Chromatography

GC

OPTIMA® WAXplus

New polar polyethylene glycol (PEG) column with innovative cross-linking and high polarity features!

- ✔ Improved temperature stability compared to conventional PEG columns!
- ✔ Operating range 40 °C – 260 °C (isothermal), for short isotherms in a temperature program up to 270 °C!
- ✔ Chemically bonded and solvent-rinsable!
- ✔ Extended column lifetime!
- ✔ Low column bleed, suited for MSD!
- ✔ Allows for injection of aqueous samples!
- ✔ OPTIMA® WAXplus is equivalent to USP phase G16!

Field of application:

- Alcohols
- Solvents
- Fragrances
- FAMEs
- Food analysis
- Analysis of biologically active compounds
- BTEX analysis

MACHEREY-NAGEL

www.mn-net.com

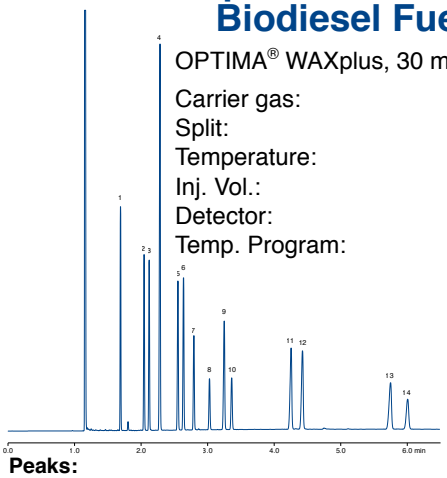
MN Since 1911

Fast Separation of FAMEs in Biodiesel Fuel

OPTIMA® WAXplus, 30 m, 0.25 mm, 0.25 µm

Carrier gas:	1.3 bar H_2
Split:	1:80
Temperature:	260 °C
Inj. Vol.:	0.1 µL
Detector:	FID 260 °C
Temp. Program:	220 °C, 15 °C/min 260 °C (15 min)

MN Appl. No. 214130



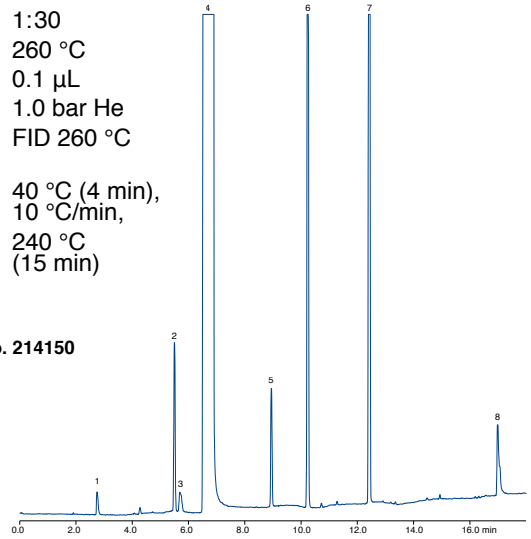
Peaks:
1 Myristic acid, **2** Palmitic acid, **3** Palmitoleic acid, **4** Methyl heptadecanoate (ISTD), **5** Stearic acid **6** Oleic acid, **7** Linoleic acid, **8** Linolenic acid, **9** Arachic acid, **10** Gadoleic acid, **11** Behenic acid, **12** Erucic acid, **13** Lignoceric acid, **14** Nervonic acid

Scotch Whisky

OPTIMA® WAXplus, 30 m, 0.25 mm, 0.5 µm

Split:	1:30
Temp.:	260 °C
Inj. Vol.:	0.1 µL
Gas:	1.0 bar He
Detector:	FID 260 °C
Temp. Program:	40 °C (4 min), 10 °C/min, 240 °C (15 min)

MN Appl. No. 214150



Peaks:
1 Acetaldehyde, **2** Ethyl acetate, **3** Methanol, **4** Ethanol, **5** 1-Propanol, **6** 2-Methyl-1-propanol, **7** 2-Methyl-1-butanol, **8** Acetic acid

