

APPLICATION

Extraction of Corticosteroids from Plasma using Novum Simplified Liquid Extraction (SLE)

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Overview

Corticosteroids are a class of steroid hormones that are widely studied due to their involvement in a variety of physiological processes. The aim of this application note is to introduce a fast and effective sample preparation technique using Novum Simplified Liquid Extraction (SLE) products that results in acceptable recoveries of 7 corticosteroids from plasma.

Analytes

1. 11 α -OH-progesterone
2. Corticosterone
3. Cortisone
4. Cortisone Acetate
5. Prednisone
6. Testosterone
7. Triamcinolone Acetonide

Sample Pre-treatment Step

- To 200 μ L plasma add 200 μ L water.

Extraction Procedure

Sample Loading

- Load the sample (~400 μ L) from pre-treatment step onto the Novum SLE MAX plate (Part No. 8E-S138-5GA) and apply a short and gentle pulse of vacuum (~5-10 sec and 5" or less of Hg) until the sample has completely entered in the media.

NOTE: Avoid prolonged or excessive vacuum. The sample must not leave the Novum bed.

- Wait for 5-6 minutes.

NOTE: Inadequate or excessive wait period will lead to variable recoveries and poor precision.

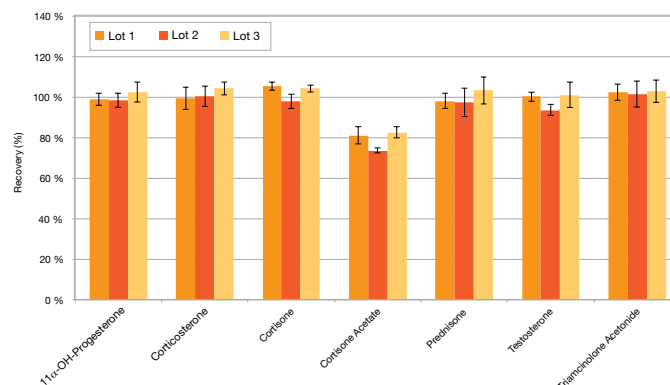
Elution

- Dispense 900 μ L of ethyl acetate onto the Novum SLE MAX plate and collect the solvent under force of gravity (approximately 5 min).
- Repeat with another 900 μ L addition of ethyl acetate and collect the solvent under gravity.
- Apply vacuum at 5" of Hg (or lower) for 20-30 secs to complete the extraction.

NOTE: Excessive/Prolong application of the vacuum may force the elution of plasma and cause dirty extraction containing internal standard.

| Analyte | Avg. Absolute Recovery | %CV (N=3) |
|------------------------------|------------------------|-----------|
| 11 α -OH-progesterone | 100 % | 3.9 |
| Corticosterone | 101 % | 2.5 |
| Cortisone | 102 % | 2.8 |
| Cortisone Acetate | 79 % | 5.8 |
| Prednisone | 100 % | 3.7 |
| Testosterone | 98 % | 5.2 |
| Triamcinolone Acetonide | 102 % | 3.4 |

% Recovery of Corticosteroids from Plasma Across 3 Different Novum SLE Sorbent Lots



APPLICATION

Ordering Information

NovumTM 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 |
|--|---|-------|
| AH0-7192 | 96-Well Collection Plate, 350 µL/well | 50/pk |
| AH0-7193 | 96-Well Collection Plate, 1 mL/well | 50/pk |
| AH0-7194 | 96-Well Collection Plate, 2 mL/well | 50/pk |
| AH0-8635 | 96-Well Collection Plate, 2 mL Square/Round-Conical | 50/pk |
| AH0-8636 | 96-Well Collection Plate, 2 mL Round/Round, 8 mm | 50/pk |
| AH0-7279 | 96-Well Collection Plate, 1 mL/well Round, 7 mm | 50/pk |

| Sealing Mats | | Unit |
|--------------|--|-------|
| AH0-8597 | Sealing Mats, Pierceable, 96-Square Well, Silicone | 50/pk |
| AH0-8598 | Sealing Mats, Pre-Slit, 96-Square Well, Silicone | 50/pk |
| AH0-8631 | Sealing Mats, Pierceable, 96-Round Well 7 mm, Silicone | 50/pk |
| AH0-8632 | Sealing Mats, Pre-Slit, 96-Round Well 7 mm, Silicone | 50/pk |
| AH0-8633 | Sealing Mats, Pierceable, 96-Round Well 8 mm, Silicone | 50/pk |
| AH0-8634 | Sealing Mats, Pre-Slit, 96-Round Well 8 mm, Silicone | 50/pk |
| AH0-7362 | Sealing Tape Pad | 10/pk |

| Vacuum Manifold | | Unit |
|-----------------|---|------|
| AH0-8950 | 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.

Terms and Conditions

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Trademarks

Novum is a trademark of Phenomenex.

Disclaimer

Novum is patent pending.

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