

New!

Strata Activated Carbon

Reproducible Extraction of Polar Analytes

- Cost-efficient sample prep
- Available in two formats: 2 g and 400 mg
- For EPA methods 521, 522, 8270, and more

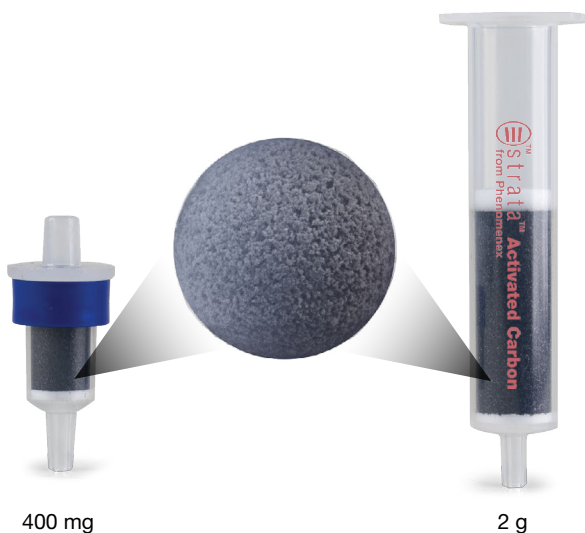




Strata Activated Carbon

Reproducible and **cost-efficient** extraction of polar analytes from aqueous matrices

Strata Activated Carbon is a high surface area fully porous sorbent that provides better retention of polar compounds compared to C8 and C18 silica products.

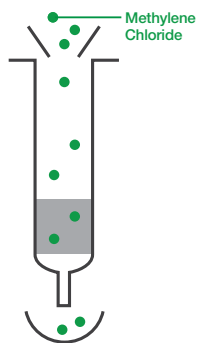


Product Benefits

- High quality chromatography-grade porous carbon
- Improved reproducibility and recovery of polar analytes
- Prescribed for EPA methods 521, 522, and 8270
- Suitable for extraction of 1,4-Dioxane, Nitrosamines, and Acrylamide
- Available in 2 g and 400 mg format

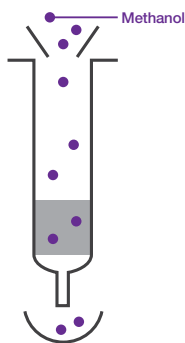
Steps in Polar Analytes Extraction Using Strata Activated Carbon

1a. CONDITION



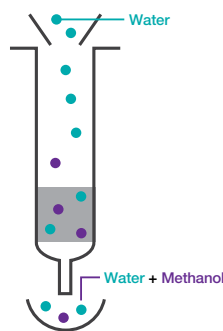
2 x 10 mL
Methylene Chloride

1b. CONDITION



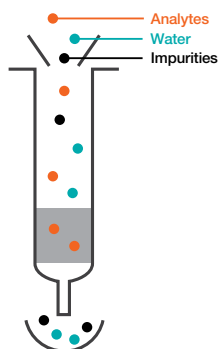
2 x 10 mL Methanol

2. EQUILIBRATE



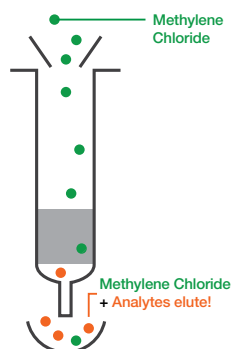
2 x 10 mL Water

3. LOAD SAMPLE



500 mL water sample
spiked with internal
standard. Dry for 10 min.

4. ELUTE ANALYTE



3 x 3 mL
Methylene Chloride

REMOVE MOISTURE

Pass the eluent through Methylene Chloride
prewetted Strata Sodium Sulfate Giga™ Tubes,
5 g / 20 mL (Part No. [8B-S124-LEG](#)) and wash
with 5 mL Methylene Chloride.

RECONSTITUTE

Evaporate solvent under Nitrogen to required
volume and reconstitute with Methylene
Chloride.



