

**KAPA Library Quantification Primer Premix and KAPA SYBR FAST (Illumina/L C480)**Version  
2.0Revision Date:  
03-25-2022Date of last issue: 10-11-2021  
Date of first issue: 05-24-2016**SECTION 1. IDENTIFICATION**

Product name : KAPA Library Quantification Primer Premix and KAPA SYBR FAST (Illumina/L C480)  
Product code : 07960573001

**Manufacturer or supplier's details**

Company name of supplier : Roche Diagnostics  
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Address : 9115 Hague Road  
Indianapolis, IN 46250  
USA

Telephone : 1-800-428-5074

Emergency telephone

In case of emergencies: : CHEMTREC  
1-800-424-9300 (U.S. or Canada)  
1-703-527-3887 (International)

**Recommended use of the chemical and restrictions on use**

Restrictions on use : For professional users only.

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**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

The product is a kit consisting of individual ingredients. The classification of the ingredients can be obtained from section 3. Section GHS Label elements contains the resulting labelling for the kit

**GHS label elements**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H370 Causes damage to organs.

Precautionary Statements : **Prevention:**  
P260 Do not breathe mist or vapors.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.

**Response:**

P307 + P311 IF exposed: Call a POISON CENTER or doctor/physician.

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### Storage:

P405 Store locked up.

### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 2x SYBR Fast Universal MM

#### GHS Classification

Specific target organ toxicity : Category 1  
- single exposure

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
glycerol	56-81-5	$\geq 10 - < 20$
Methane, 1,1'-sulfinylbis-	67-68-5	$\geq 5 - < 10$
Methanaminium, N,N,N-trimethyl-, chloride (1:1)	75-57-0	$\geq 1 - < 5$
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	77-86-1	$\geq 1 - < 5$

Actual concentration is withheld as a trade secret

### KAPA Library Quantification Primer Premix (10X)

#### GHS Classification

Not a hazardous substance or mixture.

#### Components

No hazardous ingredients

## SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.  
Show this material safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : Move to fresh air.  
If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician.

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- If on skin, rinse well with water.  
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.  
Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.  
Rinse mouth with water.
- Most important symptoms and effects, both acute and delayed : None known.
- Notes to physician : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

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**SECTION 5. FIRE-FIGHTING MEASURES**

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : No information available.
- Further information : Standard procedure for chemical fires.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for : Soak up with inert absorbent material (e.g. sand, silica gel,

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containment and cleaning up      acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.

### SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapors/dust.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Observe label precautions.  
Electrical installations / working materials must comply with the technological safety standards.
- Further information on storage conditions : See label, package insert or internal guidelines
- Further information on storage stability : No decomposition if stored and applied as directed.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 2x SYBR Fast Universal MM

##### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
glycerol	56-81-5	TWA (mist, respirable fraction)	5 mg/m <sup>3</sup>	OSHA Z-1
		TWA (mist, total dust)	15 mg/m <sup>3</sup>	OSHA Z-1
		TWA (Mist - total dust)	10 mg/m <sup>3</sup>	OSHA P0
		TWA (Mist - respirable fraction)	5 mg/m <sup>3</sup>	OSHA P0
Methane, 1,1'-sulfinylbis-	67-68-5	TWA	250 ppm	US WEEL

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### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

**Engineering measures** : No data available

### Personal protective equipment

Respiratory protection : In the case of vapor formation use a respirator with an approved filter.

Hand protection

In case of contact through splashing:  
Material : Nitrile rubber  
Break through time : > 30 min  
Glove thickness : > 0.11 mm

In case of full contact:  
Material : butyl-rubber  
Break through time : > 480 min  
Glove thickness : > 0.4 mm

Remarks : Wear appropriate protective gloves to prevent skin contact.  
Replace torn or punctured gloves promptly.  
Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles

Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 2x SYBR Fast Universal MM

Appearance : liquid

Color : No data available

Odor : No data available

Odor Threshold : No data available

pH : 9.0

Melting point/range : No data available

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Boiling point/boiling range	: No data available
Flash point	: does not flash
Evaporation rate	: No data available
Flammability (solid, gas)	: Does not sustain combustion.
Flammability (liquids)	: Does not sustain combustion.
Self-ignition	: Not applicable
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapor pressure	: No data available
Relative vapor density	: No data available
Relative density	: No data available
Density	: 1.044 g/cm <sup>3</sup>
Solubility(ies)	
Water solubility	: completely miscible
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available

### ***KAPA Library Quantification Primer Premix (10X)***

Appearance	: liquid
Color	: colorless
Odor	: odorless

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Odor Threshold	:	No data available
pH	:	7.7
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (liquids)	:	Does not sustain combustion. The product is not flammable.
Self-ignition	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	0.996 g/cm <sup>3</sup>
Solubility(ies)		
Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

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**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use. No decomposition if stored and applied as directed.
Conditions to avoid	: Exposure to light.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: No decomposition if stored and applied as directed.

