



## Restek LC Solutions

# Life & Health Sciences

**Applications for Clinical Diagnostics, Therapeutic Drug Monitoring (TDM), Drug Screening, Toxicology and Pharma** (categorized by compound group)

### Alcohol Markers

- [CFAR3061](#) Successful Strategies for the Analysis of **EtG and EtS in Urine** - Rugged Sample Preparation and Analysis Conditions for High-Throughput Labs (Raptor EtG/EtS, LC-MS/MS)
- [LC\\_CF0725](#) **Ethyl Glucuronide (EtG) and Ethyl Sulfate (EtS) in Oral Fluid** on Raptor EtG/EtS (LC-MS/MS)
- [LC\\_CF0773](#) Simultaneous Analysis of **Alcohol Metabolites and Barbiturates in Urine** by LC-MS/MS (Raptor EtG/EtS)
- [CFAN3009](#) Method Evaluation: Analysis of **Phosphatidylethanol (Peth) in Human Whole Blood** by LC-MS/MS (Raptor FluoroPhenyl)  
- *simple protein precipitation sample preparation, sensitive determination of Peth-16:0/18:1, fast 3.5 minutes gradient*

### Acylcarnitines, Amino Acids

- [CFAN4029](#) LC-MS/MS Analysis of 25 **Underivatized Acylcarnitines** for Differential Diagnosis (Raptor ARC-18)  
- *9-minute analysis, including several isobaric compounds that are essential for differential diagnosis*
- [CFAN3216](#) Improved Screening Method for **Acylcarnitines and Amino Acids in Dried Blood Spots** by LC-MS/MS (Raptor HILIC-Si)
- [CFAN3539](#) 13-Minute, Comprehensive, Direct LC-MS/MS Analysis of **Amino Acids in Plasma** (Raptor Polar X)  
- *45 amino acids, no derivatization, critical isobars separation, common LC mobile phases*

### Cannabinoids & Synthetic Cannabinoids

- [FFAN2614](#) Analysis of **Synthetic Cannabinoids and Metabolites**: Adding New Compounds to an Existing LC-MS/MS Method (Raptor Biphenyl)
- [LC\\_CF0612](#) **Synthetic Cannabinoids in Urine** on Raptor Biphenyl by LC-MS/MS
- [LC\\_CF0585](#) **Synthetic Cannabinoid Metabolites in Urine** on Raptor Biphenyl by LC-MS/MS
- [LC\\_CF0584](#) **Synthetic Cannabinoids in Urine** on Raptor Biphenyl by LC-MS/MS
- [PHFA4018](#) Isomer separation of **Synthetic Cathinones in Serum** on Raptor Biphenyl by LC-MS/MS  
- *application from a customer*
- [LC\\_CF0583](#) **THC + Metabolites in Urine** on Raptor Biphenyl by LC-MS/MS
- [BLOG](#) The Evolving Landscape of **THC Drug Testing**, Delta-8 vs. Delta-9 (Raptor FluoroPhenyl, LC-MS/MS)  
- *critical isobar separation, isocratic method, includes OH-8-THC and OH-9-THC as well as the parent compounds and the carboxy metabolites*
- [FFFA3123](#) Fast, Low-Solvent Analysis of **Cannabinoids** Increases Lab Productivity and Decreases Solvent Costs (Raptor ARC-18, LC-UV)
- [LC\\_GN0579](#) **16 Cannabinoids** on Raptor ARC-18 1.8µm by LC-UV
- [FFSS2851](#) High-Throughput Analysis of **Cannabinoids** by LC-UV (Raptor ARC-18)
- [FFSS2946](#) High-Throughput Analysis of **Mycotoxins in Cannabis CBD Oil** Pairs Simplified Cleanup with LC-MS/MS Sensitivity (Raptor Biphenyl)
- [LC\\_GN0585](#) **Mycotoxins** (STD 1 - 2 ng/g) **in MCT Oil** on Raptor Biphenyl by LC-MS/MS
- [LC\\_GN0581](#) **Potency Analysis** of a Commercially Available **CBD Product** on Raptor ARC-18 2.7µm by LC-UV

**To learn more about these solutions, simply click the linked reference number above.**

If you have the printed version and wish to receive the digital copy with links, or are interested in discussing any of the applications mentioned, please contact us at [LC-EMEA@restek.com](mailto:LC-EMEA@restek.com). We are always here to help with all other enquiries, assistance, or to discuss our try-before-you-buy evaluation column policy.