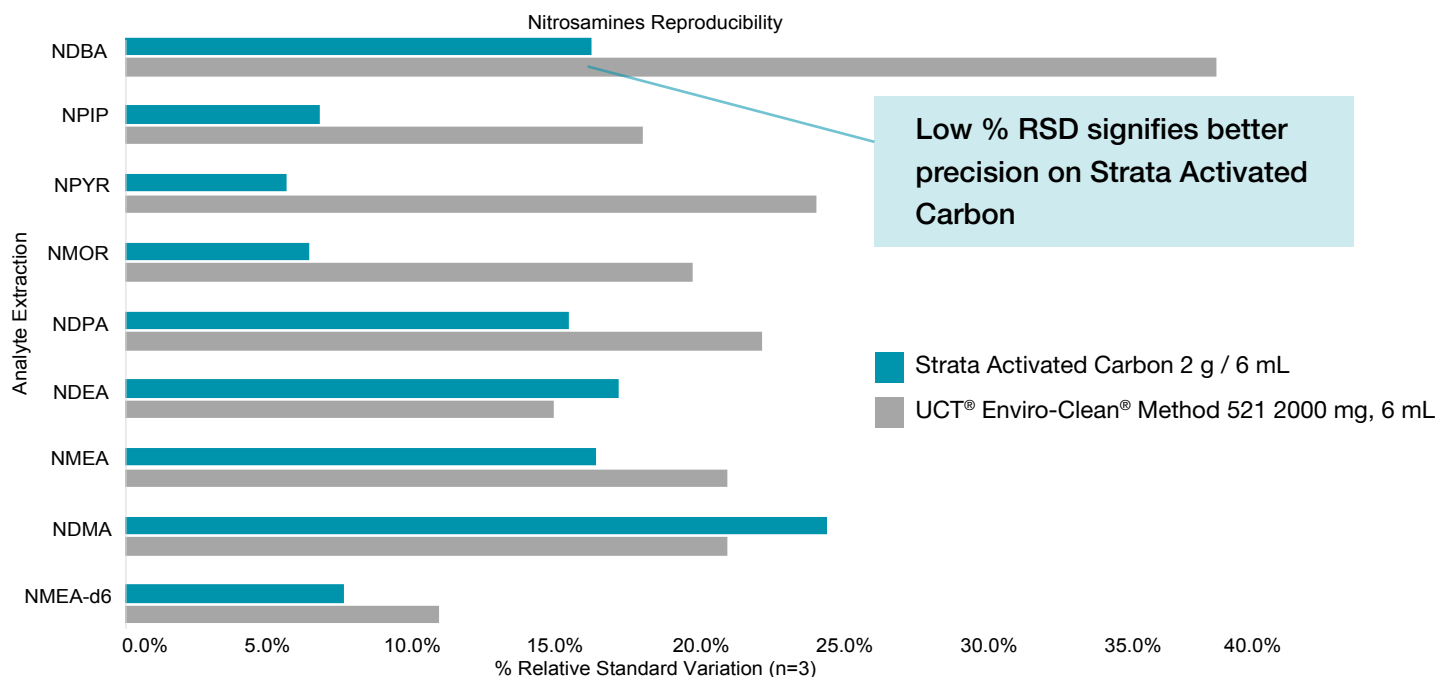


Reproducible Extraction of Nitrosamines From Water by EPA 521 on Strata™ Activated Carbon

