

Version 3.0

**Revision Date:** 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### **SECTION 1. IDENTIFICATION**

| Product name                     | :    | KAPA LTP Library Preparation                     | n Kit   |
|----------------------------------|------|--|---|
| Product code                     | :    | 07961880001                                      |   |
| Manufacturer or supplier's       | deta | ails   |   |
| Company name of supplier         | :    | Roche Diagnostics<br>-                           |   |
| Address                          | :    | 9115 Hague Road<br>Indianapolis, IN 46250<br>USA |   |
| Telephone<br>Emergency telephone | :    | 1-800-428-5074                                   |   |
| In case of emergencies:          | :    | CHEMTREC   | 1-800-424-9300 (U.S. or Ca-<br>nada)<br>1-703-527-3887 (Internatio-<br>nal) |
|                                  |      |  |   |

Recommended use of the chemical and restrictions on use

| Restrictions on use : | For prof | essional | users | only. |
|-----------------------|----------|----------|-------|-------|
|-----------------------|----------|----------|-------|-------|

#### **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        | : | H319 Causes serious eye irritation.<br>H370 Causes damage to organs. |
| Precautionary Statements | : | Brovention   |

**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. P280 Wear eye protection/ face protection.

#### **Response:**

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water



Version 3.0 Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

P337 + P313 If eye irritation persists: Get medical advice/ attention.

#### 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

### KAPA End-Repair Buffer (10X)

#### **GHS Classification**

Eye irritation : Category 2A

#### Components

| Chemical name                    | CAS-No.   | Concentration (% w/w) |
|----------------------------------|-----------|-----------------------|
| 1,3-Propanediol, 2-amino-2-      | 77-86-1   | >= 5 - < 10           |
| (hydroxymethyl)-                 |           |                       |
| 2,3-Butanediol, 1,4-dimercapto-, | 3483-12-3 | >= 1 - < 5            |
| (2R,3R)-rel-                     |           |                       |

Actual concentration is withheld as a trade secret

### Kapa A-Tailing Buffer (10X)

#### **GHS Classification**

Not a hazardous substance or mixture.

#### Components

| Chemical name               | CAS-No. | Concentration (% w/w) |
|-----------------------------|---------|-----------------------|
| 1,3-Propanediol, 2-amino-2- | 77-86-1 | >= 1 - < 5            |
| (hydroxymethyl)-            |         |                       |

Actual concentration is withheld as a trade secret

### Kapa Ligation Buffer (5X)

#### **GHS Classification**

Not a hazardous substance or mixture.

#### Components

| Chemical name                    | CAS-No.    | Concentration (% w/w) |
|----------------------------------|------------|-----------------------|
| Poly(oxy-1,2-ethanediyl), .alpha | 25322-68-3 | >= 30 - < 50          |



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

| hydroomegahydroxy-                 |                  |            |
|------------------------------------|------------------|------------|
| 1,3-Propanediol, 2-amino-2-        | 77-86-1          | >= 1 - < 5 |
| (hydroxymethyl)-                   |                  |            |
| Actual concentration is withhold a | a a trada socrat |            |

Actual concentration is withheld as a trade secret

### KAPA PEG/NaCl

#### **GHS Classification**

Not a hazardous substance or mixture.

#### Components

| Chemical name                    | CAS-No.    | Concentration (% w/w) |
|----------------------------------|------------|-----------------------|
| Poly(oxy-1,2-ethanediyl), .alpha | 25322-68-3 | >= 20 - < 30          |
| hydroomegahydroxy-               |            |                       |

Actual concentration is withheld as a trade secret

### KAPA End Repair Enzyme Mix

#### **GHS Classification**

Not a hazardous substance or mixture.

#### Components

| Chemical name                                      | CAS-No. | Concentration (% w/w) |  |
|--|---------|-----------------------|--|
| glycerol   | 56-81-5 | >= 50 - < 70          |  |
| Actual concentration is withheld as a trade secret |         |                       |  |

Actual concentration is withheld as a trade secret

### KAPA HiFi HotStart ReadyMix (2X)

#### **GHS Classification**

Specific target organ toxicity : Category 1 - single exposure

#### Components

| Chemical name                                   | CAS-No.   | Concentration (% w/w) |
|---|-----------|-----------------------|
| glycerol  | 56-81-5   | >= 10 - < 20          |
| 1,3-Propanediol, 2-amino-2-<br>(hydroxymethyl)- | 77-86-1   | >= 1 - < 5            |
| Methanaminium, N,N,N-trimethyl-,                | 75-57-0   | >= 1 - < 5            |
| chloride (1:1)<br>DNA-dependent DNA polymerase  | 9012-90-2 | < 0.1                 |

Actual concentration is withheld as a trade secret

### KAPA Library Amplification Primer Premixes (10X)

#### **GHS Classification**

Not a hazardous substance or mixture.

#### Components

No hazardous ingredients



Version 3.0

**Revision Date:** 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

### KAPA Hyper Prep DNA Ligase

#### **GHS Classification**

Not a hazardous substance or mixture.

#### Components

| Chemical name                       | CAS-No.        | Concentration (% w/w) |
|-------------------------------------|----------------|-----------------------|
| glycerol                            | 56-81-5        | >= 50 - < 70          |
| Polynucleotide 5'-hydroxyl kinase   | 37211-65-7     | >= 0.1 - < 1          |
| Actual concentration is withheld as | a trade secret | ·                     |

Actual concentration is withheld as a trade secret

### KAPA A-Tailing Enzyme

#### **GHS Classification**

Not a hazardous substance or mixture.

#### **Components**

| Chemical name                                      | CAS-No.   | Concentration (% w/w) |  |  |
|--|-----------|-----------------------|--|--|
| glycerol   | 56-81-5   | >= 50 - < 70          |  |  |
| DNA-dependent DNA polymerase                       | 9012-90-2 | < 0.1                 |  |  |
| Actual concentration is withheld as a trade secret |           |                       |  |  |

Actual concentration is withheld as a trade secret

#### **SECTION 4. FIRST AID MEASURES**

| General advice :          | Move out of dangerous area.<br>Show this material safety data sheet to the doctor in atten-<br>dance.<br>Do not leave the victim unattended.  |
|---------------------------|---|
| If inhaled :              | Move to fresh air.<br>If unconscious, place in recovery position and seek medical<br>advice.<br>If symptoms persist, call a physician.  |
| In case of skin contact : | If skin irritation persists, call a physician.<br>If on skin, rinse well with water.<br>If on clothes, remove clothes.  |
| In case of eye contact :  | Immediately flush eye(s) with plenty of water.<br>Remove contact lenses.<br>Protect unharmed eye.<br>Keep eye wide open while rinsing.<br>If eye irritation persists, consult a specialist.   |
| If swallowed :            | Clean mouth with water and drink afterwards plenty of water.<br>Keep respiratory tract clear.<br>Do not give milk or alcoholic beverages.<br>Never give anything by mouth to an unconscious person.<br>If symptoms persist, call a physician.<br>Take victim immediately to hospital. |



| Vers<br>3.0 | ion   | Revision<br>03-25-20 |                             | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016  |
|-------------|---|----------------------|-----------------------------|--|
|             |   |                      | Rinse mouth with            | n water.   |
|             | Most important sympto<br>and effects, both acute<br>delayed |                      | None known.                 |  |
|             | Notes to physician  | :                    |                             | edure should be established in consultation esponsible for industrial medicine.                          |
| SEC         | TION 5. FIRE-FIGHTI   | NG MEAS              | URES                        |  |
|             | Suitable extinguishing                                      | media :              |                             | g measures that are appropriate to local cir-<br>the surrounding environment.                            |
|             | Unsuitable extinguishi<br>media                             | ng :                 | High volume wat             | er jet   |
|             | Specific hazards durin fighting                             | g fire :             | No information a            | vailable.  |
|             | Further information   | :                    | Use extinguishin            | ure for chemical fires.<br>g measures that are appropriate to local cir-<br>the surrounding environment. |
|             | Special protective equ<br>for fire-fighters                 | ipment :             | Wear self-contai necessary. | ned breathing apparatus for firefighting if  |

### SECTION 6. ACCIDENTAL RELEASE MEASURES

| Personal precautions, protec-<br>tive equipment and emer-<br>gency procedures | : | Use personal protective equipment.<br>Refer to protective measures listed in sections 7 and 8.   |
|---|---|--|
| Environmental precautions   | : | Prevent product from entering drains.<br>Prevent further leakage or spillage if safe to do so.<br>Local authorities should be advised if significant spillages<br>cannot be contained. |
| Methods and materials for containment and cleaning up                         | : | Soak up with inert absorbent material (e.g. sand, silica gel,<br>acid binder, universal binder, sawdust).<br>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.<br>Avoid exposure - obtain special instructions before use.<br>Avoid contact with skin and eyes.<br>For personal protection see section 8.<br>Smoking, eating and drinking should be prohibited in the ap-<br>plication area.<br>Dispose of rinse water in accordance with local and national |



| Versic<br>3.0 | n                                     | Revision I<br>03-25-202 |                            | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016  |
|---------------|---------------------------------------|-------------------------|----------------------------|--|
|               |                                       |                         | regulations.               |  |
| (             | Conditions for safe sto               | orage :                 | ce.<br>Electrical installa | ightly closed in a dry and well-ventilated pla-<br>tions / working materials must comply with<br>safety standards. |
|               | Further information on age conditions | stor- :                 | See label, packa           | ge insert or internal guidelines   |
|               | Further information on age stability  | stor- :                 | No decompositio            | n if stored and applied as directed.   |

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### KAPA End-Repair Buffer (10X)

#### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

### Kapa A-Tailing Buffer (10X)

#### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

#### Kapa Ligation Buffer (5X)

#### Ingredients with workplace control parameters

| Components   | CAS-No.    | Value type<br>(Form of<br>exposure) | Control parame-<br>ters / Permissible<br>concentration | Basis   |
|--|------------|-------------------------------------|--|---------|
| Poly(oxy-1,2-<br>ethanediyl), .alphahydro-<br>.omegahydroxy- | 25322-68-3 | TWA (aero-<br>sol)                  | 10 mg/m3   | US WEEL |

### KAPA PEG/NaCl

#### Ingredients with workplace control parameters

| Components   | CAS-No.    | Value type<br>(Form of<br>exposure) | Control parame-<br>ters / Permissible<br>concentration | Basis   |
|--|------------|-------------------------------------|--|---------|
| Poly(oxy-1,2-<br>ethanediyl), .alphahydro-<br>.omegahydroxy- | 25322-68-3 | TWA (aero-<br>sol)                  | 10 mg/m3   | US WEEL |

### KAPA End Repair Enzyme Mix

#### Ingredients with workplace control parameters

| Components | CAS-No. | Value type<br>(Form of<br>exposure)   | Control parame-<br>ters / Permissible<br>concentration | Basis    |
|------------|---------|---------------------------------------|--|----------|
| glycerol   | 56-81-5 | TWA (mist,<br>respirable<br>fraction) | 5 mg/m3  | OSHA Z-1 |
|            |         | TWA (mist,<br>total dust)             | 15 mg/m3   | OSHA Z-1 |



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

| TWA (Mist -<br>total dust)             | 10 mg/m3 | OSHA P0 |
|--|----------|---------|
| TWA (Mist -<br>respirable<br>fraction) | 5 mg/m3  | OSHA P0 |

### KAPA HiFi HotStart ReadyMix (2X)

Ingredients with workplace control parameters

| Components                        | CAS-No.   | Value type<br>(Form of<br>exposure)    | Control parame-<br>ters / Permissible<br>concentration | Basis   |
|-----------------------------------|-----------|--|--|---|
| glycerol                          | 56-81-5   | TWA (mist,<br>respirable<br>fraction)  | 5 mg/m3  | OSHA Z-1  |
|                                   |           | TWA (mist,<br>total dust)              | 15 mg/m3   | OSHA Z-1  |
|                                   |           | TWA (Mist -<br>total dust)             | 10 mg/m3   | OSHA P0   |
|                                   |           | TWA (Mist -<br>respirable<br>fraction) | 5 mg/m3  | OSHA P0   |
| DNA-dependent DNA poly-<br>merase | 9012-90-2 | IOEL                                   | 0.00006 mg/m3  | Roche In-<br>dustrial Hy-<br>giene Com-<br>mittee<br>(RIHC) |

### KAPA Library Amplification Primer Premixes (10X)

#### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

#### KAPA Hyper Prep DNA Ligase

#### Ingredients with workplace control parameters

| Components                           | CAS-No.    | Value type<br>(Form of<br>exposure)    | Control parame-<br>ters / Permissible<br>concentration | Basis   |
|--------------------------------------|------------|--|--|---|
| glycerol                             | 56-81-5    | TWA (mist,<br>respirable<br>fraction)  | 5 mg/m3  | OSHA Z-1  |
|                                      |            | TWA (mist,<br>total dust)              | 15 mg/m3   | OSHA Z-1  |
|                                      |            | TWA (Mist -<br>total dust)             | 10 mg/m3   | OSHA P0   |
|                                      |            | TWA (Mist -<br>respirable<br>fraction) | 5 mg/m3  | OSHA P0   |
| Polynucleotide 5'-hydroxyl<br>kinase | 37211-65-7 | IOEL                                   | 0.00006 mg/m3  | Roche In-<br>dustrial Hy-<br>giene Com-<br>mittee<br>(RIHC) |

### KAPA A-Tailing Enzyme



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

### Ingredients with workplace control parameters

| Components   | CAS-No.  | Value type<br>(Form of<br>exposure)                      | Control parame-<br>ters / Permissible<br>concentration | Basis   |
|--|--|--|--|---|
| glycerol   | 56-81-5  | TWA (mist,<br>respirable<br>fraction)                    | 5 mg/m3  | OSHA Z-1  |
|  |  | TWA (mist,<br>total dust)                                | 15 mg/m3   | OSHA Z-1  |
|  |  | TWA (Mist -<br>total dust)                               | 10 mg/m3   | OSHA P0   |
|  |  | TWA (Mist -<br>respirable<br>fraction)                   | 5 mg/m3  | OSHA P0   |
| DNA-dependent DNA poly-<br>merase                                    | 9012-90-2  | IOEL   | 0.00006 mg/m3  | Roche In-<br>dustrial Hy-<br>giene Com-<br>mittee<br>(RIHC) |
| Engineering measures   | : No data avai   | lable  |  |   |
| Personal protective equipm   | ent  |  |  |   |
| Respiratory protection   | : In the case of ved filter.                                 | of vapor formatio  | n use a respirator with                                | n an appro-   |
| Hand protection<br>Material<br>Break through time<br>Glove thickness | In case of co<br>Nitrile rubber<br>> 30 min<br>> 0.11 mm     | ontact through sp<br>r                                   | lashing:   |   |
| Material<br>Break through time<br>Glove thickness                    | In case of fu<br>: butyl-rubber<br>: > 480 min<br>: > 0.4 mm | Il contact:  |  |   |
| Remarks<br>Eye protection  | Replace torr<br>: Eye wash bo<br>Tightly fitting             | or punctured glo<br>ottle with pure wa<br>safety goggles |  |   |

| Skin and body protection | : | Impervious clothing<br>Choose body protection according to the amount and con-<br>centration of the dangerous substance at the work place. |
|--------------------------|---|--|
| Hygiene measures         | : | When using do not eat or drink.<br>When using do not smoke.<br>Wash hands before breaks and at the end of workday.                         |



