



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** VITEK MS-FA  
**Other means of identification**  
**SDS number** 1027  
**Product code** 411024 / 411072  
**Recommended use** In vitro diagnostic medical device  
**Recommended restrictions** None known.

### Manufacturer/Importer/Supplier/Distributor information

#### Manufacturer

**Company name** bioMérieux SA  
**Address** Chemin de l'Orme - 69280 Marcy-l'Etoile - France  
**Phone** +33(0)478877656  
**Fax** +(1) 919 470 6819  
**Email** gcs\_microbiology@biomerieux.com

#### D\_Supplier

**Company name** bioMérieux Inc  
**Address** 100 Rodolphe Street - Durham, NC 27712  
**Telephone** For information call : (800) 682-2666  
**Website** <http://www.biomerieux-usa.com/index.htm>

**Emergency telephone number** 1-800-424-9300 (Chemtrec) or Call your local Poison Control Center

## 2. Hazard(s) identification

**Physical hazards** Not classified.  
**Health hazards** Skin corrosion/irritation Category 1  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.

### Label elements



**Signal word** Danger  
**Hazard statement** Causes severe skin burns and eye damage.  
**Precautionary statement**  
**Prevention** Do not breathe mist/vapors. Wear protective gloves/protective clothing/eye protection/face protection.  
**Response** If swallowed: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**Storage** Not available.  
**Disposal** Not available.  
**Hazard(s) not otherwise classified (HNOC)** None known.  
**Supplemental information** None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Formic Acid ... %		64-18-6	28.9

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Get medical attention if irritation develops and persists. Immediately flush skin with plenty of water. For minor skin contact, avoid spreading material on unaffected skin.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Ingestion</b>	If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Indication of immediate medical attention and special treatment needed</b>	Symptoms may be delayed.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Not available.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Not applicable.
<b>Special protective equipment and precautions for firefighters</b>	Wear suitable protective equipment. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.
<b>Methods and materials for containment and cleaning up</b>	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

### 7. Handling and storage

<b>Precautions for safe handling</b>	Do not breathe mist or vapor. Provide adequate ventilation. Wear appropriate personal protective equipment.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in original tightly closed container.

### 8. Exposure controls/personal protection

#### Occupational exposure limits

##### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Formic Acid ... % (CAS 64-18-6)	PEL	9 mg/m <sup>3</sup>  5 ppm

**US. ACGIH Threshold Limit Values**

Components	Type	Value
Formic Acid ... % (CAS 64-18-6)	STEL	10 ppm
	TWA	5 ppm

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
Formic Acid ... % (CAS 64-18-6)	TWA	9 mg/m <sup>3</sup>
		5 ppm

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls** Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles) and a face shield. Avoid contact with eyes. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Skin protection**

**Hand protection** Use protective gloves made of: Nitrile.

**Other** Wear suitable protective clothing.

**Respiratory protection** Respiratory protection not required.

**Thermal hazards** Not available.

**9. Physical and chemical properties**

**Appearance** Liquid.

**Physical state** Liquid.

**Form** Liquid.

**Color** Clear colorless or nearly colorless

**Odor** Not available.

**Odor threshold** Not available.

**pH** 2 estimated

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** 213.44 °F (100.8 °C) estimated

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not available.

**Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

**Vapor pressure** Not available.

**Vapor density** Not available.

**Relative density** Not available.

**Solubility(ies)**

**Solubility (water)** Not available.

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

Viscosity Not available.  
Other information  
Density 1.22 g/cm<sup>3</sup> estimated

## 10. Stability and reactivity

Reactivity Not available.  
Chemical stability Not available.  
Possibility of hazardous reactions Not available.  
Conditions to avoid Contact with incompatible materials.  
Incompatible materials Strong oxidizing agents.  
Hazardous decomposition products Not available.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation May cause irritation to the respiratory system. Prolonged inhalation may be harmful.  
Skin contact Causes severe skin burns.  
Eye contact Causes serious eye damage.  
Ingestion Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

### Information on toxicological effects

#### Acute toxicity

Components	Species	Test Results
Formic Acid ... % (CAS 64-18-6)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Rat	7.4 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	730 mg/kg

\* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious eye damage.

#### Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization Not available.

Germ cell mutagenicity Not available.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

#### US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Not available.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Not available.

Aspiration hazard Not available.

## 12. Ecological information

### Ecotoxicity

Product		Species	Test Results
VITEK MS-FA			
<b>Aquatic</b>			
Crustacea	EC50	Daphnia	477.5086 mg/l, 48 hours estimated
<b>Components</b>		<b>Species</b>	<b>Test Results</b>
Formic Acid ... % (CAS 64-18-6)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	138 - 165.6 mg/l, 48 hours

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** Not available.

**Bioaccumulative potential** Not available.

**Partition coefficient n-octanol / water (log Kow)**

Formic Acid ... % -0.54

**Mobility in soil** Not available.

**Other adverse effects** Not available.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### DOT

**UN number** UN3412  
**UN proper shipping name** Formic acid with not less than 10% but not more than 85% acid by mass  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Label(s)** 8  
**Packing group** II  
**Special precautions for user** Not available.  
**Special provisions** IB2, T7, TP2  
**Packaging exceptions** 154  
**Packaging non bulk** 202  
**Packaging bulk** 242

### IATA

**UN number** UN3412  
**UN proper shipping name** Formic acid with >= 10% but <= 85% acid by weight  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Packing group** II  
**Environmental hazards** No.  
**ERG Code** 8L  
**Special precautions for user** Not available.

**Other information**

**Passenger and cargo aircraft** Allowed with restrictions.  
**Cargo aircraft only** Allowed with restrictions.

**IMDG**

**UN number** UN3412  
**UN proper shipping name** FORMIC ACID with not less than 10% but not more than 85% acid by mass  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Packing group** II  
**Environmental hazards**  
**Marine pollutant** No.  
**EmS** F-A, S-B  
**Special precautions for user** Not available.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not available.

**DOT**



**IATA; IMDG**



**15. Regulatory information**

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

**Toxic Substances Control Act (TSCA)**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Formic Acid ... % (CAS 64-18-6) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes  
**Classified hazard categories** Skin corrosion or irritation

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Formic Acid ... %	64-18-6	28.9

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

Formic Acid ... % (CAS 64-18-6) High priority

**US state regulations**

**California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

**Issue date** 11-21-2014

**Revision date** 12-05-2019

**Version #** 03

**Disclaimer** bioMérieux SA cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

**Revision information** Hazard(s) identification: Prevention  
Hazard(s) identification: Response  
Hazard(s) identification: Supplemental information  
GHS: Classification