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**SECTION 11. TOXICOLOGICAL INFORMATION****2x SYBR Fast Universal MM****Acute toxicity**

Not classified based on available information.

**Components:****glycerol:**

Acute oral toxicity	: LC50 (Mouse): 11,500 mg/kg
Acute inhalation toxicity	: LC50 (Rat, male): 275000 mg/m3 Exposure time: 7 h Test atmosphere: vapor GLP: no Assessment: The component/mixture is minimally toxic after short term inhalation.
Acute dermal toxicity	: LD50 (Guinea pig, male and female): 56,750 mg/kg GLP: no

**Methane, 1,1'-sulfinylbis-:**

Acute oral toxicity	: LD50 (Rat, male and female): 28,300 mg/kg Method: OECD Test Guideline 401 GLP: no
Acute inhalation toxicity	: LC0 (Rat, male and female): > 5.33 mg/l Exposure time: 4 h Test atmosphere: vapor Method: OECD Test Guideline 403 GLP: yes
Acute dermal toxicity	: LD50 Dermal (Rat, male and female): 40,000 mg/kg GLP: no



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Acute oral toxicity : LD50 Oral (Rat): 47 mg/kg  
Method: OECD Test Guideline 401  
GLP: no

Acute dermal toxicity : LD50 Dermal (Rabbit): > 200 - < 500 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes

**1,3-Propanediol, 2-amino-2-(hydroxymethyl)-:**

Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg  
Method: OECD Test Guideline 425  
GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes

**Skin corrosion/irritation**

Not classified based on available information.

**Components:****glycerol:**

Species : Rabbit  
Exposure time : 24 h  
Result : No skin irritation  
GLP : no

**Methane, 1,1'-sulfinylbis-:**

Species : Rabbit  
Exposure time : 4 h  
Method : OECD Test Guideline 404  
GLP : yes  
Remarks : Mild skin irritation

**Methanaminium, N,N,N-trimethyl-, chloride (1:1):**

Result : Irritating to skin.

**1,3-Propanediol, 2-amino-2-(hydroxymethyl)-:**

Species : Rabbit  
Exposure time : 4 h  
Method : OECD Test Guideline 404  
Result : No skin irritation  
GLP : yes

**Serious eye damage/eye irritation**

Not classified based on available information.

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Species : Rabbit  
Result : No eye irritation  
Exposure time : 7 d  
GLP : no

**Methane, 1,1'-sulfinylbis-:**

Species : Rabbit  
Exposure time : 24 h  
Method : OECD Test Guideline 405  
GLP : No information available.  
Remarks : Mild eye irritation

**Methanaminium, N,N,N-trimethyl-, chloride (1:1):**

Species : Rabbit  
Result : No eye irritation  
Method : OECD Test Guideline 405

**1,3-Propanediol, 2-amino-2-(hydroxymethyl)-:**

Species : Rabbit  
Result : No eye irritation  
Exposure time : 72 h  
Method : OECD Test Guideline 405  
GLP : yes

**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Components:****glycerol:**

Assessment : Mild eye irritant, Mild respiratory irritant, No skin irritation

**Methane, 1,1'-sulfinylbis-:**

Test Type : Local lymph node assay (LLNA)  
Species : Mouse  
Assessment : Does not cause skin sensitization.  
Method : OECD Test Guideline 429  
GLP : No information available.

Assessment : Mild eye irritation, Mild skin irritation

**Methanaminium, N,N,N-trimethyl-, chloride (1:1):**

Test Type : Local lymph node assay (LLNA)

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Species : Mouse  
Assessment : Does not cause skin sensitization.  
Method : OECD Test Guideline 429

**1,3-Propanediol, 2-amino-2-(hydroxymethyl)-:**

Test Type : Direct Peptide Reactivity Assay (DPRA)  
Assessment : Does not cause skin sensitization.  
GLP : yes  
Remarks : Based on data from similar materials  
Expert judgment

Test Type : Buehler Test  
Species : Guinea pig  
Method : OECD Test Guideline 406  
GLP : no  
Remarks : Based on data from similar materials

Test Type : Intracutaneous test  
Species : Guinea pig  
GLP : no  
Remarks : Based on data from similar materials

**Germ cell mutagenicity**

Not classified based on available information.