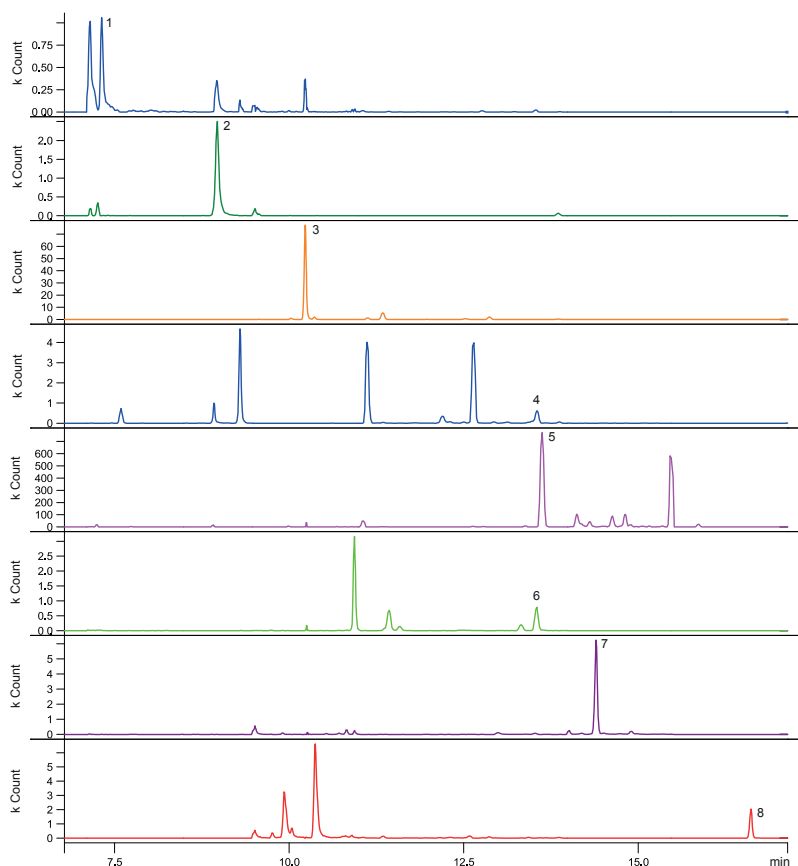
Sample Preparation Steps

Phenomenex	CS0-9209
Part No.:	Strata Activated Carbon, 2 g / 6 mL 8B-S124-LEG Strata Sodium Sulfate Giga™ Tubes, 5 g / 20 mL
Part No.:	EU52112M6 Method 521 2000 mg, 6 mL
Condition:	2 X 3 mL Methylene Chloride and soak for 2 min 2 X 3 mL Methanol and soak for 2 min
Equilibrate:	3 X 3 mL reagent water
Load:	500 mL water sample spiked with internal standard
Dry:	Dry cartridge for 10 min
Elute:	4 X 3 mL Methylene Chloride (Total 12 mL)
Water Removal:	Pass 12 mL eluent from previous step through Strata Sodium Sulfate cartridge, prewetted with Methylene Chloride to remove water and wash with 3 mL Methylene Chloride
Reconstitute:	Dry the eluent under Nitrogen at 20-25 °C to 0.9 mL volume and reconstitute to 1 mL with Methylene Chloride

Low Variability and High Reproducibility for EPA 521 on Strata™ Activated Carbon



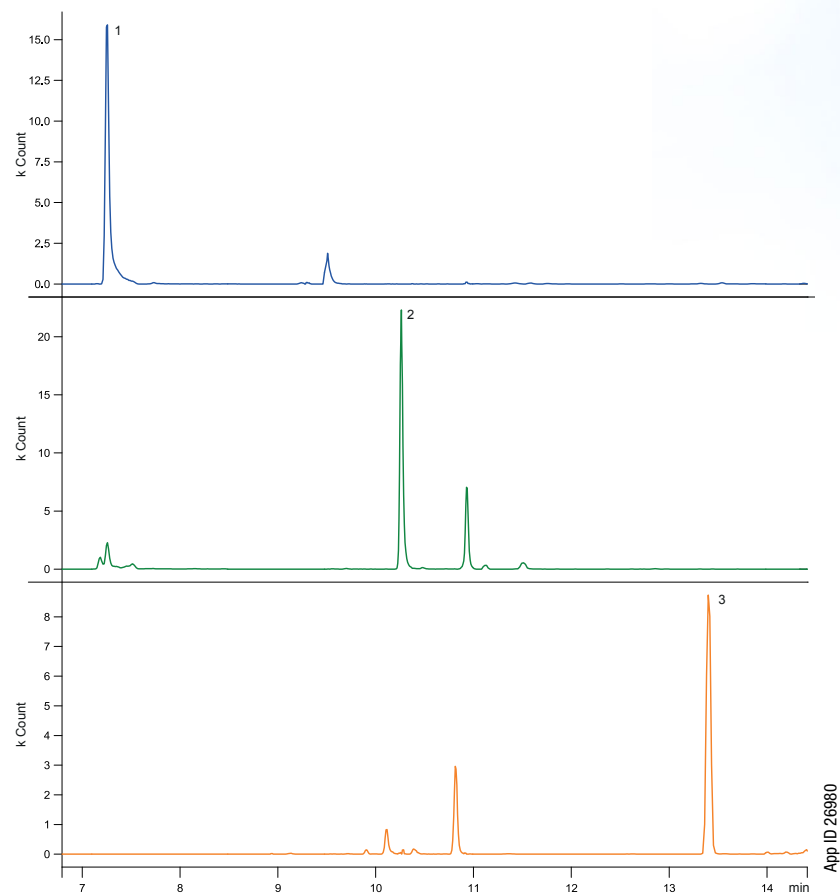
Retention Identification of Extracted Nitrosamines on a Zebron™ ZB-5MS_{PLUS} GC Column