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

## KAPA End-Repair Buffer (10X)

| Appearance  | : | liquid                        |
|---|---|-------------------------------|
| Color   | : | colorless                     |
| Odor  | : | odorless                      |
| Odor Threshold                                      | : | No data available             |
| рН  | : | 7.5                           |
| 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<br>flammability limit | : | No data available             |
| Lower explosion limit / Lower<br>flammability limit | : | No data available             |
| Vapor pressure                                      | : | No data available             |
| Relative vapor density                              | : | No data available             |
| Relative density                                    | : | No data available             |
| Density   | : | 1.04 g/cm3                    |
| Solubility(ies)<br>Water solubility                 | : | completely miscible           |
| Solubility in other solvents                        | : | No data available             |
| Partition coefficient: n-<br>octanol/water          | : | No data available             |
| Autoignition temperature                            | : | No data available             |



## KAPA LTP Library Preparation Kit

| Version<br>3.0                  | Revision Date:<br>03-25-2022 | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |
|---------------------------------|------------------------------|---|
| Decomposition tempe             | erature : No data availa     | ble   |
| Viscosity<br>Viscosity, dynamic | : No data availa             | ble   |
| Viscosity, kinemat              | ic : No data availa          | ble   |
| Oxidizing properties            | : The substance              | or mixture is not classified as oxidizing.                        |

## Kapa A-Tailing Buffer (10X)

| Appearance  | : | liquid                        |
|---|---|-------------------------------|
| Color   | : | colorless                     |
| Odor  | : | odorless                      |
| Odor Threshold                                      | : | No data available             |
| рН  | : | 8.0                           |
| 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<br>flammability limit | : | No data available             |
| Lower explosion limit / Lower<br>flammability limit | : | No data available             |
| Vapor pressure                                      | : | No data available             |
| Relative vapor density                              | : | No data available             |
| Relative density                                    | : | No data available             |
| Density   | : | 1.040 g/cm3                   |
| Solubility(ies)<br>Water solubility                 | : | completely miscible           |



## KAPA LTP Library Preparation Kit

| Version | Revision Date: |
|---------|----------------|
| 3.0     | 03-25-2022     |
|         |                |

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

| Solubility in other solvents               | : No data available |
|--|---------------------|
| Partition coefficient: n-<br>octanol/water | : No data available |
| Autoignition temperature                   | : No data available |
| Decomposition temperature                  | : No data available |
| Viscosity<br>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.

## Kapa Ligation Buffer (5X)

| Appearance  | : | liquid                        |
|---|---|-------------------------------|
| Color   | : | colorless                     |
| Odor  | : | odorless                      |
| Odor Threshold                                      | : | No data available             |
| рН  | : | 7.6                           |
| 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<br>flammability limit | : | No data available             |
| Lower explosion limit / Lower<br>flammability limit | : | No data available             |



# KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

| Vapor pressure                             | : | No data available  |
|--|---|--|
| Relative vapor density                     | : | No data available  |
| Relative density                           | : | No data available  |
| Density                                    | : | 1.040 g/cm3  |
| Solubility(ies)<br>Water solubility        | : | No data available  |
| Solubility in other solvents               | : | No data available  |
| Partition coefficient: n-<br>octanol/water | : | No data available  |
| Autoignition temperature                   | : | No data available  |
| Decomposition temperature                  | : | No data available  |
| Viscosity<br>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. |

## KAPA PEG/NaCl

| Appearance                  | : | liquid            |
|-----------------------------|---|-------------------|
| Color                       | : | colorless         |
| Odor                        | : | odorless          |
| Odor Threshold              | : | No data available |
| рН                          | : | 8.1               |
| Melting point/range         | : | No data available |
| Boiling point/boiling range | : | No data available |
|                             |   |                   |
| Flash point                 | : | does not flash    |
| Evaporation rate            | : | No data available |



## KAPA LTP Library Preparation Kit

| Version<br>3.0                             | Revision E<br>03-25-202 |                  | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |  |  |
|--|-------------------------|------------------|---|--|--|
| Flammability (liquids)                     | :                       | Does not sustai  | Does not sustain combustion.                                      |  |  |
|  |                         | The product is i | not flammable.  |  |  |
| Self-ignition                              | :                       | Not applicable   |   |  |  |
| Upper explosion limit / flammability limit | Upper :                 | No data availab  | ble   |  |  |
| Lower explosion limit / flammability limit | Lower :                 | No data availab  | ble   |  |  |
| Vapor pressure                             | :                       | No data availab  | ble   |  |  |
| Relative vapor density                     | :                       | No data availab  | ble   |  |  |
| Relative density                           | :                       | No data availab  | ble   |  |  |
| Density                                    | :                       | 1.120 g/cm3      |   |  |  |
| Solubility(ies)<br>Water solubility        | :                       | completely mise  | cible   |  |  |
| Solubility in other se                     | olvents :               | No data availab  | ble   |  |  |
| Partition coefficient: n-<br>octanol/water | :                       | No data availab  | ble   |  |  |
| Autoignition temperatu                     | re :                    | No data availab  | ble   |  |  |
| Decomposition temper                       | ature :                 | No data availab  | ble   |  |  |
| Viscosity<br>Viscosity, dynamic            | :                       | No data availab  | ble   |  |  |
| Viscosity, kinematic                       | ; ;                     | No data availab  | ble   |  |  |
| Explosive properties                       | :                       | Not explosive    |   |  |  |
| Oxidizing properties                       | :                       | The substance    | or mixture is not classified as oxidizing                         |  |  |

## KAPA End Repair Enzyme Mix

| Appearance     | : | liquid            |
|----------------|---|-------------------|
| Color          | : | colorless         |
| Odor           | : | odorless          |
| Odor Threshold | : | No data available |



## KAPA LTP Library Preparation Kit

| Vers<br>3.0 | ion   | Revision [<br>03-25-202 |   |                               | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |  |  |
|-------------|---|-------------------------|---|-------------------------------|---|--|--|
|             | рН  |                         | : | 6.0                           |   |  |  |
|             | Melting point/range                           |                         | : | No data availab               | le  |  |  |
|             | Boiling point/boiling ra                      | nge                     | : | No data availab               | le  |  |  |
|             | Flash point                                   |                         | : | does not flash                |   |  |  |
|             | Evaporation rate                              |                         | : | No data availab               | le  |  |  |
|             | Flammability (liquids)                        |                         | : | Does not sustai               | n combustion.   |  |  |
|             |   |                         |   | The product is not flammable. |   |  |  |
|             | Self-ignition                                 |                         | : | Not applicable                |   |  |  |
|             | Upper explosion limit /<br>flammability limit | Upper                   | : | No data availab               | le  |  |  |
|             | Lower explosion limit / flammability limit    | Lower                   | : | No data availab               | le  |  |  |
|             | Vapor pressure                                |                         | : | No data availab               | le  |  |  |
|             | Relative vapor density                        | ,                       | : | No data availab               | le  |  |  |
|             | Relative density                              |                         | : | No data availab               | le  |  |  |
|             | Density                                       |                         | : | 1.148 g/cm3                   |   |  |  |
|             | Solubility(ies)<br>Water solubility           |                         | : | completely miso               | cible   |  |  |
|             | Solubility in other s                         | olvents                 | : | No data availab               | le  |  |  |
|             | Partition coefficient: n-<br>octanol/water    |                         | : | No data availab               | le  |  |  |
|             | Autoignition temperatu                        | ıre                     | : | No data availab               | le  |  |  |
|             | Decomposition tempe                           | rature                  | : | No data availab               | le  |  |  |
|             | Viscosity<br>Viscosity, dynamic               |                         | : | No data availab               | le  |  |  |
|             | Viscosity, kinematio                          | C                       | : | No data availab               | le  |  |  |
|             | Explosive properties                          |                         | : | Not explosive                 |   |  |  |
|             | Oxidizing properties                          |                         | : | The substance                 | or mixture is not classified as oxidizing                         |  |  |
|             |   |                         |   |                               |   |  |  |

## KAPA HiFi HotStart ReadyMix (2X)



# KAPA LTP Library Preparation Kit

| Vers<br>3.0 | ion   | Revision E<br>03-25-202 |         | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |
|-------------|---|-------------------------|---------|---|
|             | Appearance                                    | :                       | liquid  |   |
|             | Color   | :                       | colorle | SS  |
|             | Odor  | :                       | odorle  | S   |
|             | Odor Threshold                                | :                       | No dat  | a available   |
|             | рН  | :                       | 8.7     |   |
|             | Melting point/range                           | :                       | No dat  | a available   |
|             | Boiling point/boiling ra                      | nge :                   | No dat  | a available   |
|             | Flash point                                   | :                       | does n  | ot flash  |
|             | Evaporation rate                              | :                       | No dat  | a available   |
|             | Flammability (solid, ga                       | s) :                    | Does r  | ot sustain combustion.  |
|             | Flammability (liquids)                        | :                       | Does r  | ot sustain combustion.  |
|             | Self-ignition                                 | :                       | Not ap  | blicable  |
|             | Upper explosion limit /<br>flammability limit | Upper :                 | No dat  | a available   |
|             | Lower explosion limit / flammability limit    | Lower :                 | No dat  | a available   |
|             | Vapor pressure                                | :                       | No dat  | a available   |
|             | Relative vapor density                        | :                       | No dat  | a available   |
|             | Relative density                              | :                       | No dat  | a available   |
|             | Density                                       | :                       | 1.044 ( | ı/cm3   |
|             | Solubility(ies)<br>Water solubility           | :                       | comple  | tely miscible   |
|             | Solubility in other s                         | olvents :               | No dat  | a available   |
|             | Partition coefficient: n-<br>octanol/water    | :                       | No dat  | a available   |
|             | Autoignition temperatu                        | ire :                   | No dat  | a available   |
|             | Decomposition temper                          | rature :                | No dat  | a available   |
|             | Viscosity<br>Viscosity, dynamic               | :                       | No dat  | a available   |



## **KAPA LTP Library Preparation Kit**

| Version<br>3.0                        | Revision I<br>03-25-202 |                                  | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |
|---------------------------------------|-------------------------|----------------------------------|---|
| Viscosity, kine<br>Explosive properti |                         | No data availab<br>Not explosive | le  |
| Oxidizing properti                    | es :                    | The substance of                 | or mixture is not classified as oxidizing.                        |

### KAPA Library Amplification Primer Premixes (10X)

| Appearance                                       | : | liquid                       |
|--|---|------------------------------|
| Color  | : | colorless                    |
| Odor   | : | odorless                     |
| Odor Threshold                                   | : | No data available            |
| рН   | : | 7.7                          |
| Melting point/range                              | : | No data available            |
| Boiling point/boiling range                      | : | ca. 212 °F / 100 °C          |
| 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  | : | 0.996 g/cm3                  |
| Solubility(ies)<br>Water solubility              | : | completely miscible          |



## KAPA LTP Library Preparation Kit

| Vers<br>3.0 | ion  | Revision [<br>03-25-202 |                 | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |
|-------------|--|-------------------------|-----------------|---|
|             | Solubility in other s                      | olvents :               | No data availab | le  |
|             | Partition coefficient: n-<br>octanol/water | :                       | No data availab | le  |
|             | Autoignition temperatu                     | ire :                   | No data availab | le  |
|             | Decomposition temper                       | rature :                | No data availab | le  |
|             | Viscosity<br>Viscosity, dynamic            | :                       | No data availab | le  |
|             | Viscosity, kinematio                       | <b>c</b> :              | No data availab | le  |
|             | Explosive properties                       | :                       | Not explosive   |   |
|             | Oxidizing properties                       | :                       | The substance   | or mixture is not classified as oxidizing.                        |

## KAPA Hyper Prep DNA Ligase

| Appearance  | : | liquid                        |
|---|---|-------------------------------|
| Color   | : | colorless                     |
| Odor  | : | odorless                      |
| Odor Threshold                                      | : | No data available             |
| рН  | : | 6.5                           |
| 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<br>flammability limit | : | No data available             |
| Lower explosion limit / Lower flammability limit    | : | No data available             |



## KAPA LTP Library Preparation Kit

| Version<br>3.0                      | Revision<br>03-25-202 |                  | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |
|-------------------------------------|-----------------------|------------------|---|
| Vapor pressure                      | :                     | No data availabl | e   |
| Relative vapor dens                 | sity :                | No data availabl | e   |
| Relative density                    | :                     | No data availabl | e   |
| Density                             | :                     | 1.148 g/cm3      |   |
| Solubility(ies)<br>Water solubility | :                     | completely misc  | ible  |
| Solubility in othe                  | er solvents :         | No data availabl | e   |
| Partition coefficient octanol/water | :n- :                 | No data availabl | e   |
| Autoignition temper                 | rature :              | No data availabl | e   |
| Decomposition tem                   | perature :            | No data availabl | e   |
| Viscosity<br>Viscosity, dynan       | nic :                 | No data availabl | e   |
| Viscosity, kinem                    | atic :                | No data availabl | e   |
| Explosive propertie                 | s :                   | Not explosive    |   |
| Oxidizing properties                | s :                   | The substance c  | or mixture is not classified as oxidizing                         |

### KAPA A-Tailing Enzyme

| Appearance                  | : | liquid                       |
|-----------------------------|---|------------------------------|
| Color                       | : | colorless                    |
| Odor                        | : | odorless                     |
| Odor Threshold              | : | No data available            |
| рН                          | : | 6.0                          |
| 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. |



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

|   |   | The product is not flammable.                            |
|---|---|--|
| Self-ignition                                       | : | Not applicable   |
| Upper explosion limit / Upper<br>flammability limit | : | No data available  |
| Lower explosion limit / Lower<br>flammability limit | : | No data available  |
| Vapor pressure                                      | : | No data available  |
| Relative vapor density                              | : | No data available  |
| Relative density                                    | : | No data available  |
| Density   | : | 1.148 g/cm3  |
| Solubility(ies)<br>Water solubility                 | : | completely miscible                                      |
| Solubility in other solvents                        | : | No data available  |
| Partition coefficient: n-<br>octanol/water          | : | No data available  |
| Autoignition temperature                            | : | No data available  |
| Decomposition temperature                           | : | No data available  |
| Viscosity<br>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. |

#### SECTION 10. STABILITY AND REACTIVITY

| Reactivity                              | : | No dangerous reaction known under conditions of normal use.  |
|---|---|--|
| Chemical stability                      | : | Stable under normal conditions.  |
| Possibility of hazardous reac-<br>tions | : | No dangerous reaction known under conditions of normal use.<br>No decomposition if stored and applied as directed. |
| Incompatible materials                  | : | Strong oxidizing agents  |
| Hazardous decomposition products        | : | No decomposition if stored and applied as directed.  |



## KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### SECTION 11. TOXICOLOGICAL INFORMATION

### KAPA End-Repair Buffer (10X)

#### Acute toxicity

Not classified based on available information.

