Safety Data Sheet
acc. to OSHA HCS

Printing date 03/28/2019 Version Number 3 Reviewed on 03/23/2019

*
1 Identification

· **Product identifier**

· **Trade name: VOC Standard (1X1 mL)**

· **Part number:** DWM-590-1
· **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA

· **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

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2 Hazard(s) identification

· **Classification of the substance or mixture**


GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.


GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.


GHS08 Health hazard

Muta. 1B H340 May cause genetic defects.
Carc. 1A H350 May cause cancer.
Repr. 2 H361 Suspected of damaging fertility or the unborn child.
STOT SE 1 H370 Causes damage to organs.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.


GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**

GHS02 GHS06 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
methanol
benzene
carbon tetrachloride
trichloromethane

· **Hazard statements**
Highly flammable liquid and vapor.
Toxic if inhaled.
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.
Suspected of damaging fertility or the unborn child.
Causes damage to organs.
May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF exposed or concerned: Get medical advice/attention.
Specific treatment (see on this label).
Get medical advice/attention if you feel unwell.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *1
Fire = 3
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

67-56-1	methanol	96.9664%
75-27-4	bromodichloromethane	0.253%
67-66-3	trichloromethane	0.253%
106-46-7	1,4-dichlorobenzene	0.253%
71-43-2	benzene	0.253%
56-23-5	carbon tetrachloride	0.253%
107-06-2	1,2-dichloroethane	0.253%
71-55-6	1,1,1-trichloroethane	0.253%
79-01-6	trichloroethylene	0.253%
75-01-4	vinyl chloride	0.253%

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
· **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

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· **After swallowing:** If symptoms persist consult doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
· **Advice for firefighters**
· **Protective equipment:** Mouth respiratory protective device.

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6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
67-56-1	methanol	530 ppm
75-27-4	bromodichloromethane	1.3 mg/m³
75-25-2	bromoform	1.5 ppm
67-66-3	trichloromethane	2 ppm
124-48-1	dibromochloromethane	1.1 mg/m³
106-46-7	1,4-dichlorobenzene	30 ppm
75-35-4	1,1-dichloroethylene	45 ppm
71-43-2	benzene	52 ppm
56-23-5	carbon tetrachloride	1.2 ppm
107-06-2	1,2-dichloroethane	50 ppm
71-55-6	1,1,1-trichloroethane	230 ppm
79-01-6	trichloroethylene	130 ppm
75-01-4	vinyl chloride	250 ppm

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· PAC-2:		
67-56-1	methanol	2,100 ppm
75-27-4	bromodichloromethane	14 mg/m³
75-25-2	bromoform	6.8 ppm
67-66-3	trichloromethane	64 ppm
124-48-1	dibromochloromethane	12 mg/m³
106-46-7	1,4-dichlorobenzene	170 ppm
75-35-4	1,1-dichloroethylene	500 ppm
71-43-2	benzene	800 ppm
56-23-5	carbon tetrachloride	13 ppm
107-06-2	1,2-dichloroethane	200 ppm
71-55-6	1,1,1-trichloroethane	600 ppm
79-01-6	trichloroethylene	450 ppm
75-01-4	vinyl chloride	1,200 ppm

· PAC-3:		
67-56-1	methanol	7200* ppm
75-27-4	bromodichloromethane	85 mg/m³
75-25-2	bromoform	41 ppm
67-66-3	trichloromethane	3,200 ppm
124-48-1	dibromochloromethane	73 mg/m³
106-46-7	1,4-dichlorobenzene	1,000 ppm
75-35-4	1,1-dichloroethylene	1,000 ppm
71-43-2	benzene	4000* ppm
56-23-5	carbon tetrachloride	340 ppm
107-06-2	1,2-dichloroethane	300 ppm
71-55-6	1,1,1-trichloroethane	4,200 ppm
79-01-6	trichloroethylene	3,800 ppm
75-01-4	vinyl chloride	4800* ppm

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.

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· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No further relevant information available.

