

13.02.2017

**Kit Components**

| Product code | Description |
|--------------|-------------|
|--------------|-------------|

|                |  |
|----------------|--|
| <b>1955720</b> | <b>TDM by HPLC, Basic Set, 200 Test Online Metho</b> |
|----------------|--|

## Components:

|         |                        |
|---------|------------------------|
| 1956638 | TDM by HPLC, MP 1      |
| 1956602 | TDM by HPLC, MP 2      |
| 1956685 | TDM by HPLC, EXTR CRTR |

**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 13.02.2017

Version number 14

Revision: 13.02.2017

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
- **Trade name:** TDM by HPLC, MP 1
- **Article number:** 1956638
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** In-Vitro-laboratory reagent or component
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories Ltd.  
Bio-Rad House  
Maxted Road  
Hemel Hempstead  
Hertfordshire HP2 7DX  
Freephone: 0800 181134  
Tel: +44 (0)208 328 2000  
Fax: +44 (0) 208 328 2550
- **Further information obtainable from:**  
Technical Support:  
techsupport.uk@bio-rad.com
- **1.4 Emergency telephone number:**  
GBK Gefahrgut Büro GmbH  
Tel.: 0049(0)6123-84463

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Flam. Liq. 2 H225 Highly flammable liquid and vapour.  
Acute Tox. 4 H312 Harmful in contact with skin.  
Eye Irrit. 2 H319 Causes serious eye irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
acetonitrile
- **Hazard statements**  
H225 Highly flammable liquid and vapour.  
H312 Harmful in contact with skin.  
H319 Causes serious eye irritation.
- **Precautionary statements**  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P241 Use explosion-proof electrical/ventilating/lighting equipment.

(Contd. on page 2)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 13.02.2017

Version number 14

Revision: 13.02.2017

**Trade name: TDM by HPLC, MP 1**

(Contd. of page 1)



- P280** Wear protective gloves/protective clothing/eye protection/face protection.
- P303+P361+P353** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

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

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

|                   |  |         |
|-------------------|--|---------|
| CAS: 75-05-8      | acetonitrile   | 50-100% |
| EINECS: 200-835-2 |  Flam. Liq. 2, H225;  Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319 |         |

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

GB

(Contd. on page 3)

**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 13.02.2017

Version number 14

Revision: 13.02.2017

**Trade name: TDM by HPLC, MP 1**

(Contd. of page 2)

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 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.
- **6.4 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.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

**75-05-8 acetonitrile**

|     |  |
|-----|--|
| WEL | Short-term value: 102 mg/m <sup>3</sup> , 60 ppm |
|     | Long-term value: 68 mg/m <sup>3</sup> , 40 ppm   |

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 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.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.

(Contd. on page 4)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 13.02.2017

Version number 14

Revision: 13.02.2017

Trade name: TDM by HPLC, MP 1

(Contd. of page 3)

· **Respiratory protection:**

*In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.*

· **Protection of hands:**



Protective gloves

*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.*

*Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.*

*Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

· **Material of gloves**

*The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.*

· **Penetration time of glove material**

*The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.*

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

### SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

|                         |                 |
|-------------------------|-----------------|
| <b>Form:</b>            | Fluid           |
| <b>Colour:</b>          | Colourless      |
| <b>Odour:</b>           | Characteristic  |
| <b>Odour threshold:</b> | Not determined. |

· **pH-value:** Not determined.

· **Change in condition**

|   |               |
|---|---------------|
| <b>Melting point/freezing point:</b>            | Undetermined. |
| <b>Initial boiling point and boiling range:</b> | >78 °C        |

· **Flash point:** <15 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 524 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

(Contd. on page 5)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 13.02.2017