#### Components:

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

| Acute oral toxicity   | : | LD50 (Rat, female): > 5,000 mg/kg<br>Method: OECD Test Guideline 425<br>GLP: yes          |
|-----------------------|---|---|
| Acute dermal toxicity | : | LD50 (Rat, male and female): > 5,000 mg/kg<br>Method: OECD Test Guideline 402<br>GLP: yes |

#### 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel-:

| Acute oral toxicity | : | LD50 (Rat, female): > 300 - < 2,000 mg/kg<br>Method: OECD Test Guideline 423<br>GLP: yes |
|---------------------|---|--|
|                     |   |  |

| Acute toxicity (other routes of | : |  |
|---------------------------------|---|--|
| administration)                 |   |  |

Symptoms: May cause cardiac arrhythmia., Convulsions, Vomiting

#### Skin corrosion/irritation

Not classified based on available information.

#### Components:

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

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

#### 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel-:

| Species<br>Exposure time<br>Method<br>Result<br>GLP | : | human keratinocytes<br>4 h<br>OECD Test Guideline 431<br>Irritating to skin.<br>yes                    |
|---|---|--|
| Species<br>Exposure time<br>Method<br>Result<br>GLP |   | reconstructed human epidermis (RhE)<br>60 min<br>OECD Test Guideline 439<br>Irritating to skin.<br>yes |



## KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### Serious eye damage/eye irritation

Causes serious eye irritation.

#### **Components:**

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

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

#### 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel-:

| Species           | : | Chicken eye                              |
|-------------------|---|--|
| Result            | : | Risk of serious damage to eyes.          |
| Exposure time     | : | 10 s                                     |
| Method            | : | OECD Test Guideline 438                  |
| GLP               | : | yes                                      |
|                   |   |  |
| Species           | : | Human                                    |
| Species<br>Result | : | Human<br>Risk of serious damage to eyes. |
|                   | : |  |
| Result            |   | Risk of serious damage to eyes.          |

#### Respiratory or skin sensitization

#### Skin sensitization

Not classified based on available information.

#### **Respiratory sensitization**

Not classified based on available information.

#### **Components:**

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

| Test Type<br>Assessment<br>GLP<br>Remarks        | : | Direct Peptide Reactivity Assay (DPRA)<br>Does not cause skin sensitization.<br>yes<br>Based on data from similar materials<br>Expert judgment |
|--|---|--|
| Test Type<br>Species<br>Method<br>GLP<br>Remarks | : | Buehler Test<br>Guinea pig<br>OECD Test Guideline 406<br>no<br>Based on data from similar materials  |
| Test Type<br>Species<br>GLP<br>Remarks           | : | Intracutaneous test<br>Guinea pig<br>no<br>Based on data from similar materials  |

#### 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel-:

| Test Type | : | Local lymph node assay (LLNA) |
|-----------|---|-------------------------------|
|-----------|---|-------------------------------|



Version 3.0 Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

Species: MouseAssessment: Does not cause skin sensitization.Method: OECD Test Guideline 429GLP: yes

#### Germ cell mutagenicity

Not classified based on available information.

#### **Components:**

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

| Genotoxicity in vitro | : Test Type: Chromosome aberration test in vitro<br>Test system: Chinese hamster lung cells<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 473<br>Result: negative<br>GLP: yes  |
|-----------------------|--|
|                       | Test Type: In vitro mammalian cell gene mutation test<br>Test system: Chinese hamster ovary cells<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 476<br>Result: negative<br>GLP: yes  |
|                       | Test Type: Microbial mutagenesis assay (Ames test)<br>Test system: Salmonella typhimurium<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 471<br>Result: negative<br>GLP: yes<br>Remarks: Based on data from similar materials |
|                       |  |

#### 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel-:

| Genotoxicity in vitro : | Test Type: Microbial mutagenesis assay (Ames test)<br>Test system: Salmonella typhimurium<br>Metabolic activation: with and without metabolic activation<br>Method: Mutagenicity (Salmonella typhimurium - reverse mu-<br>tation assay)<br>Result: negative<br>GLP: yes |
|-------------------------|---|
|                         | Test Type: Microbial mutagenesis assay (Ames test)<br>Test system: Escherichia coli<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 471<br>Result: negative<br>GLP: yes   |

#### Carcinogenicity

Not classified based on available information. IARC No ingredient of this product p

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.



|                                  | orary Prepar   |  |  |  |
|----------------------------------|--|--|--|--|
| sion                             | Revision<br>03-25-20   |  | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016  |  |
| OSHA                             | No component of this product present at levels greater than or equal to 0.1% i 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<br>Not classified I | toxicity<br>based on available   | e information.   |  |  |
| Components:                      |  |  |  |  |
| 1,3-Propaned                     | iol, 2-amino-2-(hy   | ydroxymethyl)-   | :  |  |
| Effects on ferti                 | lity :   | Species: Rat,<br>Application R<br>Dose: 100, 30<br>General Toxic<br>General Toxic<br>Method: OEC   | productive and developmental toxicity study<br>male and female<br>oute: Oral<br>00, 1000 mg/kg bw/day<br>city Parent: NOAEL: > 1,000 mg/kg body weight<br>city F1: NOAEL: > 1,000 mg/kg body weight<br>D Test Guideline 421<br>al testing did not show any effects on fertility. |  |
| Effects on feta                  | I development :  | Species: Rat,<br>Strain: wistar<br>Application R<br>Dose: 100, 30<br>General Toxid<br>weight<br>Development<br>Method: OEC<br>Result: No eff<br>GLP: yes | female   |  |

### STOT-single exposure

Not classified based on available information.

### STOT-repeated exposure

Not classified based on available information.

#### Repeated dose toxicity

#### Components:

| 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 |



## KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### Aspiration toxicity

Not classified based on available information.

### Kapa A-Tailing Buffer (10X)

#### Acute toxicity

Not classified based on available information.

#### Components:

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

| Acute oral toxicity   | : | LD50 (Rat, female): > 5,000 mg/kg<br>Method: OECD Test Guideline 425<br>GLP: yes          |
|-----------------------|---|---|
| Acute dermal toxicity | : | LD50 (Rat, male and female): > 5,000 mg/kg<br>Method: OECD Test Guideline 402<br>GLP: yes |

#### Skin corrosion/irritation

Not classified based on available information.

#### Components:

#### 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.

#### **Components:**

#### 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.



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### Components:

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

| Test Type<br>Assessment<br>GLP<br>Remarks        | : : : | Direct Peptide Reactivity Assay (DPRA)<br>Does not cause skin sensitization.<br>yes<br>Based on data from similar materials<br>Expert judgment |
|--|-------|--|
| Test Type<br>Species<br>Method<br>GLP<br>Remarks |       | Buehler Test<br>Guinea pig<br>OECD Test Guideline 406<br>no<br>Based on data from similar materials  |
| Test Type<br>Species<br>GLP<br>Remarks           | ::    | Intracutaneous test<br>Guinea pig<br>no<br>Based on data from similar materials  |

#### Germ cell mutagenicity

Not classified based on available information.

#### Components:

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

| Genotoxicity in vitro : | Test Type: Chromosome aberration test in vitro<br>Test system: Chinese hamster lung cells<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 473<br>Result: negative<br>GLP: yes  |
|-------------------------|--|
|                         | Test Type: In vitro mammalian cell gene mutation test<br>Test system: Chinese hamster ovary cells<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 476<br>Result: negative<br>GLP: yes  |
|                         | Test Type: Microbial mutagenesis assay (Ames test)<br>Test system: Salmonella typhimurium<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 471<br>Result: negative<br>GLP: yes<br>Remarks: Based on data from similar materials |

#### Carcinogenicity

Not classified based on available information.

- **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.



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

**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:**

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

| Effects on fertility :         | Test Type: reproductive and developmental toxicity study<br>Species: Rat, male and female<br>Application Route: Oral<br>Dose: 100, 300, 1000 mg/kg bw/day<br>General Toxicity Parent: NOAEL: > 1,000 mg/kg body weight<br>General Toxicity F1: NOAEL: > 1,000 mg/kg body weight<br>Method: OECD Test Guideline 421<br>Result: Animal testing did not show any effects on fertility.<br>GLP: yes        |
|--------------------------------|--|
| Effects on fetal development : | Test Type: Pre-natal<br>Species: Rat, female<br>Strain: wistar<br>Application Route: Oral<br>Dose: 100, 300, 1000 mg/kg bw/day<br>General Toxicity Maternal: NOAEL: > 1,000 mg/kg body<br>weight<br>Developmental Toxicity: NOAEL: 1,000 mg/kg body weight<br>Method: OECD Test Guideline 414<br>Result: No effects on fetal development.<br>GLP: yes<br>Remarks: Based on data from similar materials |

#### STOT-single exposure

Not classified based on available information.

#### STOT-repeated exposure

Not classified based on available information.

#### **Repeated dose toxicity**

#### **Components:**

| Species<br>NOAEL<br>LOAEL<br>Application Route<br>Exposure time<br>Number of exposures<br>Dose<br>Method<br>GLP |   | OECD Test Guideline 408<br>yes       |
|---|---|--------------------------------------|
| Remarks   | : | Based on data from similar materials |
|   |   |                                      |



## KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### Aspiration toxicity

Not classified based on available information.

### Kapa Ligation Buffer (5X)

#### Acute toxicity

Not classified based on available information.

### Components:

#### Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-:

| Acute oral toxicity          | :   | LD50 Oral (Rat): 28,000 mg/kg  |
|------------------------------|-----|--|
| Acute inhalation toxicity    | :   | Acute toxicity estimate: 5.1 mg/l<br>Test atmosphere: dust/mist<br>Method: Expert judgment |
| Acute dermal toxicity        | :   | LD50 Dermal (Rabbit): 20,000 mg/kg   |
| 1,3-Propanediol, 2-amino-2-( | (hy | droxymethyl)-:   |
| Acute oral toxicity          | :   | LD50 (Rat, female): > 5,000 mg/kg<br>Method: OECD Test Guideline 425<br>GLP: yes           |
| Acute dermal toxicity        | :   | LD50 (Rat, male and female): > 5,000 mg/kg<br>Method: OECD Test Guideline 402<br>GLP: yes  |

#### Skin corrosion/irritation

Not classified based on available information.

#### **Components:**

#### 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.

#### Components:

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



## KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### Respiratory or skin sensitization

#### Skin sensitization

Not classified based on available information.

#### **Respiratory sensitization**

Not classified based on available information.

#### **Components:**

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

| • •  |   |  |
|--|---|--|
| Test Type<br>Assessment<br>GLP<br>Remarks        | : | Direct Peptide Reactivity Assay (DPRA)<br>Does not cause skin sensitization.<br>yes<br>Based on data from similar materials<br>Expert judgment |
| Test Type<br>Species<br>Method<br>GLP<br>Remarks |   | Buehler Test<br>Guinea pig<br>OECD Test Guideline 406<br>no<br>Based on data from similar materials  |
| Test Type<br>Species<br>GLP<br>Remarks           | : | Intracutaneous test<br>Guinea pig<br>no<br>Based on data from similar materials  |

#### Germ cell mutagenicity

Not classified based on available information.

#### Components:

| Genotoxicity in vitro | : Test Type: Chromosome aberration test in vitro<br>Test system: Chinese hamster lung cells<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 473<br>Result: negative<br>GLP: yes  |
|-----------------------|--|
|                       | Test Type: In vitro mammalian cell gene mutation test<br>Test system: Chinese hamster ovary cells<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 476<br>Result: negative<br>GLP: yes  |
|                       | Test Type: Microbial mutagenesis assay (Ames test)<br>Test system: Salmonella typhimurium<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 471<br>Result: negative<br>GLP: yes<br>Remarks: Based on data from similar materials |



| Version | Revision Date: | Date of last issue: 10-11-2021  |
|---------|----------------|---------------------------------|
| 3.0     | 03-25-2022     | Date of first issue: 05-18-2016 |

#### Carcinogenicity

Not classified based on available information.

- **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:

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

| Effects on fertility         | : | Test Type: reproductive and developmental toxicity study<br>Species: Rat, male and female<br>Application Route: Oral<br>Dose: 100, 300, 1000 mg/kg bw/day<br>General Toxicity Parent: NOAEL: > 1,000 mg/kg body weight<br>General Toxicity F1: NOAEL: > 1,000 mg/kg body weight<br>Method: OECD Test Guideline 421<br>Result: Animal testing did not show any effects on fertility.<br>GLP: yes        |  |  |  |  |
|------------------------------|---|--|--|--|--|--|
| Effects on fetal development | : | Test Type: Pre-natal<br>Species: Rat, female<br>Strain: wistar<br>Application Route: Oral<br>Dose: 100, 300, 1000 mg/kg bw/day<br>General Toxicity Maternal: NOAEL: > 1,000 mg/kg body<br>weight<br>Developmental Toxicity: NOAEL: 1,000 mg/kg body weight<br>Method: OECD Test Guideline 414<br>Result: No effects on fetal development.<br>GLP: yes<br>Remarks: Based on data from similar materials |  |  |  |  |

#### STOT-single exposure

Not classified based on available information.

#### STOT-repeated exposure

Not classified based on available information.

#### Repeated dose toxicity

#### Components:

| Species           | : | Rat, male and female |
|-------------------|---|----------------------|
| NOAEL             | : | 250 mg/kg            |
| LOAEL             | : | 1,000 mg/kg          |
| Application Route | : | Oral                 |



| Version |  |
|---------|--|
| 3.0     |  |

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

| 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.