Ordering information

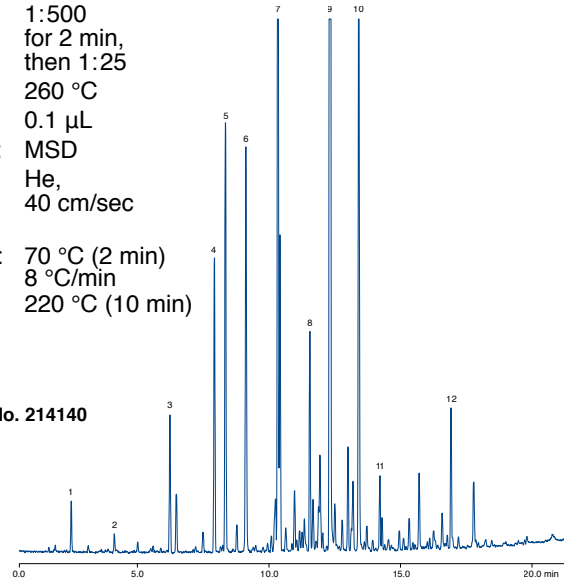
REF	Phase	ID	FD	Length
726380.30	**OPTIMA® WAXplus**	0.25 mm	0.25 µm	30 m
726380.60	**OPTIMA® WAXplus**	0.25 mm	0.25 µm	60 m
726381.30	**OPTIMA® WAXplus**	0.25 mm	0.50 µm	30 m
726381.60	**OPTIMA® WAXplus**	0.25 mm	0.50 µm	60 m
726382.30	**OPTIMA® WAXplus**	0.32 mm	0.25 µm	30 m
726382.60	**OPTIMA® WAXplus**	0.32 mm	0.25 µm	60 m
726383.30	**OPTIMA® WAXplus**	0.32 mm	0.50 µm	30 m
726383.60	**OPTIMA® WAXplus**	0.32 mm	0.50 µm	60 m

Geranium Oil Ingredients

OPTIMA® WAXplus, 30 m, 0.25 mm, 0.25 µm

Split:	1:500 for 2 min, then 1:25
Temp.:	260 °C
Inj. Vol.:	0.1 µL
Detector:	MSD
Gas:	He, 40 cm/sec
Temp. Program:	70 °C (2 min) 8 °C/min 220 °C (10 min)

MN Appl. No. 214140

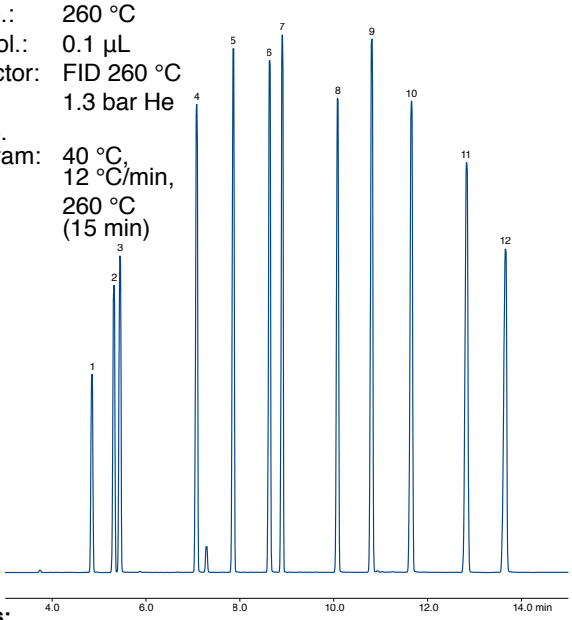


Peaks:
1 α-Pinene, **2** Limonene, **3** Rose oxide, **4** Menthone, **5** Isomenthone, **6** Linalool, **7** Citronellyl formate, **8** Geranyl formate, **9** Geranyl acetate, citronellol, **10** Geraniol, **11** Geranyl butyrate, **12** Geranyl tiglate

Alcohols

OPTIMA® WAXplus, 30 m, 0.25 mm, 0.5 µm

Split:	1:80
Temp.:	260 °C
Inj. Vol.:	0.1 µL
Detector:	FID 260 °C
Gas:	1.3 bar He
Temp. Program:	40 °C, 12 °C/min, 260 °C (15 min)



Peaks:
1 Methanol, **2** 2-Propanol, **3** Ethanol, **4** 1-Propanol, **5** 2-Methyl-1-propanol, **6** 1-Butanol, **7** 4-Methyl-2-pentanol, **8** 1-Pentanol, **9** 2-Methyl-1-pentanolformiate, **10** 1-Hexanol, **11** Cyclohexanol, **12** 1-Heptanol

MN Appl. No. 214160

KATEN200091/OptimaWAXinertEN1/2/5/07.2011 DD · Printed in Germany
Image Credits © Papo · Fotolia.com

www.mn-net.com
MACHEREY-NAGEL
AZ Chrom s.r.o., Robotnícka 10, 831 03 Bratislava
Tel. 0907 244526, Fax. 02-20715811, azetchrom@hplc.sk, www.azetchrom.sk
MN Since 1911