Peak No.	RT (min)	Analyte Name
1	7.299	NDMA
2	8.967	NMEA
3	10.367	NDEA
4	13.503	NDPA
5	13.551	NPYR
6	13.631	NMOR
7	14.407	NPIP
8	16.623	NDDBA

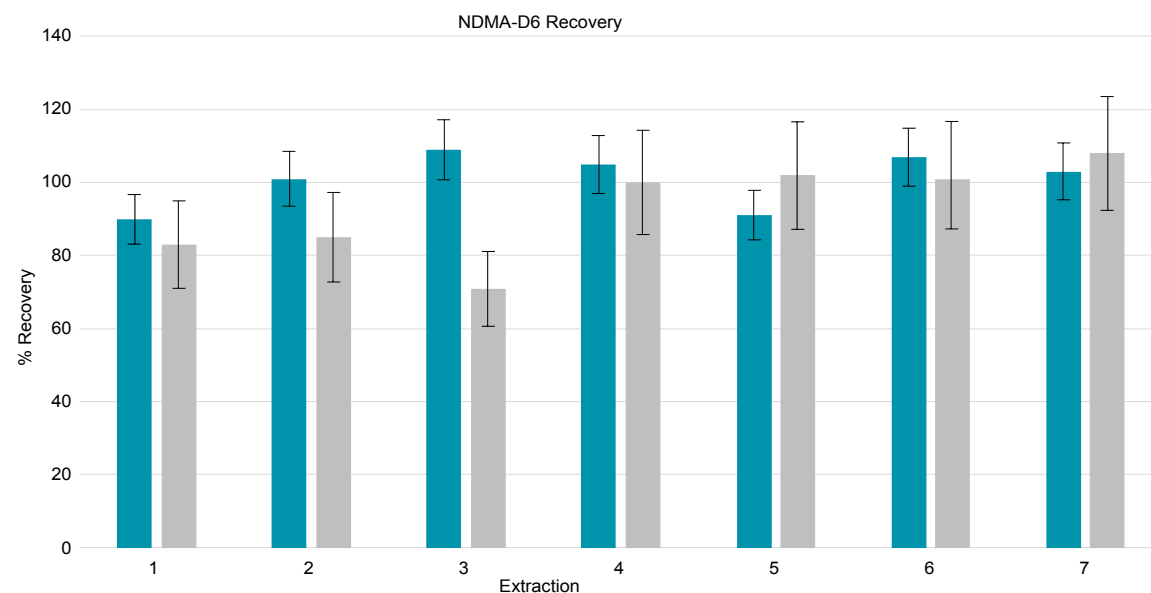
App ID 26981

Retention Identification of Extracted Nitrosamines on a Zebron™ ZB-5MS_{PLUS} GC Column



Peak No.	RT (min)	Analyte Name
1	7.236	NDMA-d6 (SS)
2	10.268	NDEA-d10 (IS)
3	13.413	NDPA d14 (IS)

Reproducibility of NDMA-D6 Recovery



- Strata™ Activated Carbon 2 g / 6 mL
- UCT® Enviro-Clean® Method 521 2000 mg, 6 mL

Shorter Standard Deviation bars signifies reproducible extraction of Nitrosamines on Strata Activated Carbon

Download complete application

Extraction of Nitrosamines in a Losartan Drug Substance using Strata™ Activated Carbon 400mg SPE Cartridge

Sample Preparation Steps

Condition: Strata Activated Carbon, 400 mg cartridge (Part No. [CS0-9210](#)) with 2 washes of 3 mL Methylene Chloride, 3 washes of 3 mL Methanol