Version number 14

Revision: 13.02.2017

**Trade name: TDM by HPLC, MP 1**

(Contd. of page 4)

|  |   |
|--|---|
| · <b>Explosive properties:</b>                   | Product is not explosive. However, formation of explosive air/vapour mixtures are possible. |
| · <b>Explosion limits:</b>                       |   |
| Lower:   | 3.0 Vol %   |
| Upper:   | 17.0 Vol %  |
| · <b>Vapour pressure at 20 °C:</b>               | 97 hPa  |
| · <b>Density at 20 °C:</b>                       | 0.92 g/cm <sup>3</sup>  |
| · <b>Relative density</b>                        | Not determined.   |
| · <b>Vapour density</b>                          | Not determined.   |
| · <b>Evaporation rate</b>                        | Not determined.   |
| · <b>Solubility in / Miscibility with water:</b> | Fully miscible.   |
| · <b>Partition coefficient: n-octanol/water:</b> | Not determined.   |
| · <b>Viscosity:</b>                              |   |
| Dynamic:   | Not determined.   |
| Kinematic:                                       | Not determined.   |
| · <b>9.2 Other information</b>                   | No further relevant information available.  |

### SECTION 10: Stability and reactivity

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

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**  
Harmful in contact with skin.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

GB

(Contd. on page 6)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 13.02.2017

Version number 14

Revision: 13.02.2017

**Trade name: TDM by HPLC, MP 1**

(Contd. of page 5)


**SECTION 12: Ecological information**

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

**SECTION 14: Transport information**

- |   |   |
|---|---|
| · <b>14.1 UN-Number</b>   | UN1993  |
| · <b>ADR, IMDG, IATA</b>  |   |
| · <b>14.2 UN proper shipping name</b>   | 1993 FLAMMABLE LIQUID, N.O.S. (ACETONITRILE),<br>special provision 640D |
| · <b>ADR</b>  |   |
| · <b>IMDG, IATA</b>   | FLAMMABLE LIQUID, N.O.S. (ACETONITRILE)                                 |
| · <b>14.3 Transport hazard class(es)</b>  |   |
| · <b>ADR, IMDG, IATA</b>  |   |
|  |   |
| · <b>Class</b>  | 3 Flammable liquids.  |
| · <b>Label</b>  | 3   |
| · <b>14.4 Packing group</b>   |   |
| · <b>ADR, IMDG, IATA</b>  | II  |
| · <b>14.5 Environmental hazards:</b>  |   |
| · <b>Marine pollutant:</b>  | No  |
| · <b>14.6 Special precautions for user</b>  | Warning: Flammable liquids.   |
| · <b>Danger code (Kemler):</b>  | 33  |

(Contd. on page 7)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 13.02.2017

Version number 14

Revision: 13.02.2017

**Trade name: TDM by HPLC, MP 1**

(Contd. of page 6)

|  |  |
|--|--|
| · <b>EMS Number:</b>   | <i>F-E, S-E</i>  |
| · <b>Stowage Category</b>  | <i>B</i>   |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> | <i>Not applicable.</i>   |
| · <b>Transport/Additional information:</b>                                       |  |
| · <b>ADR</b>   |  |
| · <b>Limited quantities (LQ)</b>   | <i>1L</i>  |
| · <b>Excepted quantities (EQ)</b>  | <i>Code: E2</i><br><i>Maximum net quantity per inner packaging: 30 ml</i><br><i>Maximum net quantity per outer packaging: 500 ml</i> |
| · <b>Transport category</b>  | <i>2</i>   |
| · <b>Tunnel restriction code</b>   | <i>D/E</i>   |
| · <b>IMDG</b>  |  |
| · <b>Limited quantities (LQ)</b>   | <i>1L</i>  |
| · <b>Excepted quantities (EQ)</b>  | <i>Code: E2</i><br><i>Maximum net quantity per inner packaging: 30 ml</i><br><i>Maximum net quantity per outer packaging: 500 ml</i> |
| · <b>UN "Model Regulation":</b>  | <i>UN 1993 FLAMMABLE LIQUID, N.O.S., SPECIAL PROVISION 640D (ACETONITRILE), 3, II</i>  |

