

# Micro GC Fusion® Analyzes VOCs on a 15 Meter Stabilwax Column

## Introduction

The following datasheet provides the retention time order and the potential coelution issues for common volatile organic compounds (VOCs) and hydrocarbons using a 15 m RT-Stabilwax polar column module.

## Starting Parameters

These parameters can be used as a starting point for creating a method and can be adjusted to optimize specific separations. Exact retention times vary from GC to GC, but the compound order remains the same. Some components cannot be separated using this phase and are indicated in the table.

Method Parameter	Module A - 15 m Stabilwax, Variable Volume Injector (GCMR-TG5)
Inject time	60 ms
Injector temperature	90°C
TCD Temperature	70°C
TCD Drift	5°C
Column pressure	28 psi, 99.999% helium
Data rate	25 Hz
Temperature ramp	80°C (isothermal)
Sample pump time	15 s
Sample inlet temperature	90°C

## Retention Time Order

Compound	Retention Time (s)	Relative Retention Time to n-Hexane	Coelution
air/composite	27.72	0.91	N/A
formaldehyde	27.72	0.91	Coelutes with composite peak
dimethyl ether	28.44	0.93	Partially coelutes with composite peak
n-hexane	30.52	1.00	N/A
n-heptane	33.64	1.10	N/A
acetaldehyde	34.74	1.14	N/A
acetone	43.32	1.42	N/A
ethyl acetate	51.76	1.70	N/A
MEK (2-butanone)	55.28	1.81	Partial coelution with methanol
methanol	57.8	1.89	Coelutes with methylene chloride
methylene chloride	60.0	1.97	Coelutes with methanol
isopropanol	60.32	1.98	N/A

Compound	Retention Time (s)	Relative Retention Time to n-Hexane	Coelution
ethanol	63.56	2.08	Coelutes with benzene
benzene	65.28	2.14	N/A
MIBK (4-methyl-2-pentanone)	82.88	2.72	N/A
acetonitrile	85.96	2.82	N/A
chloroform	88.92	2.91	N/A
toluene	98.96	3.24	N/A
1,4-dioxane	109.32	3.58	N/A
water	127.4	4.17	N/A
ethyl benzene	151.6	4.97	N/A
p-xylene	157.64	5.17	N/A
m-xylene	163.28	5.35	N/A
butanol	173.08	5.67	N/A
o-xylene	207.32	6.79	N/A
styrene	315.04	10.32	N/A

## Example Chromatogram

The following chromatogram is an example run of common VOCs and hydrocarbons.