**Components:****glycerol:**

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)  
Test system: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Result: negative  
GLP: No information available.

Test Type: In vitro mammalian cell gene mutation test  
Test system: Chinese hamster ovary cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative  
GLP: No information available.

**Methane, 1,1'-sulfinylbis-:**

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)  
Test system: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative  
GLP: No information available.

Test Type: Chromosome aberration test in vitro  
Test system: Chinese hamster ovary cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473

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Result: negative  
GLP: No information available.

Test Type: sister chromatid exchange assay  
Test system: Chinese hamster ovary cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 479  
Result: negative  
GLP: No information available.

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Species: Rat (male and female)  
Cell type: Bone marrow  
Application Route: Intraperitoneal injection  
Dose: 200, 1000, 5000 mg/kg/d  
Method: OECD Test Guideline 474  
GLP: yes

**Methanaminium, N,N,N-trimethyl-, chloride (1:1):**

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)  
Test system: Salmonella typhimurium  
Result: negative

Test Type: Microbial mutagenesis assay (Ames test)  
Test system: Escherichia coli  
Result: negative

**1,3-Propanediol, 2-amino-2-(hydroxymethyl)-:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Test system: Chinese hamster lung cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473  
Result: negative  
GLP: yes

Test Type: In vitro mammalian cell gene mutation test  
Test system: Chinese hamster ovary cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative  
GLP: yes

Test Type: Microbial mutagenesis assay (Ames test)  
Test system: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative  
GLP: yes  
Remarks: Based on data from similar materials

**Carcinogenicity**

Not classified based on available information.

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Species : Rat, male and female  
Application Route : Oral  
Exposure time : 2 Years  
GLP : No information available.  
Remarks : No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

Not classified based on available information.

**Components:****glycerol:**

Effects on fertility : Test Type: Two-generation study  
Species: Rat, male and female  
Application Route: Oral  
Dose: 2000 mg/kg bw/day  
Fertility: NOAEL: 2,000 mg/kg body weight  
GLP: no

Effects on fetal development : Species: Rabbit, female  
Application Route: Oral  
Dose: 11.8, 54.8, 254.5, 1180 mg/kg bw/day  
Duration of Single Treatment: 29 d  
Developmental Toxicity: NOAEL: 1,180 mg/kg bw/day  
GLP: no

**Methane, 1,1'-sulfinylbis:-**

Effects on fertility : Species: Rat, male and female  
Application Route: Oral  
Dose: 100, 300, 1000 mg/kg bw/day  
Fertility: NOAEL: 1,000 mg/kg body weight  
Method: OECD Test Guideline 421  
GLP: yes

Effects on fetal development : Species: Rat, female  
Application Route: Oral  
Dose: 200, 1000, 5000 milligram per kilogram  
Duration of Single Treatment: 10 d  
Developmental Toxicity: NOAEL: 1,000 mg/kg body weight

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GLP: yes**1,3-Propanediol, 2-amino-2-(hydroxymethyl)-:**

Effects on fertility : Test Type: reproductive and developmental toxicity study  
Species: Rat, male and female  
Application Route: Oral  
Dose: 100, 300, 1000 mg/kg bw/day  
General Toxicity Parent: NOAEL: > 1,000 mg/kg body weight  
General Toxicity F1: NOAEL: > 1,000 mg/kg body weight  
Method: OECD Test Guideline 421  
Result: Animal testing did not show any effects on fertility.  
GLP: yes

Effects on fetal development : Test Type: Pre-natal  
Species: Rat, female  
Strain: wistar  
Application Route: Oral  
Dose: 100, 300, 1000 mg/kg bw/day  
General Toxicity Maternal: NOAEL: > 1,000 mg/kg body weight  
Developmental Toxicity: NOAEL: 1,000 mg/kg body weight  
Method: OECD Test Guideline 414  
Result: No effects on fetal development.  
GLP: yes  
Remarks: Based on data from similar materials

**STOT-single exposure**

Causes damage to organs.

**Components:****Methanaminium, N,N,N-trimethyl-, chloride (1:1):**

Routes of exposure : Ingestion  
Target Organs : Central nervous system  
Assessment : Causes damage to organs.

**STOT-repeated exposure**

Not classified based on available information.