Equilibrate: Cartridges with 6 washes of 3 mL Water

Load: 100 mL sample onto cartridges

Dry: Cartridges for 10 min

Elute: With 1 mL Methylene Chloride and repeat elution 3 more times (3 mL total volume), add 10 µL Ethylene Glycol

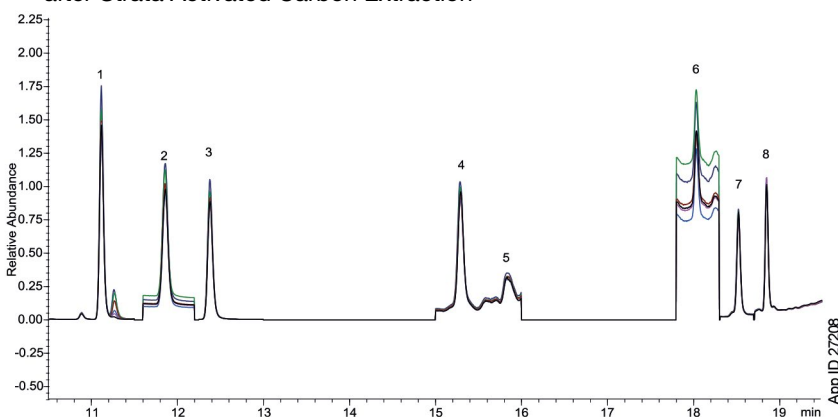
Water Removal: Pass eluent through Sodium Sulfate tubes, 1 g/6 mL (Part No. [8B-S124-JCH](#)) that is pretreated with Methylene Chloride and wash with 3 mL Methylene Chloride

Evaporate: Solvent to approximately 1 mL in a water bath at 20-25 °C under a gentle stream of Nitrogen

Adjust: Final volume to 1 mL with Methylene Chloride

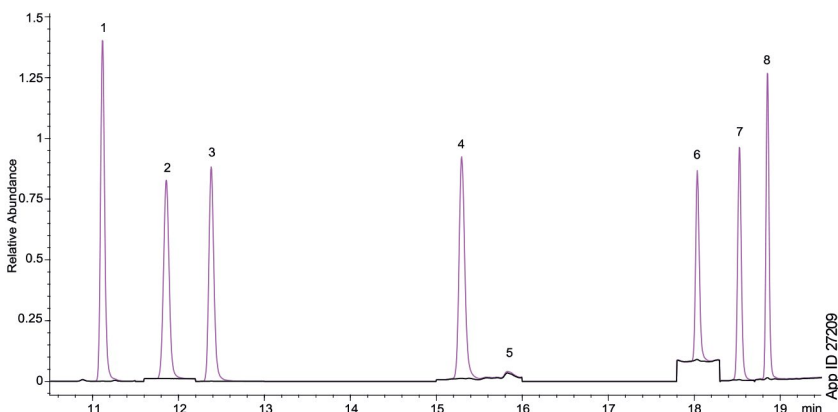
Reconstitute: Dry the eluent under Nitrogen at 20-25 °C to 0.9 mL volume and reconstitute to 1 mL with Methylene Chloride

Chromatogram of 0.5 µg/mL Nitrosamine Spiked Losartan Sample after Strata Activated Carbon Extraction



Peak No.	Analyte	RT (min)	% RSD
1	NDMA-d6 (IS)	11.10	-
2	NDMA	11.12	0.8
3	NMEA	11.86	0.6
4	NDEA	12.38	0.9
5	NDPA	15.29	4.2
6	NDBA	18.03	9.4
7	NPIP	18.52	6.3
8	NPYR	18.85	6.1
N = 6 Injections			