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8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
67-56-1 methanol	
PEL	Long-term value: 260 mg/m³, 200 ppm
REL	Short-term value: 325 mg/m³, 250 ppm Long-term value: 260 mg/m³, 200 ppm Skin
TLV	Short-term value: 328 mg/m³, 250 ppm Long-term value: 262 mg/m³, 200 ppm Skin; BEI
67-66-3 trichloromethane	
PEL	Ceiling limit value: 240 mg/m³, 50 ppm
REL	Short-term value: 9.78* mg/m³, 2* ppm *60-min; See Pocket Guide App. A
TLV	Long-term value: 49 mg/m³, 10 ppm
106-46-7 1,4-dichlorobenzene	
PEL	Long-term value: 450 mg/m³, 75 ppm
REL	See Pocket Guide App. A
TLV	Long-term value: 60 mg/m³, 10 ppm
71-43-2 benzene	
PEL	Short-term value: 15* mg/m³, 5* ppm Long-term value: 3* mg/m³, 1* ppm *table Z-2 for exclusions in 29CFR1910.1028(d)
REL	Short-term value: 1 ppm Long-term value: 0.1 ppm See Pocket Guide App. A
TLV	Short-term value: 8 mg/m³, 2.5 ppm Long-term value: 1.6 mg/m³, 0.5 ppm Skin; BEI
56-23-5 carbon tetrachloride	
PEL	Long-term value: 10 ppm Ceiling limit value: 25; 200* ppm *5-min peak in any 4 hrs

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REL	Short-term value: 12.6* mg/m³, 2* ppm *60-min;See Pocket Guide App. A
TLV	Short-term value: 63 mg/m³, 10 ppm Long-term value: 31 mg/m³, 5 ppm Skin
107-06-2 1,2-dichloroethane	
PEL	Long-term value: 50 ppm Ceiling limit value: 100; 200* ppm *5-min peak in any 3 hrs
REL	Short-term value: 8 mg/m³, 2 ppm Long-term value: 4 mg/m³, 1 ppm See Pocket Guide Apps. A and C
TLV	Long-term value: 40 mg/m³, 10 ppm
71-55-6 1,1,1-trichloroethane	
PEL	Long-term value: 1900 mg/m³, 350 ppm
REL	Ceiling limit value: 1900* mg/m³, 350* ppm *15-min; See Pocket Guide App. C
TLV	Short-term value: 2460 mg/m³, 450 ppm Long-term value: 1910 mg/m³, 350 ppm BEI
79-01-6 trichloroethylene	
PEL	Long-term value: 100 ppm Ceiling limit value: 200; 300* ppm *5-min peak in any 2 hrs
REL	See Pocket Guide Apps. A and C
TLV	Short-term value: 135 mg/m³, 25 ppm Long-term value: 54 mg/m³, 10 ppm BEI
75-01-4 vinyl chloride	
PEL	Short-term value: 5* ppm Long-term value: 1 ppm *Avg. not exceeding any 15 min; see 29CFR1910.1017
REL	See Pocket Guide App.A
TLV	Long-term value: 2.6 mg/m³, 1 ppm

· **Ingredients with biological limit values:**

67-56-1 methanol	
BEI	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)

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71-43-2 benzene	
BEI	25 µg/g creatinine Medium: urine Time: end of shift Parameter Parameter: S-Phenylmercapturic acid (background 500 µg/g creatinine Medium: urine Time: end of shift Parameter: t,t-Muconic acid (background)
71-55-6 1,1,1-trichloroethane	
BEI	40 ppm Medium: end-exhaled air Time: prior to last shift of workweek Parameter: Methyl chloroform 10 mg/L Medium: urine Time: end of workweek Parameter: Trichloroacetic acid (nonspecific, semi-quantitative) 30 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Total trichloroethanol (nonspecific, semi-quantitative) 1 mg/L Medium: blood Time: end of shift at end of workweek Parameter: Total trichloroethanol (nonspecific)
79-01-6 trichloroethylene	
BEI	15 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Trichloroacetic acid (nonspecific) 0.5 mg/L Medium: blood Time: end of shift at end of workweek Parameter: Trichloroethanol without hydrolysis (nonspecific) - Medium: blood Time: end of shift at end of workweek Parameter: Trichloroethylene (semi-quantitative) - Medium: end-exhaled air Time: end of shift at end of workweek Parameter: Trichloroethylene (semi-quantitative)