**Repeated dose toxicity****Components:****glycerol:**

Species : Rat, male and female  
NOAEL : 4580 mg/kg  
NOAEL : 4,580 mg/kg  
Application Route : Oral  
Exposure time : 90 d  
Number of exposures : daily  
Dose : 4580 - 25,800 mg/kg/day  
GLP : no

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Species : Rat, male and female  
Application Route : Inhalation  
Test atmosphere : dust/mist  
Exposure time : 13 Weeks  
Number of exposures : 6 hours/day, 5 days/week  
Dose : 33, 165 and 660 mg/m<sup>3</sup>  
GLP : No information available.

Species : Rat  
NOAEL : 5040 mg/kg  
NOAEL : 5,040 mg/kg  
Application Route : dermal  
Exposure time : 45 Weeks  
Number of exposures : 8 hours/day, 5 days/week  
Dose : 0.5-4.0 ml/kg  
GLP : no

Repeated dose toxicity - Assessment : Mild eye irritant, Mild respiratory irritant, No skin irritation

### Methane, 1,1'-sulfinylbis:-

Species : Monkey, male and female  
NOAEL : 2970 mg/kg  
NOAEL : 2,970 mg/kg  
Application Route : Oral  
Exposure time : 87 Weeks  
Dose : 990, 2970, 8910 mg/kg  
Method : OECD Test Guideline 452  
GLP : no

Species : Rat, male and female  
NOAEC : 2783 mg/l  
Application Route : Inhalation  
Test atmosphere : vapor  
Exposure time : 13 Weeks  
Dose : 0.310, 0.964, 2.783 mg/l  
Method : OECD Test Guideline 413  
GLP : yes

Species : Monkey, male and female  
NOAEL : > 8910 mg/kg  
NOAEL : > 8,910 mg/kg  
Application Route : Dermal  
Exposure time : 18 Months  
Dose : 990, 2970, 8910 mg/kg bw/da  
Method : OECD Test Guideline 452  
GLP : no

Repeated dose toxicity - Assessment : Mild eye irritation, Mild skin irritation

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Species : Rat  
NOAEL : 5 mg/kg  
Application Route : Oral  
Method : OECD Test Guideline 421  
GLP : yes

**1,3-Propanediol, 2-amino-2-(hydroxymethyl)-:**

Species : Rat, male and female  
NOAEL : 250 mg/kg  
LOAEL : 1,000 mg/kg  
Application Route : Oral  
Exposure time : 90 d  
Number of exposures : daily  
Dose : 62.5, 250, 1000 mg/kg bw  
Method : OECD Test Guideline 408  
GLP : yes  
Remarks : Based on data from similar materials

**Aspiration toxicity**

Not classified based on available information.

**Further information****Components:****Methanaminium, N,N,N-trimethyl-, chloride (1:1):**

Remarks : Other dangerous properties can not be excluded.

***KAPA Library Quantification Primer Premix (10X)*****Acute toxicity**

Not classified based on available information.

**Skin corrosion/irritation**

Not classified based on available information.

**Serious eye damage/eye irritation**

Not classified based on available information.

**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.



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- IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
- NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

Not classified based on available information.

**STOT-single exposure**

Not classified based on available information.

**STOT-repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

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**SECTION 12. ECOLOGICAL INFORMATION****2x SYBR Fast Universal MM****Ecotoxicity****Components:****glycerol:**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 54,000 mg/l  
End point: mortality  
Exposure time: 96 h  
Test Type: static test  
GLP: no
- Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 1,955 mg/l  
End point: mortality  
Exposure time: 48 h  
Test Type: static test  
Analytical monitoring: no  
GLP: no
- Toxicity to algae/aquatic plants : (Scenedesmus quadricauda (Green algae)): > 10,000 mg/l  
End point: Growth rate  
Exposure time: 8 d  
Test Type: static test  
GLP: no
- Toxicity to microorganisms : EC50 (Pseudomonas putida): > 10,000 mg/l  
End point: Growth rate  
Exposure time: 16 h  
Test Type: static test  
GLP: No information available.

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- Acute aquatic toxicity : This product has no known ecotoxicological effects.
- Chronic aquatic toxicity : This product has no known ecotoxicological effects.
- Toxicity Data on Soil : Not expected to adsorb on soil.
- Other organisms relevant to the environment : No data available

**Methane, 1,1'-sulfinylbis-:**

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 25,000 mg/l  
End point: mortality  
Exposure time: 96 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 203  
GLP: yes
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 24,600 mg/l  
Exposure time: 48 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 202  
GLP: No information available.
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 17,000 mg/l  
End point: Growth rate  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes
- Toxicity to microorganisms : EC50 (activated sludge): 10 - 100 mg/l  
Exposure time: 0.5 h  
Analytical monitoring: no  
Method: ISO 8192  
GLP: No information available.