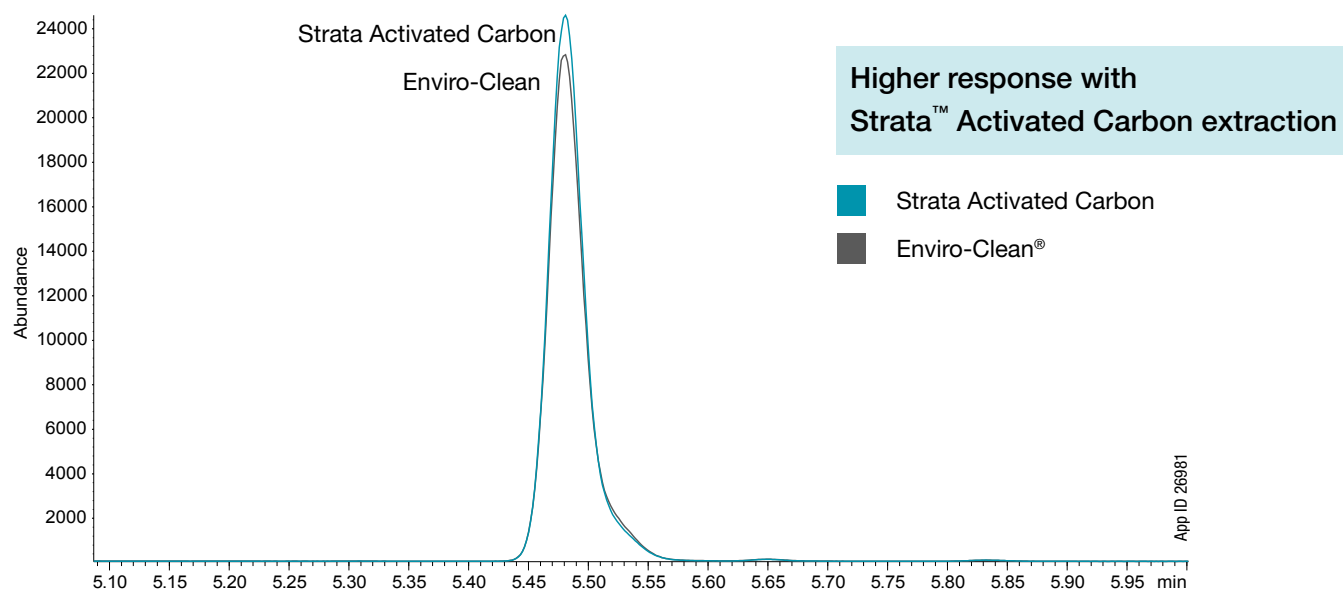
Overlaid Chromatograms of Losartan Sample and Nitrosamine Standard at 5.0 µg/mL



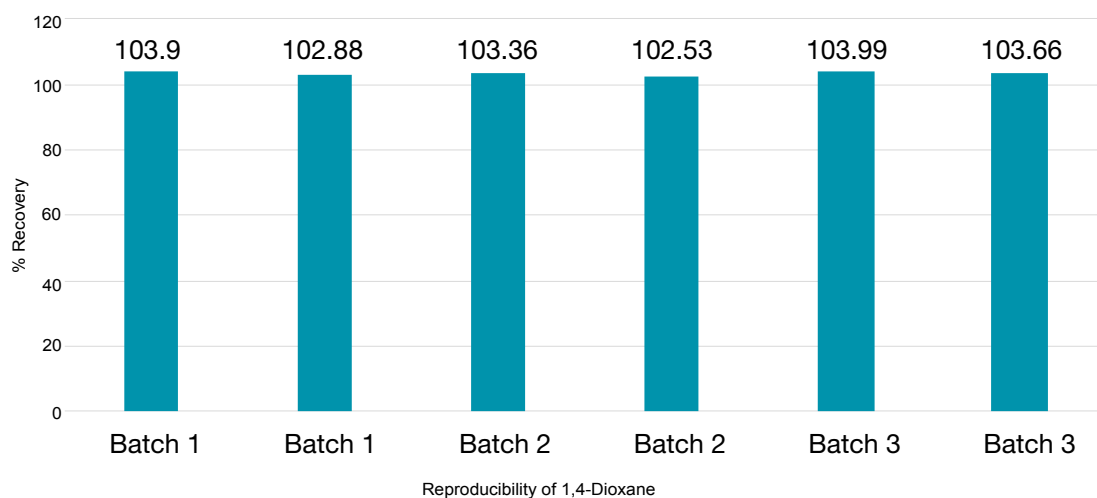
Peak No.	Analyte	RT (min)
1	NDMA-d6 (IS)	11.11
2	NDMA	11.12
3	NMEA	11.86
4	NDEA	12.38
5	NDPA	15.29
6	NDBA	18.04
7	NPIP	18.53
8	NPYR	18.85

[Download application](#)