### KAPA PEG/NaCl

#### Acute toxicity

Not classified based on available information.

#### Components:

| Poly(oxy-1,2-ethanediyl), .al | lpha | ahydroomegahydroxy-:  |
|-------------------------------|------|---|
| Acute oral toxicity           | :    | LD50 Oral (Rat): > 50,000 mg/kg   |
| Acute inhalation toxicity     | :    | Acute toxicity estimate: > 30 mg/l<br>Test atmosphere: dust/mist<br>Method: Expert judgment |
| Acute dermal toxicity         | :    | LD50 Dermal (Rabbit): > 20,000 mg/kg  |

#### Skin corrosion/irritation

Not classified based on available information.

#### **Components:**

### Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-:

Remarks : This information is not available.

#### Serious eye damage/eye irritation

Not classified based on available information.

#### Components:

#### Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-: Remarks : This information is not available.

#### 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.



| APA LTP I                        | Library Preparation Ki   | t   |
|----------------------------------|--|---|
| rsion                            | Revision Date:<br>03-25-2022   | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016                               |
| IARC                             |  | t present at levels greater than or equal to 0.1% is ble or confirmed human carcinogen by IARC. |
| OSHA                             | No component of this produce on OSHA's list of regulated of                    | ct present at levels greater than or equal to 0.1% carcinogens.                                 |
| NTP                              | No ingredient of this product identified as a known or anti-                   | t present at levels greater than or equal to 0.1% is cipated carcinogen by NTP.                 |
|                                  | <b>ive toxicity</b><br>ed based on available informatior<br><b>le exposure</b> | ٦.  |
| -                                | ed based on available information  | ٦.  |
| Polv(oxv-1                       | ,2-ethanediyl), .alphahydroo   | megahvdroxv-:   |
| Assessmen                        | t : The subst  | tance or mixture is not classified as specific targer icant, single exposure.                   |
| •                                | ated exposure<br>ed based on available informatior                             |   |
| Componen                         |  | 1.  |
|                                  |  |   |
| Assessmen                        |  | tance or mixture is not classified as specific targe icant, repeated exposure.                  |
| Aspiration<br>Not classifie      | toxicity<br>ed based on available informatior                                  | ٦.  |
| <u>Componen</u>                  | its:   |   |
| <b>Poly(oxy-1</b><br>No data ava | , <b>2-ethanediyl), .alphahydroo</b><br>ailable                                | megahydroxy-:   |
| APA End R                        | epair Enzyme Mix   |   |
| Acuto toxic                      | -  |   |
| Acute toxic                      | ,ity   |   |

Not classified based on available information.

#### Components:

| <b>glycerol:</b><br>Acute oral toxicity | : | LC50 (Mouse): 11,500 mg/kg  |
|---|---|---|
| Acute inhalation toxicity               | : | LC50 (Rat, male): 275000 mg/m3<br>Exposure time: 7 h<br>Test atmosphere: vapor<br>GLP: no<br>Assessment: The component/mixture is minimally toxic after<br>short term inhalation. |



## KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

Acute dermal toxicity : LD50 (Guinea pig, male and female): 56,750 mg/kg GLP: no

#### Skin corrosion/irritation

Not classified based on available information.

#### Components:

#### glycerol:

| n irritation |
|--------------|
|              |
|              |

#### Serious eye damage/eye irritation

Not classified based on available information.

#### **Components:**

#### glycerol:

| : | Rabbit            |
|---|-------------------|
| : | No eye irritation |
| : | 7 d               |
| : | no                |
|   | :                 |

#### 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

#### Germ cell mutagenicity

Not classified based on available information.

#### **Components:**

glycerol:

| Genotoxicity in vitro | : | Test Type: Microbial mutagenesis assay (Ames test)<br>Test system: Salmonella typhimurium<br>Metabolic activation: with and without metabolic activation<br>Result: negative<br>GLP: No information available. |
|-----------------------|---|--|
|                       |   | Test Type: In vitro mammalian cell gene mutation test<br>Test system: Chinese hamster ovary cells<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 476            |



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

Result: negative GLP: No information available.

#### Carcinogenicity

Not classified based on available information.

#### Components:

| <b>glycerol:</b><br>Species<br>Application Rou<br>Exposure time<br>GLP<br>Remarks | ute :<br>:<br>:  | Rat, male and female<br>Oral<br>2 Years<br>No information available.<br>No ingredient of this product present at levels greater than or<br>equal to 0.1% is identified as probable, possible or confirmed<br>human carcinogen by IARC. |  |
|---|--|--|--|
| IARC  |  | this product present at levels greater than or equal to 0.1% is bable, 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<br>Not classified b<br>Components:<br>glycerol:<br>Effects on fertil | based on available   | Test Type: Two-generation study<br>Species: Rat, male and female<br>Application Route: Oral<br>Dose: 2000 mg/kg bw/day<br>Fertility: NOAEL: 2,000 mg/kg body weight<br>GLP: no   |  |
|   |  | GLP: no  |  |

### STOT-single exposure

Not classified based on available information.

#### STOT-repeated exposure

Not classified based on available information.



## KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### **Repeated dose toxicity**

#### Components:

#### glycerol:

| Species<br>NOAEL<br>NOAEL<br>Application Route<br>Exposure time<br>Number of exposures<br>Dose<br>GLP  | <ul> <li>Rat, male and female</li> <li>4580 mg/kg</li> <li>4,580 mg/kg</li> <li>Oral</li> <li>90 d</li> <li>daily</li> <li>4580 - 25,800 mg/kg/day</li> <li>no</li> </ul>                             |
|--|---|
| Species<br>Application Route<br>Test atmosphere<br>Exposure time<br>Number of exposures<br>Dose<br>GLP | <ul> <li>Rat, male and female</li> <li>Inhalation</li> <li>dust/mist</li> <li>13 Weeks</li> <li>6 hours/day, 5 days/week</li> <li>33, 165 and 660 mg/m3</li> <li>No information available.</li> </ul> |
| Species<br>NOAEL<br>NOAEL<br>Application Route<br>Exposure time<br>Number of exposures<br>Dose<br>GLP  | <ul> <li>Rat</li> <li>5040 mg/kg</li> <li>5,040 mg/kg</li> <li>dermal</li> <li>45 Weeks</li> <li>8 hours/day, 5 days/week</li> <li>0.5-4.0 ml/kg</li> <li>no</li> </ul>                               |
| Repeated dose toxicity -<br>Assessment   | : Mild eye irritant, Mild respiratory irritant, No skin irritation  |

#### Aspiration toxicity

Not classified based on available information.

### KAPA HiFi HotStart ReadyMix (2X)

#### 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<br>Exposure time: 7 h<br>Test atmosphere: vapor<br>GLP: no<br>Assessment: The component/mixture is minimally toxic after<br>short term inhalation. |
| Acute dermal toxicity     | : | LD50 (Guinea pig, male and female): 56,750 mg/kg  |



# KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### GLP: no

| <b>1,3-Propanediol, 2-aminc</b><br>Acute oral toxicity  | : LD50 (Rat, female): > 5,000 mg/kg   |
|---|---|
| Note of a toxicity  | Method: OECD Test Guideline 425   |
|   | GLP: yes  |
|   | ·   |
| Acute dermal toxicity   | : LD50 (Rat, male and female): > 5,000 mg/kg<br>Method: OECD Test Guideline 402   |
|   | GLP: yes  |
|   |   |
| Methanaminium, N,N,N-t  | rimethyl-, chloride (1:1):  |
| 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  |
| Skin corrosion/irritation   |   |
| Not classified based on av  | vailable information  |
| Components:   |   |
| glycerol:   |   |
|   |   |
| Species   | : Rabbit  |
| Species<br>Exposure time  | : Rabbit<br>: 24 h  |
| Exposure time<br>Result   |   |
| Exposure time<br>Result   | : 24 h  |
| Exposure time<br>Result<br>GLP  | <ul><li>24 h</li><li>No skin irritation</li><li>no</li></ul>  |
| Exposure time<br>Result<br>GLP<br><b>1,3-Propanediol, 2-aminc</b>   | <ul><li>24 h</li><li>No skin irritation</li><li>no</li></ul>  |
| Exposure time<br>Result<br>GLP<br><b>1,3-Propanediol, 2-amino</b><br>Species  | <ul> <li>24 h</li> <li>No skin irritation</li> <li>no</li> </ul>  |
| Exposure time<br>Result<br>GLP<br><b>1,3-Propanediol, 2-amino</b><br>Species<br>Exposure time<br>Method   | <ul> <li>24 h</li> <li>No skin irritation</li> <li>no</li> </ul> <b>b-2-(hydroxymethyl)-:</b> <ul> <li>Rabbit</li> <li>4 h</li> <li>OECD Test Guideline 404</li> </ul>  |
| Exposure time<br>Result<br>GLP<br><b>1,3-Propanediol, 2-amino</b><br>Species<br>Exposure time<br>Method<br>Result   | <ul> <li>24 h</li> <li>No skin irritation</li> <li>no</li> </ul> <b>b-2-(hydroxymethyl)-:</b> <ul> <li>Rabbit</li> <li>4 h</li> </ul>   |
| Exposure time<br>Result<br>GLP<br><b>1,3-Propanediol, 2-amino</b><br>Species<br>Exposure time<br>Method<br>Result   | <ul> <li>24 h</li> <li>No skin irritation</li> <li>no</li> </ul> <b>b-2-(hydroxymethyl)-:</b> <ul> <li>Rabbit</li> <li>4 h</li> <li>OECD Test Guideline 404</li> </ul>  |
| Exposure time<br>Result<br>GLP<br><b>1,3-Propanediol, 2-amino</b><br>Species<br>Exposure time<br>Method<br>Result<br>GLP                                    | <ul> <li>24 h</li> <li>No skin irritation</li> <li>no</li> </ul> <b>b-2-(hydroxymethyl)-:</b> <ul> <li>Rabbit</li> <li>4 h</li> <li>OECD Test Guideline 404</li> <li>No skin irritation</li> <li>yes</li> </ul>   |
| Exposure time<br>Result<br>GLP<br><b>1,3-Propanediol, 2-amino</b><br>Species<br>Exposure time   | <ul> <li>24 h</li> <li>No skin irritation</li> <li>no</li> </ul> <b>b-2-(hydroxymethyl)-:</b> <ul> <li>Rabbit</li> <li>4 h</li> <li>OECD Test Guideline 404</li> <li>No skin irritation</li> <li>yes</li> </ul>   |
| Exposure time<br>Result<br>GLP<br><b>1,3-Propanediol, 2-amino</b><br>Species<br>Exposure time<br>Method<br>Result<br>GLP<br><b>Methanaminium, N,N,N-t</b> i | <ul> <li>24 h</li> <li>No skin irritation</li> <li>no</li> </ul> <b>b-2-(hydroxymethyl)-:</b> <ul> <li>Rabbit</li> <li>4 h</li> <li>OECD Test Guideline 404</li> <li>No skin irritation</li> <li>yes</li> </ul> trimethyl-, chloride (1:1):   |
| Exposure time<br>Result<br>GLP<br><b>1,3-Propanediol, 2-amino</b><br>Species<br>Exposure time<br>Method<br>Result<br>GLP<br><b>Methanaminium, N,N,N-t</b> i | <ul> <li>24 h</li> <li>No skin irritation</li> <li>no</li> </ul> <b>b-2-(hydroxymethyl)-:</b> <ul> <li>Rabbit</li> <li>4 h</li> <li>OECD Test Guideline 404</li> <li>No skin irritation</li> <li>yes</li> </ul> trimethyl-, chloride (1:1): <ul> <li>Irritating to skin.</li> </ul> |

# Components:

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



## KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

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

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

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

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

#### 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

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

| : | Direct Peptide Reactivity Assay (DPRA)<br>Does not cause skin sensitization.<br>yes<br>Based on data from similar materials<br>Expert judgment |
|---|--|
|   | Buehler Test<br>Guinea pig<br>OECD Test Guideline 406<br>no<br>Based on data from similar materials  |
| : | Intracutaneous test<br>Guinea pig<br>no<br>Based on data from similar materials  |
|   | :  |

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

| Test Type  | : | Local lymph node assay (LLNA)      |
|------------|---|------------------------------------|
| Species    | : | Mouse                              |
| Assessment | : | Does not cause skin sensitization. |
| Method     | : | OECD Test Guideline 429            |

#### Germ cell mutagenicity

Not classified based on available information.



| Version | Revision Date: | Date of last issue: 10-11-2021  |
|---------|----------------|---------------------------------|
| 3.0     | 03-25-2022     | Date of first issue: 05-18-2016 |

#### 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.

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

| Genotoxicity in vitro :                          | Test Type: Chromosome aberration test in vitro<br>Test system: Chinese hamster lung cells<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 473<br>Result: negative<br>GLP: yes  |  |
|--|--|--|
|  | Test Type: In vitro mammalian cell gene mutation test<br>Test system: Chinese hamster ovary cells<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 476<br>Result: negative<br>GLP: yes  |  |
|  | Test Type: Microbial mutagenesis assay (Ames test)<br>Test system: Salmonella typhimurium<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 471<br>Result: negative<br>GLP: yes<br>Remarks: Based on data from similar materials |  |
| Methanaminium, N,N,N-trimethyl-, chloride (1:1): |  |  |
| Genotoxicity in vitro :                          | Test Type: Microbial mutagenesis assay (Ames test)<br>Test system: Salmonella typhimurium<br>Result: negative  |  |

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

#### Carcinogenicity



Version **Revision Date:** Date of last issue: 10-11-2021 3.0 03-25-2022 Date of first issue: 05-18-2016 **Components:** glycerol: 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. No component of this product present at levels greater than or equal to 0.1% is **OSHA** on OSHA's list of regulated carcinogens. No ingredient of this product present at levels greater than or equal to 0.1% is NTP 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 Species: Rabbit, female Effects on fetal development : **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 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 Test Type: Pre-natal Effects on fetal development : Species: Rat, female Strain: wistar **Application Route: Oral** 



## **KAPA LTP Library Preparation Kit**

Version 3.0 Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

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. |

:

2

#### **DNA-dependent DNA polymerase:**

Assessment

The substance or mixture is not classified as specific target organ toxicant, single exposure.

#### STOT-repeated exposure

Not classified based on available information.

