ThermoFisher SCIENTIFIC

Unparalleled performance of Advanced Electron Ionization GC-MS_MS technology for the determination of nitrosamines in drinking water on TG-1701MS

#	Compound Name	CAS Number	Compound Class	RT (min)
1	NDMA-d6 (/Search?CompoundName=NDMA-d6)	17829-05-9 (/Search?CasNumber=17829-05-9)	Nitrosamine	4.6
2	NDMA (/Search?CompoundName=NDMA)	62-75-9 (/Search?CasNumber=62-75-9)	Nitrosamine	4.7
3	NMEA (/Search?CompoundName=NMEA)	10595-95-6 (/Search?CasNumber=10595-95-6)	Nitrosamine	5.3
4	NDEA-d10 (/Search?CompoundName=NDEA-d10)	1219794-54-3 (/Search?CasNumber=1219794-54-3)	Nitrosamine	5.7
5	NDEA (/Search?CompoundName=NDEA)	55-18-5 (/Search?CasNumber=55-18-5)	Nitrosamine	5.8
6	NDPA (/Search?CompoundName=NDPA)	621-64-7 (/Search?CasNumber=621-64-7)	Nitrosamine	7.0
7	NPYR (/Search?CompoundName=NPYR)	930-55-2 (/Search?CasNumber=930-55-2)	Nitrosamine	7.4
8	NPIP (/Search?CompoundName=NPIP)	100-75-4 (/Search?CasNumber=100-75-4)	Nitrosamine	7.6
9	NDBA (/Search?CompoundName=NDBA)	924-16-3 (/Search?CasNumber=924-16-3)	Nitrosamine	8.4

Autosampler

Manufacturer	Thermo Fisher Scientific™
Brand	Thermo Scienfific
System	Trace™
Module Type	Autosampler
Instrument Module	TriPlus RSH™
Description	The Thermo Scientific™ TriPlus RSH™ Autosampler expands automated capabilities beyond liquid, headspace, and SPME injections. With its advanced, built-in robotics, the system delivers exceptional precision, unprecedented sample handling flexibility, and reliable, weekend-long unattended operation.
Catalog #	1R77010-0600

Mass Spectrometer

Manufacturer	Thermo Fisher Scientific™
Brand	Thermo Scientific™
System	TSQ™ 9000
Module Type	Mass Spectrometer
Instrument Module	TSQ™ 9000 AEI

Gas Chromatograph

Manufacturer	Thermo Fisher Scientific™
Brand	Thermo Scientific™
System	TRACE 1310 GC™
Module Type	Gas Chromatograph
Instrument Module	TRACE 1310 GC™
Description	Gas Chromatograph Manufacturer Thermo Fisher Scientific™ Brand Thermo Scientific™ System TRACE 1310 GC™ Module Type Gas Chromatograph Instrument Module TRACE 1310 GC™ Description
Catalog #	14800302

Columns

Manufacturer	Thermo Fisher Scientific™
Brand	Thermo Scientific™
Model	TG-1701MS
Length	30 m
Inner Diameter	0.25 mm
Film Thickness	0.5 µm
Stationary Phase	(14%-Cyanopropyl-phenyl)-methylpolysiloxane
Catalog #	26090-2230

MZ ANALYSENTECHNIK
AUTHORIZED DISTRIBUTOR
MZ-Analysentechnik GmbH
Barcelona-Allee 17 • D-55129 Mainz
Tel +49 6131 880 96-0
Fax +49 6131 880 96-20
e-mail: info@mz-at.de
www.mz-at.de

Auto-sampler paramaters

Syringe volume (µL)	10
Sample volume (µL)	2.0
Plunger strokes	9
Air volume (µL)	1.0
Rinses	1
Post injection solvent washes	5

GC Inlet Parameters

Carrier gas, Flow mode/ flow rate (mL/ min)	Helium, Constant flow / 1.3
Injection mode	Splitless with surge
Temperature (°C)	240
Split flow (mL/ min)	81
Splitless Time	1.0
Purge flow (mL/ min)	5
Surge pressure (psi)	25
Surge duration (min)	1.01
Vacuum compensation	On

MS Conditions

Transfer line temperature (°C)	250
Ion source temperature (°C)	300
Source used	Thermo Scientific™ Advanced Electron Ionization (AEI)
Ionization Type	Electron Ionization (EI)
Acquisition Mode	Timed SRM
Tune Type	AEI SmartTune
Collision gas and pressure	Argon at 70 psi
Peak width	0.7 Da (both Q1 and Q3)

Gradient GC Oven

Step#	Rate (C/min)	Temperature (C)	Hold Time (min)
1	0.0	35.0	1.00
2	25.0	130.0	0.00
3	20.0	250.0	2.00