Pure Chromatography

[www.restek.com](http://www.restek.com)

## Drugs & Pharmaceuticals

- [CFAR2309](#) **"The Big Pain"**: Development of Pain-Free Methods for Analyzing **231 Multiclass Drugs and Metabolites** by LC-MS/MS (Raptor Biphenyl) - *10 minutes screening analysis of 231 compounds (40+ isobars, 10 drug classes, 22 ESI- compounds), and confirmation methods for the 10 drug classes*
- [LC\\_CF0568](#) **Pain Panel in Urine** on Raptor Biphenyl by LC-MS/MS
- [LC\\_CF0561](#) **Nonsteroidal Anti-Inflammatory Drugs (NSAIDS)** on Raptor Biphenyl (LC-UV)
- [LC\\_CF0620](#) **Analgesics and Non-Steroidal Anti-Inflammatory Drugs (NSAID)** on Raptor Biphenyl by LC-MS/MS  
- *Comprehensive analysis of 27 NSAIDS, both positive and negative ions in one simultaneous run, with a fast analysis time amenable to high throughput analysis*
- [CFAN2820](#) Analysis of **Fentanyl and Its Analogues in Human Urine** by LC-MS/MS (Raptor Biphenyl)
- [LC\\_CF0587](#) **Drugs of Abuse** on Raptor Biphenyl by LC-MS/MS
- [CFAN3052](#) Analysis of **Amphetamines** by LC-MS/MS for High-Throughput **Urine** Drug Testing Labs (Raptor C18)
- [LC\\_CF0579](#) **Therapeutic Drugs in Urine** on Raptor Biphenyl by LC-MS/MS
- [CFAN2666](#) High-Throughput Analysis of **Immunosuppressive Drugs from Whole Blood** by LC-MS/MS (Raptor Biphenyl)  
- *robust method with only simple protein precipitation sample preparation, no matrix interferences, 3 minutes cycle time*
- [CFSS3051](#) LC-MS/MS Analysis of **58 Antipsychotics and Antidepressants in Human Urine** (Raptor Biphenyl)  
- *simple sample preparation, fast 5.5 minutes cycle time, separation of isobars*
- [LC\\_CF0619](#) **Barbiturate Drug Panel** on Raptor C18 by LC-MS/MS
- [LC\\_CF0618](#) **Barbiturate Drug Panel** on Raptor Biphenyl by LC-MS/MS
- [LC\\_CF0617](#) **Stimulant Drug Panel** on Raptor Biphenyl by LC-MS/MS
- [LC\\_CF0607](#) **Hallucinogen Drug Panel** on Raptor Biphenyl by LC-MS/MS
- [LC\\_CF0616](#) **Anti-Epileptic Drug Panel** on Raptor Biphenyl by LC-MS/MS
- [LC\\_CF0615](#) **Anti-Anxiety Drug Panel** on Raptor Biphenyl by LC-MS/MS
- [LC\\_CF0609](#) **Anti-Depressant Drug Panel** on Raptor Biphenyl by LC-MS/MS
- [LC\\_CF0608](#) **Anti-Psychotic Drug Panel** on Raptor Biphenyl by LC-MS/MS
- [LC\\_CF0581](#) **Benzodiazepines in Urine** on Raptor Biphenyl by LC-MS/MS
- [LC\\_CF0610](#) **Opioid Drug Panel** on Raptor Biphenyl by LC-MS/MS
- [LC\\_CF0580](#) **Norbuprenorphine & Buprenorphine in Urine** on Raptor Biphenyl by LC-MS/MS
- [CFSS2892](#) Fast, Sensitive LC-MS/MS Analysis of **GHB and Related Compounds in Human Blood** for Forensic Testing (Force C18)
- [CFAN2665](#) Direct Analysis of **Morphine, M3G and M6G Metabolites, and Related Compounds in Urine** by LC-MS/MS (Force Biphenyl)
- [LC\\_CF0588](#) **Naltrexone and 6-β-Naltrexol in Urine** on Raptor Biphenyl by LC-MS/MS
- [CFAN2216](#) Rapid and Accurate LC-MS/MS Analysis of **Nicotine and Related Compounds in Urine** Using Raptor Biphenyl LC Columns and MS-Friendly Mobile Phases
- [CFAN3694](#) Fast, 3.5 Minute Analysis of **Psilocin and Psilocybin in Urine** by LC-MS/MS (Raptor Biphenyl)
- [LC\\_GN0550](#) **Beta Blockers** on Raptor Biphenyl (LC-MS/MS)
- [LC\\_CF0675](#) **Cardiac Drugs** on Force Biphenyl by LC-MS/MS
- [LC\\_CF0671](#) **Metformin** on Force FluoroPhenyl by UHPLC-MS/MS
- [LC\\_CF0710](#) **Statins** on Raptor ARC-18 (1.8μm) by LC-MS/MS
- [LC\\_PH0533](#) **Weight Loss Drugs** on Force Biphenyl (LC-MS/MS)
- [LC\\_CF0679](#) Analysis of **Antiretroviral Drugs** on Raptor Biphenyl by LC-MS/MS
- [BLOG](#) **Antiviral Analysis: Remdesivir and its Metabolites** (on Raptor Biphenyl by LC-MS/MS)
- [LC\\_PH0530](#) **Emtricitabine and Tenofovir** on Ultra IBD by LC-MS/MS
- [LC\\_CF0678](#) **Warfarin and Chemotherapeutic Drugs** on Raptor FluoroPhenyl by LC-MS/MS
- [LC\\_BA0351](#) Analysis of **Taxanes** on Raptor FluoroPhenyl by LC-MS/MS
- [LC\\_CF0600](#) **Macrolide Antibiotics** on Raptor C18 by LC-MS/MS