#### **Components:**

#### **DNA-dependent DNA polymerase:**

Assessment

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

#### Repeated dose toxicity

#### **Components:**

#### glycerol:

| Species<br>NOAEL<br>NOAEL<br>Application Route<br>Exposure time<br>Number of exposures<br>Dose<br>GLP  |   | Rat, male and female<br>4580 mg/kg<br>4,580 mg/kg<br>Oral<br>90 d<br>daily<br>4580 - 25,800 mg/kg/day<br>no                                   |
|--|---|---|
| Species<br>Application Route<br>Test atmosphere<br>Exposure time<br>Number of exposures<br>Dose<br>GLP | ::::::::::::::::::::::::::::::::::::::: | Rat, male and female<br>Inhalation<br>dust/mist<br>13 Weeks<br>6 hours/day, 5 days/week<br>33, 165 and 660 mg/m3<br>No information available. |



| Version<br>3.0   | Revision Date:<br>03-25-2022 | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |
|--|------------------------------|---|
| Species<br>NOAEL<br>NOAEL<br>Application Route<br>Exposure time<br>Number of exposures<br>Dose<br>GLP<br>Repeated dose toxicit | : 0.5-4.0 ml<br>: no         | kg<br>ay, 5 days/week   |
| Assessment   | y Mild eye h                 | mant, which respiratory initiality no Skin initialion             |

#### 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 |

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

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

#### Aspiration toxicity

Not classified based on available information.

#### Components:

#### **DNA-dependent DNA polymerase:**

No data available

#### Further information

#### Components:

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

Remarks : Other dangerous properties can not be excluded.

### KAPA Library Amplification Primer Premixes (10X)

#### Acute toxicity



## KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### 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.

- **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.

### KAPA Hyper Prep DNA Ligase

#### Acute toxicity

Not classified based on available information.

#### **Components:**

| <b>glycerol:</b><br>Acute oral toxicity | : | LC50 (Mouse): 11,500 mg/kg  |
|---|---|---|
| Acute inhalation toxicity               | : | LC50 (Rat, male): 275000 mg/m3<br>Exposure time: 7 h<br>Test atmosphere: vapor<br>GLP: no<br>Assessment: The component/mixture is minimally toxic after<br>short term inhalation. |



## KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

Acute dermal toxicity

: LD50 (Guinea pig, male and female): 56,750 mg/kg GLP: no

#### Skin corrosion/irritation

Not classified based on available information.

#### Components:

#### glycerol:

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

#### Serious eye damage/eye irritation

Not classified based on available information.

#### **Components:**

#### glycerol:

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

#### 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

#### Germ cell mutagenicity

Not classified based on available information.

#### **Components:**

glycerol:

| Genotoxicity in vitro | : | Test Type: Microbial mutagenesis assay (Ames test)<br>Test system: Salmonella typhimurium<br>Metabolic activation: with and without metabolic activation<br>Result: negative<br>GLP: No information available.          |
|-----------------------|---|---|
|                       |   | Test Type: In vitro mammalian cell gene mutation test<br>Test system: Chinese hamster ovary cells<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 476<br>Result: negative |



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

GLP: No information available.

#### Carcinogenicity

Not classified based on available information.

#### **Components:**

#### glycerol:

| Species<br>Application Rou<br>Exposure time<br>GLP<br>Remarks | ute :              | Rat, male and female<br>Oral<br>2 Years<br>No information available.<br>No ingredient of this product present at levels greater than or<br>equal to 0.1% is identified as probable, possible or confirmed<br>human carcinogen by IARC. |
|---|--------------------|--|
| Polynucleotide  | e 5'-hydroxyl kina | ISE:   |
| 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  | 5                  | his 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<br>Species: Rat, male and female<br>Application Route: Oral<br>Dose: 2000 mg/kg bw/day<br>Fertility: NOAEL: 2,000 mg/kg body weight<br>GLP: no                         |
|------------------------------|---|--|
| Effects on fetal development | : | Species: Rabbit, female<br>Application Route: Oral<br>Dose: 11.8, 54.8, 254.5, 1180 mg/kg bw/day<br>Duration of Single Treatment: 29 d<br>Developmental Toxicity: NOAEL: 1,180 mg/kg bw/day<br>GLP: no |

#### STOT-single exposure



Version 3.0

Revision Date: 03-25-2022

:

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### **Components:**

#### Polynucleotide 5'-hydroxyl kinase:

Assessment

The substance or mixture is not classified as specific target organ toxicant, single exposure.

#### STOT-repeated exposure

Not classified based on available information.

#### **Components:**

#### Polynucleotide 5'-hydroxyl kinase:

| Assessment | : | The substance or mixture is not classified as specific target |
|------------|---|---|
|            |   | organ toxicant, repeated exposure.                            |

#### Repeated dose toxicity

#### **Components:**

#### glycerol:

| Species<br>NOAEL<br>NOAEL<br>Application Route<br>Exposure time<br>Number of exposures<br>Dose<br>GLP  | <ul> <li>Rat, male and female</li> <li>4580 mg/kg</li> <li>4,580 mg/kg</li> <li>Oral</li> <li>90 d</li> <li>daily</li> <li>4580 - 25,800 mg/kg/day</li> <li>no</li> </ul>                             |
|--|---|
| Species<br>Application Route<br>Test atmosphere<br>Exposure time<br>Number of exposures<br>Dose<br>GLP | <ul> <li>Rat, male and female</li> <li>Inhalation</li> <li>dust/mist</li> <li>13 Weeks</li> <li>6 hours/day, 5 days/week</li> <li>33, 165 and 660 mg/m3</li> <li>No information available.</li> </ul> |
| Species<br>NOAEL<br>NOAEL<br>Application Route<br>Exposure time<br>Number of exposures<br>Dose<br>GLP  | <ul> <li>Rat</li> <li>5040 mg/kg</li> <li>5,040 mg/kg</li> <li>dermal</li> <li>45 Weeks</li> <li>8 hours/day, 5 days/week</li> <li>0.5-4.0 ml/kg</li> <li>no</li> </ul>                               |
| Repeated dose toxicity -<br>Assessment   | : Mild eye irritant, Mild respiratory irritant, No skin irritation  |

#### Aspiration toxicity



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### **Components:**

**Polynucleotide 5'-hydroxyl kinase:** No data available

### KAPA A-Tailing Enzyme

#### 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<br>Exposure time: 7 h<br>Test atmosphere: vapor<br>GLP: no<br>Assessment: The component/mixture is minimally toxic after<br>short term inhalation. |  |
| Acute dermal toxicity     | : LD50 (Guinea pig, male and female): 56,750 mg/kg<br>GLP: no   |  |

#### Skin corrosion/irritation

Not classified based on available information.

#### **Components:**

#### glycerol:

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

#### Serious eye damage/eye irritation

Not classified based on available information.

#### Components:

#### glycerol:

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

#### Respiratory or skin sensitization

#### Skin sensitization

Not classified based on available information.

#### **Respiratory sensitization**



## **KAPA LTP Library Preparation Kit**

Version 3.0

Revision Date: 03-25-2022

5

÷

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### **Components:**

#### glycerol:

Assessment

Mild eye irritant, Mild respiratory irritant, No skin irritation

#### 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.

#### Carcinogenicity

Not classified based on available information.

#### **Components:**

| glycerol:  |  |  |  |
|--|--|--|--|
| Species<br>Application Ro<br>Exposure time<br>GLP<br>Remarks |  |  |  |
| 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<br>Not classified b                             | toxicity<br>based on available information.  |  |  |
| Components:  |  |  |  |

#### glycerol:

Effects on fertility

: Test Type: Two-generation study Species: Rat, male and female



## KAPA LTP Library Preparation Kit

| Version<br>3.0  | Revision<br>03-25-20                  | Date:  | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016          |
|---|---------------------------------------|--|--|
|   |                                       | Application Ro<br>Dose: 2000 m<br>Fertility: NOA<br>GLP: no  |  |
| Effects on feta   | al development :                      | Application Ro<br>Dose: 11.8, 5<br>Duration of Si  |  |
| STOT-single<br>Not classified   | <b>exposure</b><br>based on available | e information.   |  |
| <u>Components</u>   | <u>:</u>                              |  |  |
| DNA-depend  | ent DNA polymera                      | ase:   |  |
| Assessment  | :                                     |  | e or mixture is not classified as specific target<br>t, single exposure.   |
|   | based on available                    | information.   |  |
| <u>Components</u>   |                                       |  |  |
| DNA-depend<br>Assessment  | ent DNA polymera                      | The substance  | e or mixture is not classified as specific target<br>t, repeated exposure. |
| Repeated do   | se toxicity                           |  |  |
| <u>Components</u>   | <u>:</u>                              |  |  |
| glycerol:   |                                       |  |  |
| Species<br>NOAEL<br>NOAEL<br>Application Ro<br>Exposure time<br>Number of ex<br>Dose<br>GLP | e :                                   | Rat, male and<br>4580 mg/kg<br>4,580 mg/kg<br>Oral<br>90 d<br>daily<br>4580 - 25,800<br>no               |  |
| Species<br>Application Ro<br>Test atmosph<br>Exposure time<br>Number of exp<br>Dose<br>GLP  | ere :                                 | Rat, male and<br>Inhalation<br>dust/mist<br>13 Weeks<br>6 hours/day, 5<br>33, 165 and 6<br>No informatio | 5 days/week<br>60 mg/m3  |
| Species<br>NOAEL<br>NOAEL   | :                                     | Rat<br>5040 mg/kg<br>5,040 mg/kg   |  |



| Version |  |
|---------|--|
| 3.0     |  |

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

| 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 -<br>Assessment | : Mild eye irritant, Mild respiratory irritant, No skin irritation |

#### Aspiration toxicity

Not classified based on available information.

#### Components:

#### **DNA-dependent DNA polymerase:**

No data available

#### **SECTION 12. ECOLOGICAL INFORMATION**

### KAPA End-Repair Buffer (10X)

#### Ecotoxicity

#### **Components:**

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

| 1,5-1 Topaneuloi, 2-animo-2-(ity                      | aroxymetry)   |
|---|---|
| Toxicity to fish :                                    | LC50 (Fish): > 4,000 mg/l<br>Exposure time: 96 h<br>Test Type: static test<br>Analytical monitoring: no<br>Method: DIN 38412<br>GLP: no   |
| Toxicity to daphnia and other : aquatic invertebrates | EC50 (Daphnia magna (Water flea)): > 980 mg/l<br>End point: Immobilization<br>Exposure time: 48 h<br>Test Type: static test<br>Analytical monitoring: yes<br>Method: OECD Test Guideline 202<br>GLP: yes  |
| Toxicity to algae/aquatic :<br>plants                 | ErC50 (Pseudokirchneriella subcapitata (green algae)): 473<br>mg/l<br>End point: Growth rate<br>Exposure time: 48 h<br>Test Type: static test<br>Analytical monitoring: no<br>Method: OECD Test Guideline 201<br>GLP: No information available. |
| Toxicity to microorganisms :                          | EC50 (activated sludge): > 1,000 mg/l<br>End point: Respiration inhibition<br>Exposure time: 3 h<br>Test Type: static test  |



| KAP/           | A LIP Library i                                | repai                | ation <b>K</b>  | It  |
|----------------|--|----------------------|---|---|
| Version<br>3.0 |  | Revision<br>03-25-20 |   | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016   |
|                |  |                      |   | l monitoring: no<br>OECD Test Guideline 209   |
|                | cotoxicology Assess<br>oxicity Data on Soil    | sment                | Not exped   | cted to adsorb on soil.   |
|                | ther organisms releva<br>e environment         | int to :             | No data a   | available   |
| 2.             | 3-Butanediol, 1,4-di                           | mercapte             | o (2R.3R)-i   | rel-:   |
| Тс             | oxicity to daphnia and<br>quatic invertebrates | -                    | EC50 (Da<br>End point<br>Exposure<br>Test Type<br>Method: 0<br>GLP: yes   | aphnia magna (Water flea)): 34.8 mg/l<br>t: Immobilization<br>e time: 48 h<br>e: semi-static test<br>OECD Test Guideline 202  |
|                |  |                      | End point<br>Exposure<br>Test Type<br>Method: 0<br>GLP: yes   | Daphnia magna (Water flea)): 25.0 mg/l<br>t: Immobilization<br>e time: 48 h<br>e: semi-static test<br>OECD Test Guideline 202   |
|                | oxicity to algae/aquati<br>ants                | c :                  | 24.3 mg/l<br>End point<br>Exposure<br>Test Type<br>Method: (<br>GLP: yes<br>Remarks:<br>NOErC (F<br>3.2 mg/l<br>End point<br>Exposure<br>Test Type<br>Method: (<br>GLP: yes | t: Growth rate<br>e time: 72 h<br>e: static test<br>OECD Test Guideline 201<br>f:<br>nominal concentration<br>Raphidocelis subcapitata (freshwater green alga)):<br>t: Growth rate<br>e time: 72 h<br>e: static test<br>OECD Test Guideline 201 |
|                |  |                      | 1.0 mg/l<br>Exposure<br>Method: 0<br>GLP: yes   | Raphidocelis subcapitata (freshwater green alga)):<br>e time: 72 h<br>OECD Test Guideline 201<br>:<br>: nominal concentration   |



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### Persistence and degradability

#### Components:

#### 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

#### 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel-:

| Biodegradability            | : | aerobic<br>Inoculum: activated sludge, non-adapted<br>Concentration: 64.3 mg/l<br>Result: Not readily biodegradable.<br>Biodegradation: 53 %<br>Exposure time: 43 d<br>Method: OECD Test Guideline 301B<br>GLP: yes<br>Remarks: The 10 day time window criterion is not fulfilled. |
|-----------------------------|---|--|
| Physico-chemical removabil- | ÷ | Method: see user defined free text   |

| Physico-chemical removabil- | : | Method: see user defined free text  |
|-----------------------------|---|-------------------------------------|
| ity                         |   | Remarks: Not abiotically degradable |

#### **Bioaccumulative potential**

#### Components:

#### 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-<br>octanol/water | : | log Pow: -2.31 (68 °F / 20 °C)<br>Method: OECD Test Guideline 107<br>GLP: no                             |

## 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel-:

| Partition coefficient: n-<br>octanol/water | : | log Pow: 0.07 (77 °F / 25 °C)<br>pH: 5.0    |  |  |
|--|---|---|--|--|
|  |   | Method: OECD Test Guideline 117<br>GLP: yes |  |  |