**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Relevant phrases**  
*H225 Highly flammable liquid and vapour.*  
*H302 Harmful if swallowed.*  
*H312 Harmful in contact with skin.*  
*H319 Causes serious eye irritation.*  
*H332 Harmful if inhaled.*
- **Department issuing SDS:**  
*Bio-Rad Laboratories GmbH*  
*Heidemannstrasse 164*  
*D-80939 Munich*
- **Contact:**  
*Technical Support:*  
*E-Mail: cts-ce@bio-rad.com*

(Contd. on page 8)



**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 13.02.2017

Version number 14

Revision: 13.02.2017

**Trade name: TDM by HPLC, MP 1**

(Contd. of page 7)

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

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

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

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

GB

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 13.02.2017

Version number 15

Revision: 10.02.2017

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
- **Trade name:** TDM by HPLC, MP 2
- **Article number:** 1956602
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** In-Vitro-laboratory reagent or component
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories Ltd.  
Bio-Rad House  
Maxted Road  
Hemel Hempstead  
Hertfordshire HP2 7DX  
Freephone: 0800 181134  
Tel: +44 (0)208 328 2000  
Fax: +44 (0) 208 328 2550
- **Further information obtainable from:**  
Technical Support:  
techsupport.uk@bio-rad.com
- **1.4 Emergency telephone number:**  
GBK Gefahrgut Büro GmbH  
Tel.: 0049(0)6123-84463

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Flam. Liq. 3 H226 Flammable liquid and vapour.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02

- **Signal word** Warning
- **Hazard statements**  
H226 Flammable liquid and vapour.
- **Precautionary statements**

|                |   |
|----------------|---|
| P210           | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.      |
| P241           | Use explosion-proof electrical/ventilating/lighting equipment.                                      |
| P280           | Wear protective gloves/protective clothing/eye protection/face protection.                          |
| P240           | Ground/bond container and receiving equipment.  |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P501           | Dispose of contents/container in accordance with local/regional/national/international regulations. |

(Contd. on page 2)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 13.02.2017

Version number 15

Revision: 10.02.2017

**Trade name: TDM by HPLC, MP 2**



(Contd. of page 1)

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

**SECTION 3: Composition/information on ingredients**

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

|                   |  |        |
|-------------------|--|--------|
| CAS: 75-05-8      | acetonitrile   | 1-<10% |
| EINECS: 200-835-2 |  Flam. Liq. 2, H225;  Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319 |        |

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**  
Hydrogen cyanide (HCN)  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide (CO)
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.

(Contd. on page 3)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 13.02.2017

Version number 15

Revision: 10.02.2017

Trade name: TDM by HPLC, MP 2

See Section 13 for disposal information.

(Contd. of page 2)

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling** Keep receptacles tightly sealed.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

|  |  |
|--|--|
| · <b>Ingredients with limit values that require monitoring at the workplace:</b> |  |
| 75-05-8 acetonitrile   |  |
| WEL  | Short-term value: 102 mg/m <sup>3</sup> , 60 ppm<br>Long-term value: 68 mg/m <sup>3</sup> , 40 ppm |

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 4)

GB

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 13.02.2017

Version number 15

Revision: 10.02.2017

**Trade name: TDM by HPLC, MP 2**

(Contd. of page 3)

· **Eye protection:**


Tightly sealed goggles

· **Body protection:** Protective work clothing

### SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

|                           |                 |
|---------------------------|-----------------|
| · <b>Form:</b>            | Fluid           |
| · <b>Colour:</b>          | Colourless      |
| · <b>Odour:</b>           | Characteristic  |
| · <b>Odour threshold:</b> | Not determined. |

· **pH-value:** Not determined.

· **Change in condition**

|   |               |
|---|---------------|
| · <b>Melting point/freezing point:</b>            | Undetermined. |
| · <b>Initial boiling point and boiling range:</b> | >82 °C        |

· **Flash point:** 33 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 524 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

|                 |                 |
|-----------------|-----------------|
| · <b>Lower:</b> | Not determined. |
| · <b>Upper:</b> | Not determined. |

· **Vapour pressure at 20 °C:** 23 hPa

|                            |                        |
|----------------------------|------------------------|
| · <b>Density at 20 °C:</b> | 0.99 g/cm <sup>3</sup> |
| · <b>Relative density</b>  | Not determined.        |
| · <b>Vapour density</b>    | Not determined.        |
| · <b>Evaporation rate</b>  | Not determined.        |

· **Solubility in / Miscibility with water:** Fully miscible.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

|                     |                 |
|---------------------|-----------------|
| · <b>Dynamic:</b>   | Not determined. |
| · <b>Kinematic:</b> | Not determined. |

· **9.2 Other information** No further relevant information available.