Reproducible Extraction of 1,4-Dioxane from Water (Modified EPA 8270 / 522)



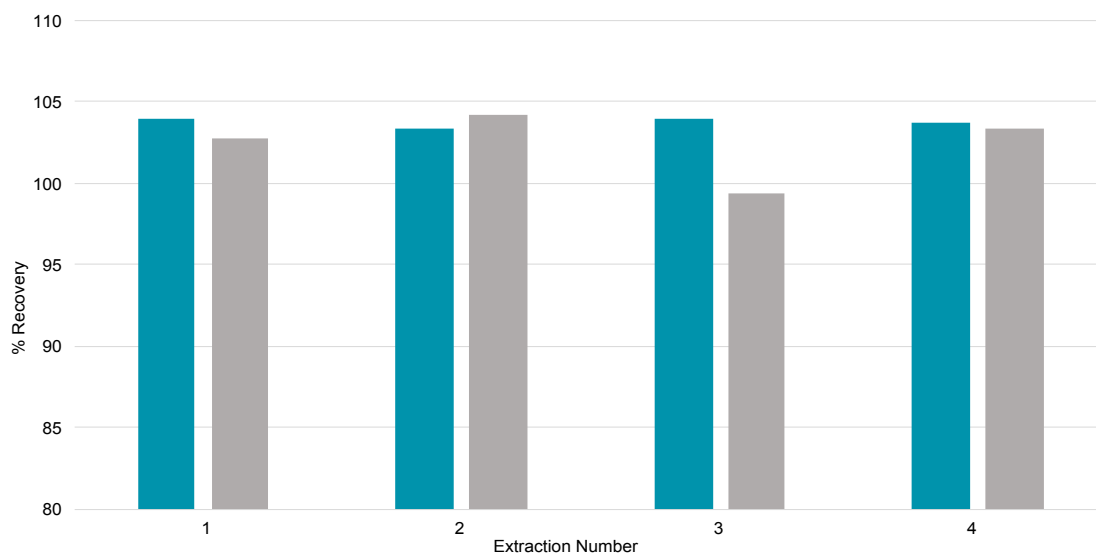
Batch-to-Batch Reproducibility with Strata Activated Carbon



Download Tech Note [TN-0147](#)

Download Application Note [AN-1102](#)

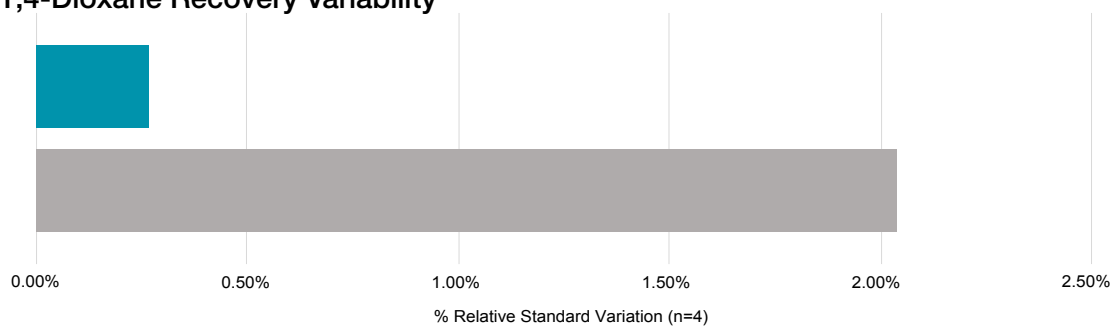
% Recovery for 1,4-Dioxane



Strata™ Activated Carbon 2 g / 6 mL

UCT® Enviro-Clean® Method 521 2000 mg, 6 mL

1,4-Dioxane Recovery Variability



Strata Activated Carbon 2 g / 6 mL

UCT Enviro-Clean Method 521 2000 mg, 6 mL

[Download complete application](#)



Need to Process Small Sample Volume?