### Mobility in soil No data available Other adverse effects

### Kapa A-Tailing Buffer (10X)



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### Ecotoxicity

#### Components:

#### 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-: LC50 (Fish): > 4,000 mg/l Toxicity to fish : Exposure time: 96 h Test Type: static test Analytical monitoring: no Method: DIN 38412 GLP: no Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 980 mg/l aquatic invertebrates 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 ErC50 (Pseudokirchneriella subcapitata (green algae)): 473 plants 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. 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 : No data available the environment

#### Persistence and degradability

#### **Components:**

#### 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                         |



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### **Bioaccumulative potential**

#### **Components:**

#### 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-<br>octanol/water | : | log Pow: -2.31 (68 °F / 20 °C)<br>Method: OECD Test Guideline 107<br>GLP: no                             |

#### Mobility in soil

No data available

Other adverse effects

### Kapa Ligation Buffer (5X)

#### Ecotoxicity

#### Components:

#### Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-:

| Toxicity to fish                                    | : | LC50 (Cyprinus carpio (Carp)): > 100 mg/l<br>Exposure time: 4 d<br>Method: OECD Test Guideline 203         |
|---|---|--|
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 100 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202    |
| Toxicity to algae/aquatic plants                    | : | EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l<br>Exposure time: 72 h                            |
| Toxicity to fish (Chronic tox-<br>icity)            | : | > 1 mg/l   |
|   |   |  |
| Ecotoxicology Assessment                            |   |  |
| Ecotoxicology Assessment<br>Acute aquatic toxicity  | : | This product has no known ecotoxicological effects.  |
|   | : | This product has no known ecotoxicological effects.<br>This product has no known ecotoxicological effects. |

# the environment

Other organisms relevant to : No data available

| Toxicity to fish | : LC50 (Fish): > 4,000 mg/l |  |  |  |
|------------------|-----------------------------|--|--|--|
|                  | Exposure time: 96 h         |  |  |  |
|                  | Test Type: static test      |  |  |  |



| rsion   | Revisior<br>03-25-2 |   | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016  |
|---|---------------------|---|--|
|   |                     | Analytical<br>Method: D<br>GLP: no                                      | monitoring: no<br>IN 38412   |
| Toxicity to daphnia and other : aquatic invertebrates |                     | End point:<br>Exposure<br>Test Type:<br>Analytical                      | ohnia magna (Water flea)): > 980 mg/l<br>Immobilization<br>time: 48 h<br>: static test<br>monitoring: yes<br>ECD Test Guideline 202                                  |
| Toxicity to alga<br>plants                            | e/aquatic           | mg/l<br>End point:<br>Exposure<br>Test Type:<br>Analytical<br>Method: O | eudokirchneriella subcapitata (green algae)): 473<br>Growth rate<br>time: 48 h<br>: static test<br>monitoring: no<br>ECD Test Guideline 201<br>nformation available. |
| Toxicity to micr                                      | oorganisms          | End point:<br>Exposure<br>Test Type:<br>Analytical                      | vated sludge): > 1,000 mg/l<br>Respiration inhibition<br>time: 3 h<br>: static test<br>monitoring: no<br>ECD Test Guideline 209                                      |
| Ecotoxicology   |                     | Not ovnoo   | tod to odporth on poil   |
| Toxicity Data o<br>Other organism<br>the environmer   | is relevant to      | : Not expec<br>: No data av   | ted to adsorb on soil.<br>/ailable   |
| Persistence a   | nd degradability    | /   |  |
| Components:   |                     |   |  |
| <b>Poly(oxy-1,2-e</b><br>Biodegradabilit              |                     | : Biodegrad<br>Exposure   | <b>negahydroxy-:</b><br>ation: > 90 %<br>time: 28 d<br>ECD Test Guideline 301  |
| 1,3-Propanedi   | ol, 2-amino-2-(ŀ    | ydroxymeth  | yl)-:  |
| Biodegradabilit                                       | y                   | Result: Re<br>Biodegrad<br>Exposure                                     | activated sludge<br>adily biodegradable.<br>ation: 100 %<br>time: 28 d<br>ECD Test Guideline 301F  |



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### **Bioaccumulative potential**

#### Components:

#### Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-:

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

#### 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-<br>octanol/water | : | log Pow: -2.31 (68 °F / 20 °C)<br>Method: OECD Test Guideline 107<br>GLP: no                             |

#### Mobility in soil

No data available

#### Other adverse effects

#### **Components:**

#### Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-:

| Adsorbed organic bound | : Remarks: Not applicable |
|------------------------|---------------------------|
| halogens (AOX)         |                           |

### KAPA PEG/NaCl

#### Ecotoxicity

#### **Components:**

#### Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-:

| Toxicity to fish | : | LC50: > 100 mg/l    |
|------------------|---|---------------------|
|                  |   | Exposure time: 96 h |

#### Ecotoxicology Assessment

| 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                                   |

#### Persistence and degradability

No data available



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### Bioaccumulative potential

#### **Components:**

#### Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-:

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

#### Mobility in soil

No data available

Other adverse effects

#### **Components:**

#### Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-:

Adsorbed organic bound : Remarks: Not applicable halogens (AOX)

### KAPA End Repair Enzyme Mix

#### Ecotoxicity

#### Components:

#### glycerol:

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



## KAPA LTP Library Preparation Kit

| Version<br>3.0  | Revision<br>03-25-20 |  | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |
|---|----------------------|--|---|
| Chronic aquatic tox   | icity :              | This product   | has no known ecotoxicological effects.                            |
| Toxicity Data on Sc   | il :                 | Not expected   | to adsorb on soil.  |
| Other organisms re the environment                          | levant to :          | No data avai   | lable   |
| Persistence and d   | egradability         |  |   |
| Components:   |                      |  |   |
| glycerol:<br>Biodegradability                               | :                    | Inoculum: ac<br>Concentratio   | lily biodegradable.<br>on: 94 %                                   |
| Bioaccumulative p   | ootential            |  |   |
| Components:   |                      |  |   |
| <b>glycerol:</b><br>Partition coefficient<br>octanol/water  | :n- :                | pH: 7.4  | 75 (77 °F / 25 °C)<br>CD Test Guideline 107                       |
| Mobility in soil<br>No data available<br>Other adverse effe | ects                 |  |   |
| KAPA HiFi HotStar   | t ReadyMi            | x (2X)   |   |
| Ecotoxicity   |                      |  |   |
| Components:   |                      |  |   |
| glycerol:   |                      |  |   |
| Toxicity to fish  | :                    | LC50 (Oncor<br>End point: m<br>Exposure tim<br>Test Type: st<br>GLP: no                  | ne: 96 h  |
| Toxicity to daphnia aquatic invertebrate                    |                      | LC50 (Daphr<br>End point: m<br>Exposure tim<br>Test Type: st<br>Analytical mo<br>GLP: no | ne: 48 h<br>tatic test  |



## KAPA LTP Library Preparation Kit

| Vers<br>3.0 | ion  | Revision<br>03-25-20                         |                       | te:  | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |  |  |  |  |
|-------------|--|--|-----------------------|--|---|--|--|--|--|
|             | Toxicity to algae/aqua plants                | itic :                                       | E<br>E<br>T           | (Scenedesmus q<br>nd point: Growth<br>xposure time: 8<br>est Type: static<br>GLP: no                           | d   |  |  |  |  |
|             | Toxicity to microorgar                       | nisms :                                      | E<br>E<br>T           | C50 (Pseudomo<br>nd point: Growth<br>xposure time: 16<br>est Type: static<br>GLP: No informat                  | 6 h<br>test   |  |  |  |  |
|             | Ecotoxicology Asse                           | ssment                                       |                       |  |   |  |  |  |  |
|             | Acute aquatic toxicity                       | :  | Т                     | his product has  | no known ecotoxicological effects.                                |  |  |  |  |
|             | Chronic aquatic toxici                       | ty :   | Т                     | his product has  | no known ecotoxicological effects.                                |  |  |  |  |
|             | Toxicity Data on Soil                        | :  | Ν                     | lot expected to a  | dsorb on soil.  |  |  |  |  |
|             | Other organisms relevent the environment     | vant to :                                    | Ν                     | lo data available  |   |  |  |  |  |
|             | 1.3-Propanediol. 2-a                         | 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-: |                       |  |   |  |  |  |  |
|             | Toxicity to fish                             | :  | L<br>E<br>T<br>A      | C50 (Fish): > 4,0<br>exposure time: 96<br>est Type: static<br>analytical monitor<br>Method: DIN 384<br>GLP: no | 6 h<br>test<br>ring: no   |  |  |  |  |
|             | Toxicity to daphnia an aquatic invertebrates | nd other :                                   | E<br>E<br>A<br>N      | and point: Immob<br>xposure time: 48<br>est Type: static<br>analytical monitor                                 | 3 h<br>test   |  |  |  |  |
|             | Toxicity to algae/aqua<br>plants             | itic :                                       | n<br>E<br>T<br>A<br>N | ng/l<br>nd point: Growth<br>xposure time: 48<br>est Type: static<br>analytical monitor                         | 3 h<br>test<br>ring: no<br>est Guideline 201                      |  |  |  |  |
|             | Toxicity to microorgar                       | nisms :                                      | E<br>E<br>T<br>A<br>N | nd point: Respir<br>xposure time: 3<br>est Type: static<br>analytical monitor                                  | h<br>test   |  |  |  |  |

Version

3.0



Date of last issue: 10-11-2021

Date of first issue: 05-18-2016

## KAPA LTP Library Preparation Kit

**Revision Date:** 

03-25-2022

| Toxicity Data on Soil                               | :   | Not expected to adsorb on soil.   |
|---|-----|---|
| Other organisms relevant to the environment         | :   | No data available   |
| Methanaminium, N,N,N-trime                          | eth | yl-, chloride (1:1):  |
| Toxicity to fish                                    | :   | LC50 (Pimephales promelas (fathead minnow)): 462 m<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203                        |
| Toxicity to daphnia and other aquatic invertebrates | :   | EC50 (Daphnia magna (Water flea)): 0.16 mg/l<br>Exposure time: 11 d<br>GLP: yes   |
|   |     | NOEC (Daphnia magna (Water flea)): 0.03 mg/l<br>Exposure time: 11 d<br>GLP: yes   |
|   |     | LC50 (Daphnia magna (Water flea)): 1.86 mg/l<br>Exposure time: 48 h<br>GLP: yes   |
| Toxicity to algae/aquatic plants                    | :   | ErC50 (Pseudokirchneriella subcapitata (green algae))<br>mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>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   |
| DNA-dependent DNA polym                             | era | se:   |
| Ecotoxicology Assessment                            |     |   |
| Toxicity Data on Soil                               | :   | Not expected to adsorb on soil.   |
| Other organisms relevant to the environment         | :   | No data available   |
| Persistence and degradabili                         | ty  |   |
| Components:   |     |   |
| glycerol:   |     |   |
| Biodegradability                                    |     | aerobic   |



| Version |  |
|---------|--|
| 3.0     |  |

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

Concentration: 226 mg/l Result: Readily biodegradable. Biodegradation: 94 % Exposure time: 24 h GLP: no

| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-:                   |   |  |  |  |  |  |  |  |  |  |
|--|---|--|--|--|--|--|--|--|--|--|
| Biodegradability   | : aerobic<br>Inoculum: activated sludge<br>Result: Readily biodegradable.<br>Biodegradation: 100 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301F<br>GLP: yes |  |  |  |  |  |  |  |  |  |
| Methanaminium, N,N,N-trimethyl-, chloride (1:1):               |   |  |  |  |  |  |  |  |  |  |
| Biodegradability   | : Remarks: Expected to be biodegradable   |  |  |  |  |  |  |  |  |  |
| Bioaccumulative potential                                      |   |  |  |  |  |  |  |  |  |  |
| Components:  |   |  |  |  |  |  |  |  |  |  |
| <b>glycerol:</b><br>Partition coefficient: n-<br>octanol/water | : log Pow: -1.75 (77 °F / 25 °C)<br>pH: 7.4<br>Method: OECD Test Guideline 107<br>GLP: no   |  |  |  |  |  |  |  |  |  |
| 1,3-Propanediol, 2-amino-2-(h                                  | ydroxymethyl)-:   |  |  |  |  |  |  |  |  |  |
| Bioaccumulation  | : Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.  |  |  |  |  |  |  |  |  |  |
| Partition coefficient: n-<br>octanol/water                     | : log Pow: -2.31 (68 °F / 20 °C)<br>Method: OECD Test Guideline 107<br>GLP: no  |  |  |  |  |  |  |  |  |  |
| Methanaminium, N,N,N-trimet                                    | thyl-, chloride (1:1):  |  |  |  |  |  |  |  |  |  |
| Partition coefficient: n-<br>octanol/water                     | : Remarks: No data available  |  |  |  |  |  |  |  |  |  |
| DNA-dependent DNA polyme                                       | rase:   |  |  |  |  |  |  |  |  |  |
| Partition coefficient: n-<br>octanol/water                     | : Remarks: No data available  |  |  |  |  |  |  |  |  |  |
| Mobility in soil<br>No data available<br>Other adverse effects |   |  |  |  |  |  |  |  |  |  |
| NDA I throw Anonlification                                     | Drimon Bromisson (10V)  |  |  |  |  |  |  |  |  |  |