**Ecotoxicology Assessment**

- Toxicity Data on Soil : Not expected to adsorb on soil.
- Other organisms relevant to the environment : No data available

**Methanaminium, N,N,N-trimethyl-, chloride (1:1):**

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 462 mg/l  
Exposure time: 96 h

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Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.16 mg/l  
Exposure time: 11 d  
GLP: yes

NOEC (Daphnia magna (Water flea)): 0.03 mg/l  
Exposure time: 11 d  
GLP: yes

LC50 (Daphnia magna (Water flea)): 1.86 mg/l  
Exposure time: 48 h  
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 115 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes

**Ecotoxicology Assessment**

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to the environment : No data available

**1,3-Propanediol, 2-amino-2-(hydroxymethyl)-:**

Toxicity to fish : LC50 (Fish): > 4,000 mg/l  
Exposure time: 96 h  
Test Type: static test  
Analytical monitoring: no  
Method: DIN 38412  
GLP: no

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 980 mg/l  
End point: Immobilization  
Exposure time: 48 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 202  
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 473 mg/l  
End point: Growth rate  
Exposure time: 48 h  
Test Type: static test  
Analytical monitoring: no  
Method: OECD Test Guideline 201  
GLP: No information available.

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Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l  
End point: Respiration inhibition  
Exposure time: 3 h  
Test Type: static test  
Analytical monitoring: no  
Method: OECD Test Guideline 209  
GLP: yes

**Ecotoxicology Assessment**

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to the environment : No data available

**Persistence and degradability****Components:****glycerol:**

Biodegradability : aerobic  
Inoculum: activated sludge  
Concentration: 226 mg/l  
Result: Readily biodegradable.  
Biodegradation: 94 %  
Exposure time: 24 h  
GLP: no

**Methane, 1,1'-sulfinylbis-:**

Biodegradability : aerobic  
Inoculum: activated sludge  
Concentration: 2 mg/l  
Result: Not readily biodegradable.  
Biodegradation: 31 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D  
GLP: yes

**Methanaminium, N,N,N-trimethyl-, chloride (1:1):**

Biodegradability : Remarks: Expected to be biodegradable

**1,3-Propanediol, 2-amino-2-(hydroxymethyl)-:**

Biodegradability : aerobic  
Inoculum: activated sludge  
Result: Readily biodegradable.  
Biodegradation: 100 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F  
GLP: yes

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Partition coefficient: n-octanol/water : log Pow: -1.75 (77 °F / 25 °C)  
pH: 7.4  
Method: OECD Test Guideline 107  
GLP: no

**Methane, 1,1'-sulfinylbis-:**

Partition coefficient: n-octanol/water : log Pow: -1.35 (68 °F / 20 °C)  
pH: 7  
GLP: No information available.

**Methanaminium, N,N,N-trimethyl-, chloride (1:1):**

Partition coefficient: n-octanol/water : Remarks: No data available

**1,3-Propanediol, 2-amino-2-(hydroxymethyl)-:**

Bioaccumulation : Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

Partition coefficient: n-octanol/water : log Pow: -2.31 (68 °F / 20 °C)  
Method: OECD Test Guideline 107  
GLP: no

**Mobility in soil**

No data available

**Other adverse effects*****KAPA Library Quantification Primer Premix (10X)*****Ecotoxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

- Waste from residues : Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.  
Can be disposed as waste water, when in compliance with local regulations.
- Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.

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**SECTION 14. TRANSPORT INFORMATION****International Regulations****UNRTDG**

Not regulated as a dangerous good

**IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**Domestic regulation****49 CFR**

Not regulated as a dangerous good

**Special precautions for user**

Remarks : Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

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**SECTION 15. REGULATORY INFORMATION****2x SYBR Fast Universal MM****CERCLA Reportable Quantity**

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Specific target organ toxicity (single or repeated exposure)

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**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

## Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

glycerol	56-81-5	>= 10 - < 20 %
Methane, 1,1'-sulfinylbis-	67-68-5	>= 5 - < 10 %

## Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-	60-00-4	>= 0 - < 0.1 %
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The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-	60-00-4	>= 0 - < 0.1 %
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This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