GB

(Contd. on page 5)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 13.02.2017

Version number 15

Revision: 10.02.2017

Trade name: TDM by HPLC, MP 2

(Contd. of page 4)

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**  
*Reacts with oxidising agents.*  
*Reacts with acids.*
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
*Hydrogen cyanide (prussic acid)*  
*Nitrogen oxides*  
*Carbon monoxide and carbon dioxide*

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water*  
*Do not allow product to reach ground water, water course or sewage system.*  
*Danger to drinking water if even small quantities leak into the ground.*
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

GB

(Contd. on page 6)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 13.02.2017

Version number 15

Revision: 10.02.2017


Trade name: TDM by HPLC, MP 2

(Contd. of page 5)

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

**SECTION 14: Transport information**

- |   |  |
|---|--|
| · <b>14.1 UN-Number</b>   | UN1993   |
| · <b>ADR, IMDG, IATA</b>  |  |
| · <b>14.2 UN proper shipping name</b>   | 1993 FLAMMABLE LIQUID, N.O.S. (ACETONITRILE),<br>special provision 640E  |
| · <b>ADR</b>  |  |
| · <b>IMDG, IATA</b>   | FLAMMABLE LIQUID, N.O.S. (ACETONITRILE)  |
| · <b>14.3 Transport hazard class(es)</b>  |  |
| · <b>ADR, IMDG, IATA</b>  |  |
|  |  |
| · <b>Class</b>  | 3 Flammable liquids.   |
| · <b>Label</b>  | 3  |
| · <b>14.4 Packing group</b>   | III  |
| · <b>ADR, IMDG, IATA</b>  |  |
| · <b>14.5 Environmental hazards:</b>  |  |
| · <b>Marine pollutant:</b>  | No   |
| · <b>14.6 Special precautions for user</b>  | Warning: Flammable liquids.  |
| · <b>Danger code (Kemler):</b>  | 30   |
| · <b>EMS Number:</b>  | F-E, S-E   |
| · <b>Stowage Category</b>   | A  |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>    | Not applicable.  |
| · <b>Transport/Additional information:</b>  |  |
| · <b>ADR</b>  |  |
| · <b>Limited quantities (LQ)</b>  | 5L   |
| · <b>Excepted quantities (EQ)</b>   | Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 1000 ml |
| · <b>Transport category</b>   | 3  |
| · <b>Tunnel restriction code</b>  | D/E  |
| · <b>IMDG</b>   |  |
| · <b>Limited quantities (LQ)</b>  | 5L   |

(Contd. on page 7)



**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 13.02.2017

Version number 15

Revision: 10.02.2017

**Trade name: TDM by HPLC, MP 2**

(Contd. of page 6)

|                                   |  |
|-----------------------------------|--|
| · <b>Excepted quantities (EQ)</b> | Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 1000 ml |
| · <b>UN "Model Regulation":</b>   | UN 1993 FLAMMABLE LIQUID, N.O.S., SPECIAL PROVISION 640E (ACETONITRILE), 3, III                                  |

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P5c** FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Relevant phrases**  
H225 Highly flammable liquid and vapour.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.
- **Department issuing SDS:**  
Bio-Rad Laboratories GmbH  
Heidemannstrasse 164  
D-80939 Munich
- **Contact:**  
Technical Support:  
E-Mail: cts-ce@bio-rad.com
- **Abbreviations and acronyms:**  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
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  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
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)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Flam. Liq. 2: Flammable liquids – Category 2  
Flam. Liq. 3: Flammable liquids – Category 3  
Acute Tox. 4: Acute toxicity – Category 4  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- **\* Data compared to the previous version altered.**