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· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
· **Breathing equipment:**
When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.
· **Protection of hands:**
Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
· **Material of gloves**
For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness
· **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: >4 hours
· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Color:	Colorless
· **Odor:**	Alcohol-like
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	-98 °C (-144.4 °F)
Boiling point/Boiling range:	64 °C (147.2 °F)
· **Flash point:**	9 °C (48.2 °F)
· **Flammability (solid, gaseous):**	Not applicable.

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· **Ignition temperature:**	455 °C (851 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Explosion limits:**	
Lower:	5.5 Vol %
Upper:	44 Vol %
· **Vapor pressure at 20 °C (68 °F):**	100 hPa (75 mm Hg)
· **Density at 20 °C (68 °F):**	0.82305 g/cm³ (6.86835 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	98.2 %
VOC content:	97.98 % 806.4 g/l / 6.73 lb/gal
Solids content:	0.3 %
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
ATE (Acute Toxicity Estimate)		
Oral	LD50	79,114 mg/kg (rat)
Dermal	LD50	11,578 mg/kg
Inhalative	LC50/4 h	3.08 mg/L

67-56-1 methanol		
Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)
75-27-4 bromodichloromethane		
Oral	LD50	450 mg/kg (mouse)
67-66-3 trichloromethane		
Oral	LD50	908 mg/kg (rat)
Dermal	LD50	75 mg/kg (rat)
		>20,000 mg/kg (rabbit)
106-46-7 1,4-dichlorobenzene		
Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	>5.07 mg/L (rat)
71-43-2 benzene		
Oral	LD50	3,340 mg/kg (rat)
Dermal	LD50	48 mg/kg (mouse)
		>8,260 mg/kg (rabbit)
Inhalative	LC50/4 h	9,980 mg/L (mouse)
56-23-5 carbon tetrachloride		
Oral	LD50	2,350 mg/kg (rat)
Dermal	LD50	5,070 mg/kg (rat)
107-06-2 1,2-dichloroethane		
Oral	LD50	670 mg/kg (rat)
Dermal	LD50	2,800 mg/kg (rat)
		2,800 mg/kg (rabbit)
71-55-6 1,1,1-trichloroethane		
Oral	LD50	10,300 mg/kg (rat)
79-01-6 trichloroethylene		
Oral	LD50	2,402 mg/kg (mouse)
		4,290 mg/kg (rat)
Dermal	LD50	8,450 mg/kg (mouse)

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75-01-4 vinyl chloride		
Oral	LD50	500 mg/kg (rat)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic
Irritant
The product can cause inheritable damage.

· **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
75-27-4	bromodichloromethane	2B
75-25-2	bromoform	3
67-66-3	trichloromethane	2B
124-48-1	dibromochloromethane	3
106-46-7	1,4-dichlorobenzene	2B
75-35-4	1,1-dichloroethylene	3
71-43-2	benzene	1
56-23-5	carbon tetrachloride	2B
107-06-2	1,2-dichloroethane	2B
71-55-6	1,1,1-trichloroethane	3
79-01-6	trichloroethylene	1
75-01-4	vinyl chloride	1

· NTP (National Toxicology Program)		
75-27-4	bromodichloromethane	R
67-66-3	trichloromethane	R
106-46-7	1,4-dichlorobenzene	R
71-43-2	benzene	K
56-23-5	carbon tetrachloride	R
107-06-2	1,2-dichloroethane	R
79-01-6	trichloroethylene	K
75-01-4	vinyl chloride	K

· OSHA-Ca (Occupational Safety & Health Administration)	
71-43-2	benzene
75-01-4	vinyl chloride

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.

