

Version	Revision Date:	Date of last issue: 10-11-2021
2.0	03-25-2022	Date of first issue: 05-17-2016

### **SECTION 1. IDENTIFICATION**

Product name Product code	:	KAPA Human Genomic DNA Quantification and QC Kit (AB Prism) 07960603001	
Manufacturer or supplier's of Company name of supplier			
Address	:	9115 Hague Road Indianapolis, IN 46250 USA	
Telephone Emergency telephone	:	1-800-428-5074	
In case of emergencies:	:	CHEMTREC	1-800-424-9300 (U.S. or Ca- nada) 1-703-527-3887 (Internatio- nal)
Recommended use of the cl	hen	nical and restrictions on use	
Restrictions on use	:	For professional 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	:	H370 Causes damage to organs.
Precautionary Statements	:	<b>Prevention:</b> P260 Do not breathe mist or vapors. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product.
		Response: P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
		1/34



Version 2.0 Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-17-2016

### 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 hgDNA Quantification Primer Premixes (10X)

### **GHS Classification**

Not a hazardous substance or mixture.

#### Components

No hazardous ingredients

### KAPA hgDNA Quantification Standards

### **GHS Classification**

Not a hazardous substance or mixture.

#### Components

No hazardous ingredients

### KAPA SYBR Fast ABI Prism qPCR Master Mix (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
Methane, 1,1'-sulfinylbis-	67-68-5	>= 5 - < 10
Methanaminium, N,N,N-trimethyl-, chloride (1:1)	75-57-0	>= 1 - < 5
1,3-Propanediol, 2-amino-2- (hydroxymethyl)-	77-86-1	>= 1 - < 5
DNA-dependent DNA polymerase	9012-90-2	< 0.1
Actual concentration is withheld as a	trado socrat	

Actual concentration is withheld as a trade secret

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



Version 2.0	Revision Date: 03-25-2022	Date of last issue: 10-11-2021 Date of first issue: 05-17-2016
General advice	Show th dance.	ut of dangerous area. is material safety data sheet to the doctor in atten- eave the victim unattended.
If inhaled	If uncon advice.	fresh air. scious, place in recovery position and seek medical oms persist, call a physician.
In case of skin contact	lf on ski	ritation persists, call a physician. n, rinse well with water. thes, remove clothes.
In case of eye contact	Remove Protect Keep ey	ately flush eye(s) with plenty of water. e contact lenses. unharmed eye. ve wide open while rinsing. ritation persists, consult a specialist.
If swallowed	Keep re Do not g Never g If sympt Take vio	nouth with water and drink afterwards plenty of water. spiratory tract clear. give milk or alcoholic beverages. ive anything by mouth to an unconscious person. oms persist, call a physician. ctim immediately to hospital. nouth with water.
Most important sympto and effects, both acute delayed		nown.
Notes to physician		aid procedure should be established in consultation doctor responsible for industrial medicine.

### SECTION 5. FIRE-FIGHTING MEASURES

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

### SECTION 6. ACCIDENTAL RELEASE MEASURES



Vers 2.0		Revision   03-25-202		Date of last issue: 10-11-2021 Date of first issue: 05-17-2016		
	Personal precautions, p tive equipment and emo gency procedures			tective equipment. e measures listed in sections 7 and 8.		
	Environmental precauti	ions :	Prevent further le	rom entering drains. akage or spillage if safe to do so. should be advised if significant spillages ned.		
	Methods and materials containment and cleani		acid binder, unive	rt absorbent material (e.g. sand, silica gel, ersal binder, sawdust). closed containers for disposal.		