**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 13.02.2017

Version number 4

Revision: 13.02.2017

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
- **Trade name:** TDM by HPLC, EXTR CRTR
- **Article number:** 1956685
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** In-Vitro-laboratory reagent or component
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories Ltd.  
Bio-Rad House  
Maxted Road  
Hemel Hempstead  
Hertfordshire HP2 7DX  
Freephone: 0800 181134  
Tel: +44 (0)208 328 2000  
Fax: +44 (0) 208 328 2550
- **Further information obtainable from:**  
Technical Support:  
techsupport.uk@bio-rad.com
- **1.4 Emergency telephone number:**  
GBK Gefahrgut Büro GmbH  
Tel.: 0049(0)6123-84463

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
The product is not classified according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients**

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.
- **Dangerous components:** Void
- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.

(Contd. on page 2)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 13.02.2017

Version number 4

Revision: 13.02.2017

Trade name: TDM by HPLC, EXTR CRTR

(Contd. of page 1)

- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:** Pick up mechanically.
- **6.4 Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:** Not required.

(Contd. on page 3)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 13.02.2017

Version number 4

Revision: 13.02.2017

Trade name: TDM by HPLC, EXTR CRTR

(Contd. of page 2)

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Not required.

## SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

|                  |                 |
|------------------|-----------------|
| Form:            | Solid           |
| Colour:          | Whitish         |
| Odour:           | Odourless       |
| Odour threshold: | Not determined. |

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Not determined.

· **Ignition temperature:**

Decomposition temperature: Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapour pressure:** Not applicable.

· **Density:** Not determined.

· **Relative density** Not determined.

· **Vapour density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with**

water: Insoluble.

· **Partition coefficient: n-octanol/water:** Not determined.

(Contd. on page 4)

**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 13.02.2017

Version number 4

Revision: 13.02.2017

**Trade name: TDM by HPLC, EXTR CRTR**

(Contd. of page 3)

- **Viscosity:**
- Dynamic:** Not applicable.
- Kinematic:** Not applicable.
- **9.2 Other information** No further relevant information available.

### **SECTION 10: Stability and reactivity**

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

### **SECTION 11: Toxicological information**

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### **SECTION 12: Ecological information**

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

GB

(Contd. on page 5)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 13.02.2017

Version number 4

Revision: 13.02.2017

Trade name: TDM by HPLC, EXTR CRTR

(Contd. of page 4)

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation** Disposal must be made according to official regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport information**

- |  |                 |
|--|-----------------|
| · <b>14.1 UN-Number</b>  | Void            |
| · <b>ADR, ADN, IMDG, IATA</b>  | Void            |
| · <b>14.2 UN proper shipping name</b>  | Void            |
| · <b>ADR, ADN, IMDG, IATA</b>  | Void            |
| · <b>14.3 Transport hazard class(es)</b>   | Void            |
| · <b>ADR, ADN, IMDG, IATA</b>  | Void            |
| · <b>Class</b>   | Void            |
| · <b>14.4 Packing group</b>  | Void            |
| · <b>ADR, IMDG, IATA</b>   | Void            |
| · <b>14.5 Environmental hazards:</b>   | No              |
| · <b>Marine pollutant:</b>   | No              |
| · <b>14.6 Special precautions for user</b>                                       | Not applicable. |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | Void            |

**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:**  
Bio-Rad Laboratories GmbH  
Heidemannstrasse 164  
D-80939 Munich
- **Contact:**  
Technical Support:  
E-Mail: cts-ce@bio-rad.com
- **Abbreviations and acronyms:**  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

(Contd. on page 6)

GB

**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 13.02.2017

Version number 4

Revision: 13.02.2017

**Trade name: TDM by HPLC, EXTR CRTR**

(Contd. of page 5)

*IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)**ICAO: International Civil Aviation Organisation**ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)**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**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**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)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative***\* Data compared to the previous version altered.**

GB