## Hormones

- [CFSS2824](#) LC-MS/MS Analysis of Urinary Free **Cortisol and Cortisone** without Matrix Interferences (Raptor Biphenyl)
- [LC\\_CF0658](#) Synthetic and Naturally Occurring **Glucocorticoids** on Raptor Biphenyl by LC-MS/MS  
- *improved separation power of the Biphenyl phase under MeOH conditions: 13 glucocorticoids eluting in less than 4 minutes*
- [LC\\_CF0659](#) **Glucocorticoid** Isomers on Raptor Biphenyl by LC-MS/MS
- [BAAN2112](#) A Rapid and Sensitive LC-MS/MS Method for the Analysis of Three Forms of **Thyroid Hormones** (Raptor Biphenyl)

## Miscellaneous Diagnostic Parameters

- [CFSS2937](#) Fast, Simple LC-MS/MS Analysis of **Creatine and Creatinine** (Raptor HILIC-Si)
- [LC\\_CF0611](#) **Coenzyme Q10 in Serum** on Raptor Biphenyl by LC-MS/MS
- [CFSS2789](#) Fast, Accurate LC-MS/MS Method for **Folate Deficiency Biomarkers in Plasma** (Raptor HILIC-Si)
- [CFAN3010](#) Evaluation of a Simple Method for **Methylmalonic Acid Analysis in Human Plasma** by LC-MS/MS (Force C18)  
- *simple protein crash sample preparation, no derivatization, baseline separation of isomers (MMA and succinic acid), fast 5 minutes analysis*
- [CFAN2911](#) Rapid Analysis of **17 Bile Acids in Human Plasma** by LC-MS/MS (Raptor C18)

## Neurotransmitters

- [CFAN2465](#) A Fast Dilute-And-Shoot Method for Simultaneous **5-Hydroxyindoleacetic Acid (5-HIAA), Vanillylmandelic Acid (VMA), and Homovanillic Acid (HVA)** LC-MS/MS Analysis in **Human Urine** (Raptor Biphenyl)  
- *baseline resolution in less than 2.5 minutes*
- [CFAN2800](#) Simultaneous Analysis of **Catecholamines and Metanephrines in Urine** by LC-MS/MS (Raptor Biphenyl)
- [CFAN2801](#) Trace-Level Analysis of **Metanephrines in Plasma** by HILIC LC-MS/MS (Raptor HILIC-Si)  
- *excellent retention, enhanced sensitivity by using HILIC*
- [LC\\_CF0560](#) **Catecholamines, Serotonin, and Related Compounds** on Raptor Biphenyl (LC-UV)
- [LC\\_CF0642](#) **Metanephrines** on Raptor FluoroPhenyl by LC-MS/MS