### SECTION 7. HANDLING AND STORAGE

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

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### KAPA hgDNA Quantification Primer Premixes (10X)

Ingredients with workplace control parameters Contains no substances with occupational exposure limit values. *KAPA hgDNA Quantification Standards* 

Ingredients with workplace control parameters Contains no substances with occupational exposure limit values. KAPA SYBR Fast ABI Prism qPCR Master Mix (2X)

Ingredients with workplace control parameters



Version 2.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-17-2016

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
glycerol	56-81-5	TWA (mist, respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (mist, total dust)	15 mg/m3	OSHA Z-1
		TWA (Mist - total dust)	10 mg/m3	OSHA P0
		TWA (Mist - respirable fraction)	5 mg/m3	OSHA P0
Methane, 1,1'-sulfinylbis-	67-68-5	TWA	250 ppm	US WEEL
DNA-dependent DNA poly- merase	9012-90-2	IOEL	0.00006 mg/m3	Roche In- dustrial Hy- giene Com- mittee (RIHC)

	Engineering measures	:	No data available	
			In the case of vapor formation use a respirator with an approved filter.	
	Hand protection Material Break through time Glove thickness		In case of contact through splashing: Nitrile rubber > 30 min > 0.11 mm	
	Material Break through time Glove thickness		In case of full contact: butyl-rubber > 480 min > 0.4 mm	
	Remarks Eye protection	:	Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly. Eye wash bottle with pure water Tightly fitting safety goggles	
	Skin and body protection	:	Impervious clothing Choose body protection according to the amount and con- centration of the dangerous substance at the work place.	



Version 2.0

Revision Date: 03-25-2022 Date of last issue: 10-11-2021 Date of first issue: 05-17-2016

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### KAPA hgDNA Quantification 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	:	No data available
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (liquids)	:	Does not sustain combustion.
		The product is not flammable.
Self-ignition	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	0.996 g/cm3
Solubility(ies) Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n- octanol/water	:	No data available
Autoignition temperature	:	No data available



Version 2.0	Revisi 03-25	•=		Date of last issue: 10-11-2021 Date of first issue: 05-17-2016
Decomposition t	temperature	:	No data availab	le
Viscosity Viscosity, dy	namic	:	No data availab	e
Viscosity, kin	iematic	:	No data availab	le
Explosive prope	rties	:	Not explosive	
Oxidizing prope	rties	:	The substance of	or mixture is not classified as oxidizing.

### KAPA hgDNA Quantification Standards

Appearance	:	liquid
Color	:	colorless
Odor	:	odorless
Odor Threshold	:	No data available
рН	:	7.7
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (liquids)	:	Does not sustain combustion.
		The product is not flammable.
Self-ignition	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available



Vers 2.0	ion	Revision Date: 03-25-2022			Date of last issue: 10-11-2021 Date of first issue: 05-17-2016
	Density	:		0.996 g/cm3	
	Solubility(ies) Water solubility	:		completely misc	ible
	Solubility in other s	olvents :		No data availab	le
	Partition coefficient: n- octanol/water	· :		No data availab	le
	Autoignition temperatu	ure :		No data availab	le
	Decomposition tempe	rature :		No data availab	le
	Viscosity Viscosity, dynamic	:		No data availab	le
	Viscosity, kinemati	c :		No data availab	le
	Explosive properties	:		Not explosive	
	Oxidizing properties	:		The substance of	or mixture is not classified as oxidizing.

### KAPA SYBR Fast ABI Prism qPCR Master Mix (2X)

Appearance	:	liquid
Color	:	light orange
Odor	:	No data available
Odor Threshold	:	No data available
рН	:	9.0
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

### SAFETY DATA SHEET



### KAPA Human Genomic DNA Quantification and QC Kit (ABI Prism)

Versi 2.0	on	Revision 03-25-20			Date of last issue: 10-11-2021 Date of first issue: 05-17-2016
	Upper explosion limit / flammability limit	Upper :	:	No data available	e
	Lower explosion limit / flammability limit	Lower :		No data available	e
	Vapor pressure	:		No data available	9
	Relative vapor density	:		No data available	9
	Relative density	:		No data available	9
	Density	:		1.044 g/cm3	
	Solubility(ies) Water solubility	:		completely misci	ble
	Solubility in other so	olvents :		No data available	9
	Partition coefficient: n- octanol/water	:		No data available	e
	Autoignition temperatu	re :		No data available	9
	Decomposition temper	ature :		No data available	9
	Viscosity Viscosity, dynamic	:		No data available	e
	Viscosity, kinematic	; :		No data available	9
	Oxidizing properties	:		The substance o	r 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- tions	:	No dangerous reaction known under conditions of normal use. No decomposition if stored and applied as directed.
Conditions to avoid	:	Exposure to light.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

### SECTION 11. TOXICOLOGICAL INFORMATION

### KAPA hgDNA Quantification Primer Premixes (10X)



Version 2.0 Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-17-2016

### Acute toxicity

Not classified based on available information.