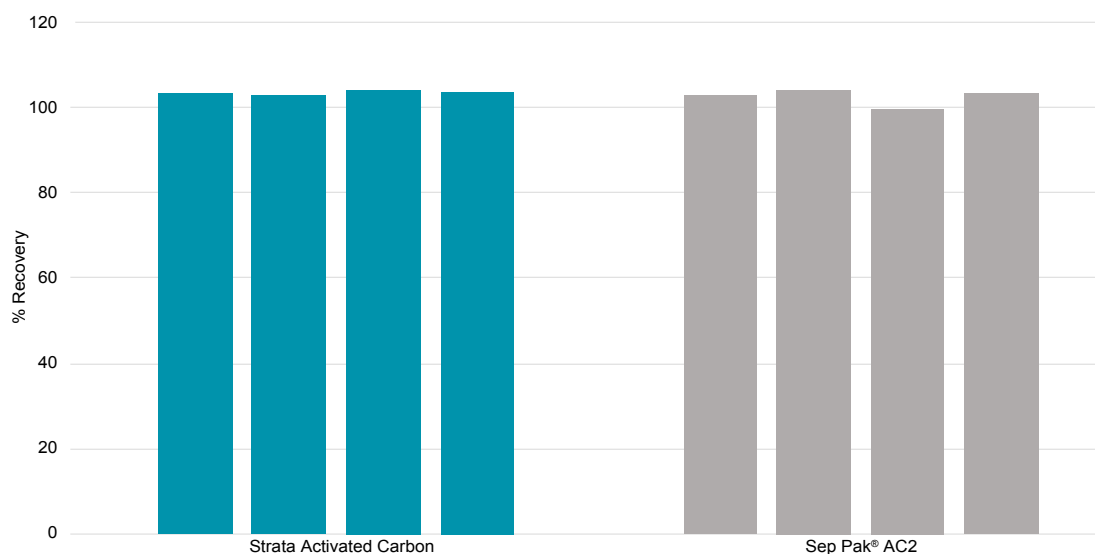
We've got you covered with Strata™ Activated Carbon 400 mg format

2 g / 6 mL tube

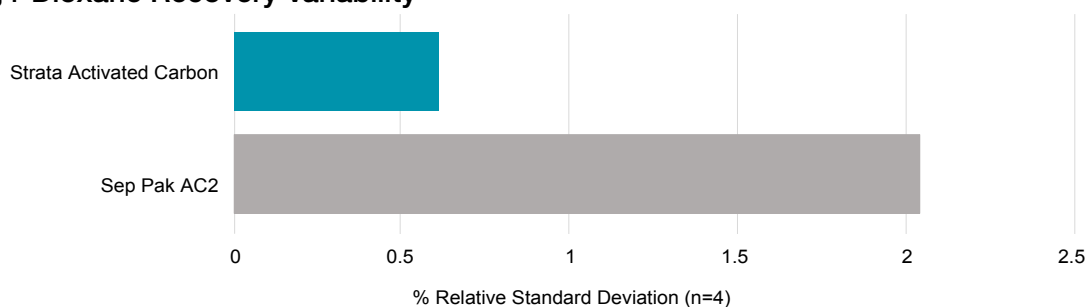
400 mg
pass through



% Recovery of 1,4-Dioxane on a 400 mg Activated Carbon Format



1,4-Dioxane Recovery Variability



[Download Complete Application](#)

Ordering Information

Strata™ Activated Carbon

Technique	Part number	Sorbent Mass	Volume	Format	Units/pk
Sample Prep	CS0-9209	2 g	6 mL	Tube	30
Sample Prep	CS0-9210	400 mg	Pass through	Cartridge	50

Other Products

Technique	Product	Part number
Sample Prep	Strata Sodium Sulfate, 1 g / 20 mL, Giga™ Tubes	8B-S124-JEG
Sample Prep	Strata Sodium Sulfate, 5 g / 20 mL, Giga Tubes	8B-S124-LEG
Sample Prep	Presston™ 1000 Positive Pressure Manifold	AH1-7033
Sample Prep	Empty SPE Tubes, 6 cc	AH0-7002
Sample Prep	SPE-Column Adapter	A80215
GC	Zebon™ ZB-624 _{PLUS} ™, GC Cap. Column 30 m x 0.25 mm x 1.40 µm	7HG-G040-27
GC	Zebon ZB-5MS _{PLUS} ™, GC Cap. Column 30 m x 0.25 mm x 1.00 µm	7HG-G030-22
GC	Zebon PLUS Liner Single Taper with Wool	AG2-0A11-05



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