## Nucleotides

- [LC\\_CF0672](#) **Xanthines** on Force FluoroPhenyl by LC-MS/MS
- [LC\\_0131](#) **Guanine, Guanosine, GTP, GDP, and GMP** on Ultra IBD (LC-UV)
- [LC\\_0130](#) **Cytosine, Cytidine, CTP, CDP, and CMP** on Ultra IBD (LC-UV)
- [LC\\_0129](#) **Adenine, Adenosine, ATP, ADP, and AMP** on Ultra IBD (LC-UV)

## Peptides & Proteins

- [PHAN2615](#) Influencing Selectivity in LC-MS **Peptides Analysis** on the Raptor ARC-18 Column
- [LC\\_PH0467](#) **PEGylated Oxytocin** on Viva C18 (LC-MS/MS)
- [LC\\_BC0386](#) **Peptide Mix** on Viva C18 (LC-UV)
- [LC\\_0324](#) **Protein Mix** on Viva C18 (LC-UV)
- [LC\\_EX0388](#) **SRM 870 Test Mix** on Viva C18 (LC-UV)

### Questions?

Interested in evaluating a column  
for your method? We are here to help!  
[LC-EMEA@restek.com](mailto:LC-EMEA@restek.com)

**To learn more about these solutions, simply click the linked reference number above.**

If you have the printed version and wish to receive the digital copy with links, or are interested in discussing any of the applications mentioned, please contact us at [LC-EMEA@restek.com](mailto:LC-EMEA@restek.com). We are always here to help with all other enquiries, assistance, or to discuss our try-before-you-buy evaluation column policy.

## Vitamins

- [CFAN2612](#) Rapid Analysis of **C3 Epimers of 25-Hydroxyvitamin D in Serum** by LC-MS/MS (Raptor Biphenyl)  
*- separation of the less bioactive epimers, 7 minutes cycle time*
- [BASS2523](#) Fast, Accurate LC-MS/MS Analysis of the **C3 Epimer of 25-Hydroxyvitamin D** on Raptor FluoroPhenyl Columns
- [CFAN2934](#) A Novel Solution for **Vitamin K<sub>1</sub> and K<sub>2</sub> Analysis in Human Plasma** by LC-MS/MS (Raptor Biphenyl)  
*- trace level analysis of K<sub>1</sub>, K<sub>2</sub> MK<sub>4</sub> and K<sub>2</sub> MK<sub>7</sub> in less than 2.5 minutes*
- [CustomerApp](#) **Vitamin K in Serum** on Raptor ARC-18 by LC-MS/MS - *application from a customer: trace level LC-MS/MS analysis of K<sub>1</sub>, K<sub>2</sub> MK<sub>4</sub> and K<sub>2</sub> MK<sub>7</sub>, method also suited for HPLC-FL, all compounds chromatographically separated*
- [LC\\_CF0586](#) **Vitamin D Metabolites** on Raptor ARC-18 by LC-MS/MS

## Key Product Performance

- [GNAR3124](#) **Phospholipid and Protein Removal** in One Simple SPE Process  
Prevents Matrix-Based Signal Suppression (Resprep PLR)

### Questions?

Interested in evaluating a column  
for your method? We are here to help!  
[LC-EMEA@restek.com](mailto:LC-EMEA@restek.com)

**To learn more about these solutions, simply click the linked reference number above.**

If you have the printed version and wish to receive the digital copy with links, or are interested in discussing any of the applications mentioned, please contact us at [LC-EMEA@restek.com](mailto:LC-EMEA@restek.com). We are always here to help with all other enquiries, assistance, or to discuss our try-before-you-buy evaluation column policy.



**Questions? Contact us or your local Restek representative ([www.restek.com/contact-us](http://www.restek.com/contact-us)).**

Restek patents and trademarks are the property of Restek Corporation. (See [www.restek.com/Patents-Trademarks](http://www.restek.com/Patents-Trademarks) for full list.) Other trademarks in Restek literature or on its website are the property of their respective owners. Restek registered trademarks are registered in the U.S. and may also be registered in other countries. To unsubscribe from future Restek communications or to update your preferences, visit [www.restek.com/subscribe](http://www.restek.com/subscribe). To update your status with an authorized Restek distributor or instrument channel partner, please contact them directly.

©2023 Restek Corporation. All rights reserved.

[www.restek.com](http://www.restek.com)



Lit. Cat.# 22004