## KAPA Library Amplification Primer Premixes (10X)



## **KAPA LTP Library Preparation Kit**

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### Ecotoxicity

No data available

Persistence and degradability

No data available

**Bioaccumulative potential** 

No data available

Mobility in soil

No data available

Other adverse effects

### KAPA Hyper Prep DNA Ligase

#### Ecotoxicity

#### Components:

#### glycerol:

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



## KAPA LTP Library Preparation Kit

|  | Revision<br>)3-25-20               |   | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016                           |  |  |  |  |  |  |
|--|------------------------------------|---|---|--|--|--|--|--|--|
| Polynucleotide 5'-hydr                     | Polynucleotide 5'-hydroxyl kinase: |   |   |  |  |  |  |  |  |
| Ecotoxicology Assessment                   |                                    |   |   |  |  |  |  |  |  |
| Toxicity Data on Soil                      | :                                  | Not expect  | ted to adsorb on soil.  |  |  |  |  |  |  |
| Other organisms relevar the environment    | nt to :                            | No data a   | vailable  |  |  |  |  |  |  |
| Persistence and degra                      | Persistence and degradability      |   |   |  |  |  |  |  |  |
| Components:                                |                                    |   |   |  |  |  |  |  |  |
| glycerol:                                  |                                    |   |   |  |  |  |  |  |  |
| Biodegradability                           | :                                  | Inoculum:<br>Concentra<br>Result: Re<br>Biodegrad | activated sludge<br>ation: 226 mg/l<br>eadily biodegradable.<br>dation: 94 %<br>time: 24 h  |  |  |  |  |  |  |
| Bioaccumulative poter                      | ntial                              |   |   |  |  |  |  |  |  |
| Components:                                |                                    |   |   |  |  |  |  |  |  |
| glycerol:                                  |                                    |   |   |  |  |  |  |  |  |
| Partition coefficient: n-<br>octanol/water | :                                  | pH: 7.4   | -1.75 (77 °F / 25 °C)<br>DECD Test Guideline 107  |  |  |  |  |  |  |
| Polynucleotide 5'-hydr                     | Polynucleotide 5'-hydroxyl kinase: |   |   |  |  |  |  |  |  |
| Partition coefficient: n-<br>octanol/water | :                                  |   | No data available   |  |  |  |  |  |  |
| Mobility in soil                           |                                    |   |   |  |  |  |  |  |  |
| No data available                          |                                    |   |   |  |  |  |  |  |  |
| Other adverse effects                      |                                    |   |   |  |  |  |  |  |  |
| (APA A-Tailing Enzyn                       | ie                                 |   |   |  |  |  |  |  |  |
| Ecotoxicity                                |                                    |   |   |  |  |  |  |  |  |
| Components:                                |                                    |   |   |  |  |  |  |  |  |
| glycerol:                                  |                                    |   |   |  |  |  |  |  |  |
| Toxicity to fish                           | :                                  | End point<br>Exposure                             | corhynchus mykiss (rainbow trout)): 54,000 m<br>: mortality<br>time: 96 h<br>:: static test |  |  |  |  |  |  |
| Toxicity to daphnia and                    | other :                            | LC50 (Da  | phnia magna (Water flea)): 1,955 mg/l   |  |  |  |  |  |  |
|  |                                    | 6   | 1 / 86  |  |  |  |  |  |  |



## KAPA LTP Library Preparation Kit

|  | vision Date:<br>25-2022  | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016   |
|--|--------------------------|---|
| aquatic invertebrates                      | Expos<br>Test T          | oint: mortality<br>sure time: 48 h<br>-ype: static test<br>tical monitoring: no<br>no   |
| Toxicity to algae/aquatic plants           | End p<br>Expos           | nedesmus quadricauda (Green algae)): > 10,000 mg<br>oint: Growth rate<br>sure time: 8 d<br>Type: static test<br>no            |
| Toxicity to microorganisms                 | End p<br>Expos<br>Test 1 | (Pseudomonas putida): > 10,000 mg/l<br>oint: Growth rate<br>sure time: 16 h<br>Type: static test<br>No information available. |
| Ecotoxicology Assessme                     | ent                      |   |
| Acute aquatic toxicity                     | : This p                 | roduct has no known ecotoxicological effects.   |
| Chronic aquatic toxicity                   | : This p                 | roduct has no known ecotoxicological effects.   |
| Toxicity Data on Soil                      | : Not ex                 | spected to adsorb on soil.  |
| Other organisms relevant t the environment | o : No da                | ta available  |
| DNA-dependent DNA pol                      | ymerase:                 |   |
| Ecotoxicology Assessme                     | ent                      |   |
| Toxicity Data on Soil                      | : Not ex                 | spected to adsorb on soil.  |
| Other organisms relevant t the environment | o : No da                | ta available  |
| Persistence and degrada                    | bility                   |   |
| Components:                                |                          |   |
| <b>glycerol:</b><br>Biodegradability       | Conce<br>Resul<br>Biode  | um: activated sludge<br>entration: 226 mg/l<br>t: Readily biodegradable.<br>gradation: 94 %<br>sure time: 24 h                |
| Bioaccumulative potentia                   | al                       |   |
| Components:                                |                          |   |
| glycerol:                                  |                          |   |
|  |                          | 62 / 86   |



## **KAPA LTP Library Preparation Kit**

| Versi<br>3.0        | ion  | Revision E<br>03-25-202 |   | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |
|---------------------|--|-------------------------|---|---|
|                     | Partition coefficient: n-<br>octanol/water | :                       | log Pow: -1.75 (7<br>pH: 7.4<br>Method: OECD T<br>GLP: no | 7°F / 25 °C)<br><sup>-</sup> est Guideline 107                    |
| DNA-dependent D     |  | polymera                | se:   |   |
|                     | Partition coefficient: n-<br>octanol/water | :                       | Remarks: No dat   | a available   |
|                     | Mobility in soil                           |                         |   |   |
|                     | No data available                          |                         |   |   |
| Other adverse effec |  | 6                       |   |   |
|                     |  |                         |   |   |
| SEC                 | TION 13. DISPOSAL                          | CONSIDER                | ATIONS  |   |

## Disposal methods

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

#### **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



## **KAPA LTP Library Preparation Kit**

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### **SECTION 15. REGULATORY INFORMATION**

#### KAPA End-Repair Buffer (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 | : | Serious eye damage or eye irritation  |
|----------------------|---|---|
| SARA 313             | : | This material does not contain any chemical components with<br>known CAS numbers that exceed the threshold (De Minimis)<br>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 SOCMI 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 R | Right To Know |  |
|----------------|---------------|--|
|----------------|---------------|--|

| Water                                       | 7732-18-5 |
|---|-----------|
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)- | 77-86-1   |

#### 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:



## **KAPA LTP Library Preparation Kit**

| Version<br>3.0 | Revision Date:<br>03-25-2022 | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016     |
|----------------|------------------------------|---|
| AIIC           | : Not in comp                | pliance with the inventory  |
| DSL            |                              | et contains the following components that are not adian DSL nor NDSL. |
|                | 2'-Deoxygu                   | anosine 5'-triphosphate trisodium salt                                |
|                | Adenosine                    | 5'-(tetrahydrogen triphosphate), 2'-deoxy-                            |
|                | 2'-Deoxycyt                  | tidine 5'-triphosphate disodium salt                                  |
|                | Thymidine 8                  | 5'-(tetrahydrogen triphosphate), sodium salt                          |
|                | Adenosine                    | 5'-triphosphate disodium salt hydrate                                 |
| NZIoC          | : On the inve                | ntory, or in compliance with the inventory                            |
| ENCS           | : Not in comp                | pliance with the inventory  |
| ISHL           | : Not in comp                | pliance with the inventory  |
| KECI           | : Not in comp                | pliance with the inventory  |
| PICCS          | : Not in comp                | pliance with the inventory  |
| IECSC          | : Not in comp                | pliance with the inventory  |
| TCSI           | : Not in comp                | pliance with the inventory  |
| TSCA           | : Product cor                | ntains substance(s) not listed on TSCA inventory.                     |
| TECI           | : Not in comp                | pliance 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 A-Tailing Buffer (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



Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### 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 SOCMI 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    | V    |   |
|-------------------------------|------|---|
| Water 7732-18-5               |      |   |
| Maine Chemicals of High Co    | nc   | ern   |
| Product does not co           | onta | ain any listed chemicals  |
| Vermont Chemicals of High (   | Со   | ncern   |
| Product does not co           | onta | ain any listed chemicals  |
| Washington Chemicals of High  | igh  | Concern   |
| Product does not co           | onta | ain any listed chemicals  |
| The ingredients of this produ | uct  | 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. |
|                               |      | Adenosine 5'-(tetrahydrogen triphosphate), 2'-deoxy-                                      |
| 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  |
| PICCS                         | :    | Not in compliance with the inventory  |
|                               |      |   |



| Version<br>3.0 | Revision Date:<br>03-25-2022 | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |
|----------------|------------------------------|---|
| IECSC          | : Not in com                 | pliance with the inventory  |
| TCSI           | : On the inve                | entory, or in compliance with the inventory                       |
| TSCA           | : Product co                 | ntains substance(s) not listed on TSCA inventory.                 |
| TECI           | : Not in com                 | pliance 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 Ligation Buffer (5X)

#### **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   |          |
|----------------------|---|----------|
| SARA 313             | This material does not contain any chemical compone<br>known CAS numbers that exceed the threshold (De N<br>reporting levels established by SARA Title III, Section | Minimis) |

#### **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 SOCMI Intermediate or Final VOC's (40 CFR 60.489): 25322-68-3

Poly(oxy-1,2ethanediyl), .alpha.hydro-.omega.-hydroxy>= 30 - < 50 %

**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



## KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

#### 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  |
|--|------------|
| Poly(oxy-1,2-ethanediyl), .alphahydroomegahydroxy- | 25322-68-3 |
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-        | 77-86-1    |

#### 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. |  |  |
|  |   | Adenosine 5'-triphosphate disodium salt hydrate   |  |  |
| 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  |  |  |
| PICCS  | : | Not in compliance with the inventory  |  |  |
| IECSC  | : | Not in compliance with the inventory  |  |  |
| TCSI   | : | On the inventory, or 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 PEG/NaCl

#### **CERCLA Reportable Quantity**

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



## **KAPA LTP Library Preparation Kit**

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

7647-01-0

#### 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   |
|----------------------|---|---|
| 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 SOCMI Intermediate or Final VOC's (40 CFR 60.489): >= 20 - < 30 %

Poly(oxy-1,2ethanediyl), .alpha.hydro-.omega.-hydroxy-

25322-68-3

#### **Clean Water Act**

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

Hydrochloric acid 7647-01-0 >= 0 - < 0.1 % The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Hydrochloric acid 7647-01-0 >= 0 - < 0.1 % 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

Hydrochloric acid

Pennsylvania Right To Know

| Water  | 7732-18-5  |
|--|------------|
| Poly(oxy-1,2-ethanediyl), .alphahydroomegahydroxy- | 25322-68-3 |
| Sodium chloride (NaCl)                             | 7647-14-5  |
| Hydrochloric acid                                  | 7647-01-0  |

#### 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:



| Version<br>3.0 | Revision Date:<br>03-25-2022 | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |
|----------------|------------------------------|---|
| AIIC           | : On the invent              | ory, or in compliance with the inventory                          |
| DSL            | : All componen               | ts of this product are on the Canadian DSL                        |
| NZIoC          | : On the invent              | ory, or in compliance with the inventory                          |
| ENCS           | : On the invent              | ory, or in compliance with the inventory                          |
| ISHL           | : On the invent              | ory, or in compliance with the inventory                          |
| KECI           | : On the invent              | ory, or in compliance with the inventory                          |
| PICCS          | : On the invent              | ory, or in compliance with the inventory                          |
| IECSC          | : On the invent              | ory, or in compliance with the inventory                          |
| TCSI           | : On the invent              | ory, or in compliance with the inventory                          |
| TSCA           | : All substances             | s listed as active on the TSCA inventory                          |
| TECI           | : Not in complia             | ance 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 End Repair Enzyme Mix

#### **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 | : | No SARA Hazards   |
|----------------------|---|---|
| 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).

| APA LIP LIDrarv                              | <b>Preparation Kit</b>    |   |  |
|--|---------------------------|---|--|
| ersion                                       | Revision Date:            | Date of last issue: 10-11-2021  |  |
| .0   | 03-25-2022                | Date of first issue: 05-18-2016   |  |
| The following chemica ate or Final VOC's (40 |                           | U.S. Clean Air Act Section 111 SOCMI Intermedi-   |  |
| glycerol                                     | 56-81-5                   | >= 50 - < 70 %  |  |
| Clean Water Act<br>The following Hazardo     | ous Substances are liste  | d under the U.S. CleanWater Act, Section 311, Ta-   |  |
| ble 116.4A:                                  |                           | >= 0 - < 0.1 %  |  |
| Glycine, N,<br>ethanediylb<br>(carboxyme     | is[N-<br>ethyl)-          |   |  |
| The following Hazardo<br>117.3:              | ous Chemicals are listed  | under the U.S. CleanWater Act, Section 311, Table   |  |
| Glycine, N,<br>ethanediylb<br>(carboxyme     | is[N-                     | >= 0 - < 0.1 %  |  |
| This product does not                        |                           | ants listed under the U.S. Clean Water Act Section  |  |
| 307<br>This product does not                 | contain any priority poll | utants related to the U.S. Clean Water Act  |  |
| US State Regulation                          | S                         |   |  |
| Massachusetts Righ                           | t To Know                 |   |  |
| glycerol                                     |                           | 56-81-5   |  |
| Pennsylvania Right                           | To Know                   |   |  |
| glycerol<br>Water                            |                           | 56-81-5<br>7732-18-5  |  |
| Maine Chemicals of                           | High Concern              | 1132-10-3   |  |
|  | es not contain any listed | chemicals   |  |
| Vermont Chemicals                            | of High Concern           |   |  |
| Product do                                   | es not contain any listed | chemicals   |  |
| Washington Chemic                            | -                         | al a sub-site   |  |
|  | es not contain any listed |   |  |
| glycerol                                     | le Exposure Limits for    | Chemical Contaminants 56-81-5   |  |
| The ingredients of the                       | is product are reporte    | d in the following inventories:   |  |
| AIIC   | : Not in comp             | pliance with the inventory  |  |
| DSL  |                           | This product contains the following components listed on the Canadian NDSL. All other components are on the Canadian DSL. |  |
|  | DNA-deper                 | ndent DNA polymerase  |  |
|  | Polynucleot               | tide 5'-hydroxyl kinase   |  |
| NZIoC  | : On the inve             | entory, or in compliance with the inventory   |  |
| ENCS   | : Not in comp             | pliance with the inventory  |  |
| ISHL   | : Not in comp             | pliance with the inventory  |  |
| KECI   | : Not in comp             | pliance with the inventory  |  |

Roche



| Version<br>3.0 | Revision Date:<br>03-25-2022 | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |
|----------------|------------------------------|---|
| PICCS          | : Not in com                 | pliance with the inventory  |
| IECSC          | : Not in com                 | pliance with the inventory  |
| TCSI           | : On the inve                | entory, or in compliance with the inventory                       |
| TSCA           | : All substan                | ces listed as active on the TSCA inventory                        |
| TECI           | : Not in com                 | pliance 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 HiFi HotStart ReadyMix (2X)

#### **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

Listed substances in the product are at low enough levels to not be expected to exceed the 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)  |
|----------------------|---|---|
| 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 SOCMI Intermediate or Final VOC's (40 CFR 60.489): >= 10 - < 20 %

glycerol

56-81-5

#### **Clean Water Act**

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

| Hydrochloric acid                      | 7647-01-0 | >= 0 - < 0.1 % |
|--|-----------|----------------|
| Sulfuric acid                          | 7664-93-9 | >= 0 - < 0.1 % |
| Glycine, N,N'-1,2-<br>ethanediyIbis[N- | 60-00-4   | >= 0 - < 0.1 % |
| , .                                    |           |                |
| (carboxymethyl)-                       |           |                |



