your comparative data within 45 days for a FULL REFUND.

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Novum is patent pending.

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