## US State Regulations

### Massachusetts Right To Know

glycerol	56-81-5
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### Pennsylvania Right To Know

Water	7732-18-5
glycerol	56-81-5
Methane, 1,1'-sulfinylbis-	67-68-5

### Maine Chemicals of High Concern

Product does not contain any listed chemicals

### Vermont Chemicals of High Concern

Product does not contain any listed chemicals

### Washington Chemicals of High Concern

Product does not contain any listed chemicals

### California Permissible Exposure Limits for Chemical Contaminants

glycerol	56-81-5
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The ingredients of this product are reported in the following inventories:

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AIIC	: Not in compliance with the inventory
DSL	: This product contains the following components that are not on the Canadian DSL nor NDSL.  2'-Deoxyguanosine 5'-triphosphate trisodium salt  Adenosine 5'-(tetrahydrogen triphosphate), 2'-deoxy-  Thymidine 5'-(tetrahydrogen triphosphate), sodium salt  2'-Deoxycytidine 5'-triphosphate disodium salt  SYBR Green I nucleic acid gel stain
NZIoC	: Not in compliance with the inventory
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Not in compliance with the inventory
TCSI	: Not in compliance with the inventory
TSCA	: Product contains substance(s) not listed on TSCA inventory.
TECI	: Not in compliance with the inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

**KAPA Library Quantification Primer Premix (10X)****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : No SARA Hazards



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**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

**US State Regulations****Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

Water

7732-18-5

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**The ingredients of this product are reported in the following inventories:**

AIIC : Not in compliance with the inventory

DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.

Primer / Oligonucleotide / Probe

NZIoC : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

ISHL : Not in compliance with the inventory

KECI : Not in compliance with the inventory

# SAFETY DATA SHEET



## KAPA Library Quantification Primer Premix and KAPA SYBR FAST (Illumina/L C480)

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PICCS : Not in compliance with the inventory  
IECSC : Not in compliance with the inventory  
TCSI : Not in compliance with the inventory  
TSCA : Product contains substance(s) not listed on TSCA inventory.  
TECI : Not in compliance with the inventory

### TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

## 2x SYBR Fast Universal MM

### GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H370 Causes damage to organs.

Precautionary Statements : **Prevention:**  
P260 Do not breathe mist or vapors.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
**Response:**  
P307 + P311 IF exposed: Call a POISON CENTER or doctor/physician.  
**Storage:**  
P405 Store locked up.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

## KAPA Library Quantification Primer Premix (10X)

### GHS label elements

Not a hazardous substance or mixture.

# KAPA Library Quantification Primer Premix and KAPA SYBR FAST (Illumina/L C480)

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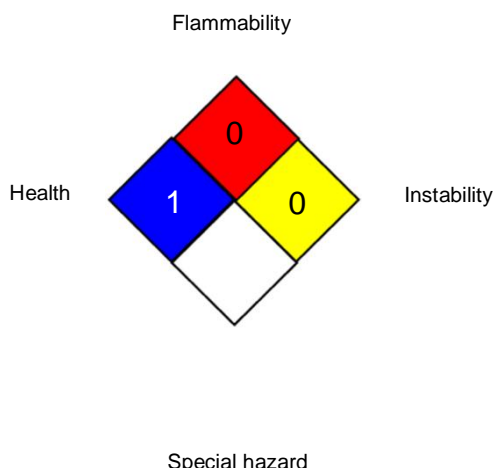
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## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA 704:

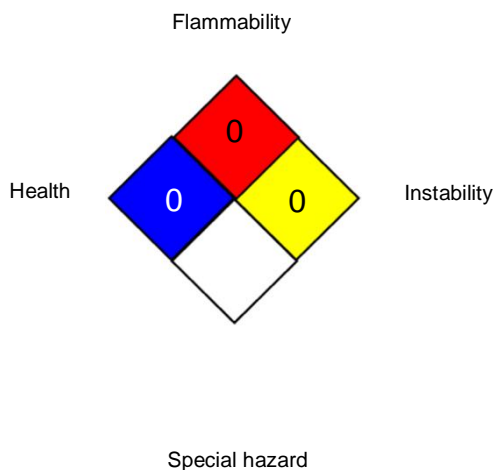


#### HMIS® IV:

HEALTH	/	4
FLAMMABILITY		0
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

#### NFPA 704:



#### HMIS® IV:

HEALTH	/	0
FLAMMABILITY		0
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

### Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with

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x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 03-25-2022

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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