## KAPA LTP Library Preparation Kit

| Version |  |
|---------|--|
| 3.0     |  |

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

| Hydrochloric acid  | 7647-01-0 | >= 0 - < 0.1 % |
|--------------------|-----------|----------------|
| Sulfuric acid      | 7664-93-9 | >= 0 - < 0.1 % |
| Glycine, N,N'-1,2- | 60-00-4   | >= 0 - < 0.1 % |
| ethanediylbis[N-   |           |                |
| (carboxymethyl)-   |           |                |

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   |
|-------------------------------------|-----------|
| Hydrochloric acid                   | 7647-01-0 |
| Sulfuric acid                       | 7664-93-9 |
| Pennsylvania Right To Know<br>Water | 7732-18-5 |

| Water    | 7732-18-5 |
|----------|-----------|
| glycerol | 56-81-5   |

#### 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 Prop. 65

WARNING: This product can expose you to chemicals including Sulfuric acid, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

#### California Permissible Exposure Limits for Chemical Contaminants

| glycerol                     |     | 56-81-5   |
|------------------------------|-----|---|
| The ingredients of this prod | uct | are reported in the following inventories:  |
| AIIC                         | :   | Not in compliance with the inventory  |
|                              |     | 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  |
|                              |     | MAB / PAB   |
|                              |     | dUTP diphosphatase  |
|                              |     | DNA-dependent DNA polymerase  |



| Version<br>3.0 | Revision Date:<br>03-25-2022 | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |
|----------------|------------------------------|---|
| NZIoC          | : On the inventory,          | , or in compliance with the inventory                             |
| ENCS           | : Not in compliance          | e with the inventory  |
| ISHL           | : Not in compliance          | e with the inventory  |
| KECI           | : Not in compliance          | e with the inventory  |
| PICCS          | : Not in compliance          | e with the inventory  |
| IECSC          | : Not in compliance          | e with the inventory  |
| TCSI           | : Not in compliance          | e with the inventory  |
| TSCA           | : Product contains           | substance(s) not listed on TSCA inventory.                        |
| TECI           | : Not in compliance          | e 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 Amplification Primer Premixes (10X)

#### **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 | : | No SARA Hazards   |
|----------------------|---|---|
| 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 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

### **Clean Water Act**

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



# KAPA LTP Library Preparation Kit

| Vers<br>3.0 | ion  | Revision Date:<br>03-25-2022 | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016          |  |  |
|-------------|--|------------------------------|--|--|--|
|             | Hydrochlo<br>The following Hazard<br>117.3:  |                              | -0 >= 0 - < 0.1 %<br>under the U.S. CleanWater Act, Section 311, Table     |  |  |
|             | Hydrochlo  |                              | -0 $>= 0 - < 0.1 \%$<br>ants listed under the U.S. Clean Water Act Section |  |  |
|             | This product does not contain any priority pollutants related to the U.S. Clean Wate |                              |  |  |  |
|             | US State Regulation  |                              |  |  |  |
|             | Massachusetts Rig<br>Hydrochlo   |                              | 7647-01-0  |  |  |
|             | Pennsylvania Right<br>Water<br>Hydrochlo   |                              | 7732-18-5<br>7647-01-0   |  |  |
|             | Maine Chemicals of   |                              | chemicals  |  |  |
|             | Vermont Chemicals<br>Product do  | chemicals                    |  |  |  |
|             | chemicals  |                              |  |  |  |
|             | The ingredients of t<br>AIIC   | •                            | <b>d in the following inventories:</b><br>Diance with the inventory        |  |  |
|             | DSL  |                              | ct contains the following components that are not adian DSL nor NDSL.      |  |  |
|             |  | Primer / Oli                 | gonucleotide / Probe   |  |  |
|             | NZIoC  | : On the inve                | ntory, or in compliance with the inventory                                 |  |  |
|             | ENCS   | : Not in com                 | bliance with the inventory   |  |  |
|             | ISHL   | : Not in com                 | pliance with the inventory   |  |  |
|             | KECI   | : Not in com                 | bliance with the inventory   |  |  |
|             | PICCS  | : Not in com                 | bliance with the inventory   |  |  |
|             | IECSC  | : Not in com                 | bliance with the inventory   |  |  |
|             | TCSI   | : Not in com                 | pliance with the inventory   |  |  |
|             | TSCA   | : Product co                 | ntains substance(s) not listed on TSCA inventory.                          |  |  |
|             | TECI   | : Not in com                 | bliance 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 LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

### KAPA Hyper Prep DNA Ligase

#### **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 | : | No SARA Hazards   |
|----------------------|---|---|
| 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 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

| glycerol 56-81-5 >= | : 50 - < 70 % |
|---------------------|---------------|
|---------------------|---------------|

#### 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- 60-00-4 >= 0 - < 0.1 %ethanediylbis[N-(carboxymethyl)-

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

>= 0 - < 0.1 %

Glycine, N,N'-1,2- 60-00-4 ethanediylbis[N-(carboxymethyl)-

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              |
| Pennsylvania Right To Know  |                      |
| glycerol<br>Water           | 56-81-5<br>7732-18-5 |

#### Maine Chemicals of High Concern

Product does not contain any listed chemicals



| KA          | PA LTP Library                  | / Prepara               | tion Kit                       |  |  |
|-------------|---------------------------------|-------------------------|--------------------------------|--|--|
| Vers<br>3.0 | sion                            | Revision E<br>03-25-202 |                                | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016              |  |
|             | Vermont Chemicals               | •                       |                                |  |  |
|             |                                 |                         | in any listed chemi            | cals   |  |
|             | Washington Chemic<br>Product do | •                       | Concern<br>in any listed chemi | cals   |  |
|             | California Permissil            | ble Exposur             | Limits for Chem                | ical Contaminants  |  |
|             | glycerol                        |                         |                                | 56-81-5  |  |
|             | The ingredients of t            | his product             | are reported in th             | e following inventories:   |  |
|             | AIIC                            | :                       | Not in compliance              | with the inventory   |  |
|             | DSL                             | :                       |                                | ains the following components listed o<br>All other components are on the Cana |  |
|             |                                 |                         | Polynucleotide 5'-             | hydroxyl kinase  |  |
|             | 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   |  |
|             | PICCS                           | :                       | Not in compliance              | with the inventory   |  |
|             | IECSC                           | :                       | Not in compliance              | with the inventory   |  |
|             | TCSI                            | :                       | On the inventory,              | or in compliance with the inventory  |  |
|             | TSCA                            | :                       | All substances list            | ed as active on the 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 A-Tailing Enzyme

### 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 : No SARA Hazards



| Version  | Revision Date: | Date of last issue: 10-11-2021  |
|----------|----------------|---|
| 3.0      | 03-25-2022     | Date of first issue: 05-18-2016   |
| SARA 313 |                | es not contain any chemical components with bers that exceed the threshold (De Minimis) |

#### **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

reporting levels established by SARA Title III, Section 313.

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 SOCMI Intermediate or Final VOC's (40 CFR 60.489): >= 50 - < 70 %

56-81-5 glycerol

#### **Clean Water Act**

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A: 60-00-4 >= 0 - < 0.1 %

Glycine, N,N'-1,2ethanediylbis[N-(carboxymethyl)-

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

| Glycine, N,N'-1,2- | 60-00-4 | >= 0 - < 0.1 % |
|--------------------|---------|----------------|
| ethanediylbis[N-   |         |                |
| (carboxymethyl)-   |         |                |

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              |  |  |
| Pennsylvania Right To Know                                       |  |                      |  |  |
| glycerol<br>Water  |  | 56-81-5<br>7732-18-5 |  |  |
| Maine Chemicals of High Conc                                     | ern  |                      |  |  |
| Product does not contain any listed chemicals                    |  |                      |  |  |
| Vermont Chemicals of High Co                                     | ncern  |                      |  |  |
| 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              |  |  |
| The ingredients of this product                                  | are reported in the following inventor   | ries:                |  |  |
| AIIC :   | Not in compliance with the inventory   |                      |  |  |
| DSL :  | This product contains the following con<br>Canadian NDSL. All other components<br>DSL. | •                    |  |  |



| RAFA LIF LIDIALY FIEPALATION RIC |                              |   |  |  |
|----------------------------------|------------------------------|---|--|--|
| Version<br>3.0                   | Revision Date:<br>03-25-2022 | Date of last issue: 10-11-2021<br>Date of first issue: 05-18-2016 |  |  |
|                                  | DNA-depende                  | ent DNA polymerase  |  |  |
| NZIoC                            | : On the invent              | ory, or in compliance with the inventory                          |  |  |
| ENCS                             | : Not in complia             | ance with the inventory   |  |  |
| ISHL                             | : Not in complia             | ance with the inventory   |  |  |
| KECI                             | : Not in complia             | ance with the inventory   |  |  |
| PICCS                            | : Not in complia             | ance with the inventory   |  |  |
| IECSC                            | : Not in complia             | ance with the inventory   |  |  |
| TCSI                             | : On the invent              | ory, or in compliance with the inventory                          |  |  |

# TECI : Not in compliance with the inventory

### **TSCA** list

TSCA

No substances are subject to a Significant New Use Rule.

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

### KAPA End-Repair Buffer (10X)

| GHS label elements<br>Hazard pictograms | : |   |
|---|---|---|
| Signal Word                             | : | Warning   |
| Hazard Statements                       | : | H319 Causes serious eye irritation.   |
| Precautionary Statements                | : | <b>Prevention:</b><br>P264 Wash skin thoroughly after handling.<br>P280 Wear eye protection/ face protection.   |
|   |   | Response:<br>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water<br>for several minutes. Remove contact lenses, if present and easy<br>to do. Continue rinsing.<br>P337 + P313 If eye irritation persists: Get medical advice/ atten-<br>tion. |

: All substances listed as active on the TSCA inventory

### Kapa A-Tailing Buffer (10X)



# KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

### GHS label elements

Not a hazardous substance or mixture. *Kapa Ligation Buffer (5X)* 

#### GHS label elements

Not a hazardous substance or mixture. *KAPA PEG/NaCl* 

#### **GHS** label elements

Not a hazardous substance or mixture. *KAPA End Repair Enzyme Mix* 

#### **GHS** label elements

Not a hazardous substance or mixture. KAPA HiFi HotStart ReadyMix (2X)

#### **GHS** label elements

Hazard pictograms



| Signal Word                                      | : | Danger   |
|--|---|--|
| Hazard Statements                                | : | H370 Causes damage to organs.  |
| Precautionary Statements                         | : | <b>Prevention:</b><br>P260 Do not breathe mist or vapors.<br>P264 Wash skin thoroughly after handling.<br>P270 Do not eat, drink or smoke when using this product. |
|  |   | <b>Response:</b><br>P307 + P311 IF exposed: Call a POISON CENTER or doctor/<br>physician.  |
|  |   | Storage:<br>P405 Store locked up.  |
|  |   | <b>Disposal:</b><br>P501 Dispose of contents/ container to an approved waste disposal plant.   |
| KAPA Library Amplification Primer Premixes (10X) |   |  |

### GHS label elements

Not a hazardous substance or mixture. *KAPA Hyper Prep DNA Ligase* 

### **GHS** label elements

Not a hazardous substance or mixture. *KAPA A-Tailing Enzyme* 

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016



# **KAPA LTP Library Preparation Kit**

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

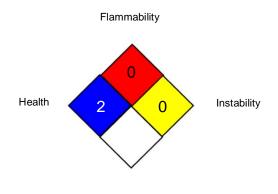
### GHS label elements

Not a hazardous substance or mixture.

#### **SECTION 16. OTHER INFORMATION**

#### **Further information**

#### NFPA 704:



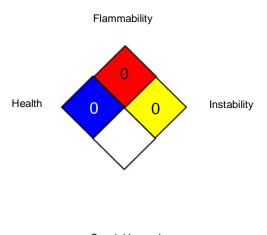
Special hazard

# HMIS® IV:



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:



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.

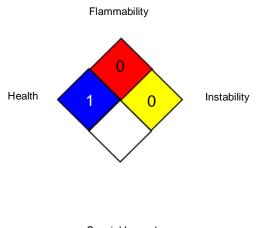
### Special hazard



Version 3.0

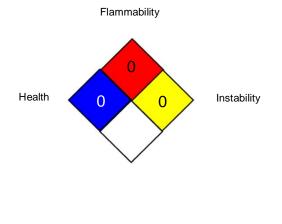
Revision Date: 03-25-2022

### NFPA 704:



Special hazard

NFPA 704:



Special hazard

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

### HMIS® IV:



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.

### HMIS® IV:



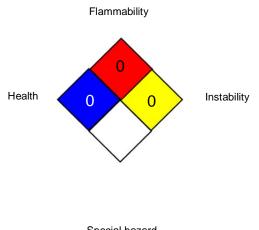
HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.



Version 3.0

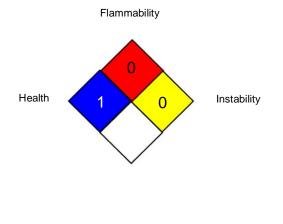
Revision Date: 03-25-2022

### NFPA 704:



Special hazard

NFPA 704:



Special hazard

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

### HMIS® IV:



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.

### HMIS® IV:



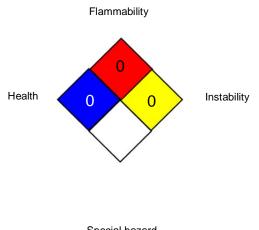
HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.



Version 3.0

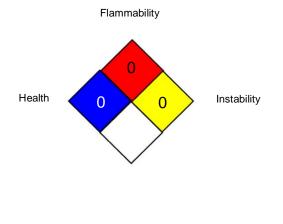
Revision Date: 03-25-2022

### NFPA 704:



Special hazard

NFPA 704:



Special hazard

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

### HMIS® IV:



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.

### HMIS® IV:



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:

Health



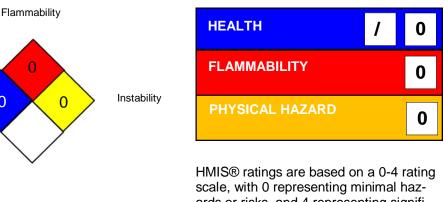
# **KAPA LTP Library Preparation Kit**

Version 3.0

**Revision Date:** 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

### HMIS® IV:



Special hazard

ards 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

0

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 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



# KAPA LTP Library Preparation Kit

Version 3.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-18-2016

**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.

US / Z8 / 2104