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· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

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14 Transport information

· **Not Regulated, De minimus Quantities**	-
· **UN-Number**	
· **DOT, IMDG, IATA**	UN1230
· **UN proper shipping name**	
· **DOT**	Methanol solution
· **IMDG, IATA**	METHANOL solution
· **Transport hazard class(es)**	
· **DOT**	
· **Class**	3 Flammable liquids
· **Label**	3, 6.1
· **IMDG**	
· **Class**	3 Flammable liquids

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· **Label**	3/6.1
· **IATA**	
	
· **Class**	3 Flammable liquids
· **Label**	3 (6.1)
· **Packing group**	
· **DOT, IMDG, IATA**	II
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Flammable liquids
· **Danger code (Kemler):**	336
· **EMS Number:**	F-E,S-D
· **Stowage Category**	B
· **Stowage Code**	SW2 Clear of living quarters.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **DOT**	
· **Quantity limitations**	On passenger aircraft/rail: 1 L On cargo aircraft only: 60 L
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 1230 METHANOL SOLUTION, 3 (6.1), II

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**	
67-66-3	trichloromethane

· **Section 313 (Specific toxic chemical listings):**	
67-56-1	methanol
75-27-4	bromodichloromethane
75-25-2	bromoform
67-66-3	trichloromethane
106-46-7	1,4-dichlorobenzene
75-35-4	1,1-dichloroethylene

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71-43-2	benzene
56-23-5	carbon tetrachloride
107-06-2	1,2-dichloroethane
71-55-6	1,1,1-trichloroethane
79-01-6	trichloroethylene
75-01-4	vinyl chloride

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **TSCA new (21st Century Act): (Substances not listed)**

75-27-4	bromodichloromethane

· **Proposition 65**

· **Chemicals known to cause cancer:**

75-27-4	bromodichloromethane
75-25-2	bromoform
67-66-3	trichloromethane
106-46-7	1,4-dichlorobenzene
75-35-4	1,1-dichloroethylene
71-43-2	benzene
56-23-5	carbon tetrachloride
107-06-2	1,2-dichloroethane
79-01-6	trichloroethylene
75-01-4	vinyl chloride

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

71-43-2	benzene
79-01-6	trichloroethylene

· **Chemicals known to cause developmental toxicity:**

67-56-1	methanol
67-66-3	trichloromethane
71-43-2	benzene
79-01-6	trichloroethylene

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

75-27-4	bromodichloromethane	B2
75-25-2	bromoform	B2
67-66-3	trichloromethane	B2, L, NL
124-48-1	dibromochloromethane	C
75-35-4	1,1-dichloroethylene	C, S (inh.), I (oral)
71-43-2	benzene	A, K/L
56-23-5	carbon tetrachloride	L

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107-06-2	1,2-dichloroethane	B2
71-55-6	1,1,1-trichloroethane	II
79-01-6	trichloroethylene	CaH
75-01-4	vinyl chloride	A, K/L

· **TLV (Threshold Limit Value established by ACGIH)**		
75-25-2	bromoform	A3
67-66-3	trichloromethane	A3
106-46-7	1,4-dichlorobenzene	A3
75-35-4	1,1-dichloroethylene	A4
71-43-2	benzene	A1
56-23-5	carbon tetrachloride	A2
107-06-2	1,2-dichloroethane	A4
71-55-6	1,1,1-trichloroethane	A4
79-01-6	trichloroethylene	A2
75-01-4	vinyl chloride	A1

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**	
67-66-3	trichloromethane
106-46-7	1,4-dichlorobenzene
75-35-4	1,1-dichloroethylene
71-43-2	benzene
56-23-5	carbon tetrachloride
107-06-2	1,2-dichloroethane
79-01-6	trichloroethylene
75-01-4	vinyl chloride

· **National regulations:**
· **Additional classification according to Decree on Hazardous Materials:**
Carcinogenic hazardous material group III (dangerous).

· **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation.
No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Department issuing SDS:** Document Control / Regulatory
· **Contact:** regulatory@ultrasci.com
· **Date of preparation / last revision** 03/28/2019 / 2
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association

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ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 1B: Germ cell mutagenicity – Category 1B
Carc. 1A: Carcinogenicity – Category 1A
Repr. 2: Reproductive toxicity – Category 2
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

· *** Data compared to the previous version altered.**