### Skin corrosion/irritation

Not classified based on available information.

### Serious eye damage/eye irritation

Not classified based on available information.

### Respiratory or skin sensitization

### Skin sensitization

Not classified based on available information.

### **Respiratory sensitization**

Not classified based on available information.

### Germ cell mutagenicity

Not classified based on available information.

### Carcinogenicity

Not classified based on available information.

**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 hgDNA Quantification Standards

### Acute toxicity

Not classified based on available information.

### Skin corrosion/irritation

Not classified based on available information.

### Serious eye damage/eye irritation

Not classified based on available information.



Version Revision Date: 2.0 03-25-2022 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.

Date of last issue: 10-11-2021

Date of first issue: 05-17-2016

- **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 SYBR Fast ABI Prism qPCR Master Mix (2X)

### Acute toxicity

Not classified based on available information.

### Components:

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



#### Version Revision Date: Date of last issue: 10-11-2021 03-25-2022 Date of first issue: 05-17-2016 2.0 Methane, 1,1'-sulfinylbis-: Acute oral toxicity LD50 (Rat, male and female): 28,300 mg/kg Method: OECD Test Guideline 401 GLP: no Acute inhalation toxicity LC0 (Rat, male and female): > 5.33 mg/l Exposure time: 4 h Test atmosphere: vapor Method: OECD Test Guideline 403 GLP: yes Acute dermal toxicity : LD50 Dermal (Rat, male and female): 40,000 mg/kg GLP: no Methanaminium, N,N,N-trimethyl-, chloride (1:1): LD50 Oral (Rat): 47 mg/kg Acute oral toxicity Method: OECD Test Guideline 401 GLP: no : LD50 Dermal (Rabbit): > 200 - < 500 mg/kg Acute dermal toxicity Method: OECD Test Guideline 402 GLP: yes 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-: Acute oral toxicity LD50 (Rat, female): > 5,000 mg/kg Method: OECD Test Guideline 425 GLP: ves LD50 (Rat, male and female): > 5,000 mg/kg Acute dermal toxicity Method: OECD Test Guideline 402 GLP: yes Skin corrosion/irritation Not classified based on available information. **Components:** glycerol: **Species** Rabbit Exposure time 24 h Result No skin irritation • GLP no Methane, 1,1'-sulfinylbis-: **Species** 2 Rabbit Exposure time 4 h Method **OECD** Test Guideline 404 5 GLP 5 yes Remarks Mild skin irritation

### KAPA Human Genomic DNA Quantification and QC Kit (ABI Prism)

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



Version 2.0

### Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-17-2016

### Result : Irritating to skin.

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

Species	: Rab	bit
Exposure time	: 4 h	
Method	: OE(	CD Test Guideline 404
Result	: No :	skin irritation
GLP	: yes	

### Serious eye damage/eye irritation

Not classified based on available information.

#### Components:

#### glycerol:

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

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

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

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

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

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

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

### Respiratory or skin sensitization

### Skin sensitization

Not classified based on available information.

#### **Respiratory sensitization**

Not classified based on available information.

### Components:

#### glycerol:

Assessment

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



Version Revision Date: 2.0 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-17-2016

#### Methane, 1,1'-sulfinylbis-: Test Type 1 Local lymph node assay (LLNA) Species Mouse ÷ Assessment Does not cause skin sensitization. 2 **OECD Test Guideline 429** Method 2 GLP 5 No information available. Assessment : Mild eye irritation, Mild skin irritation Methanaminium, N,N,N-trimethyl-, chloride (1:1): Test Type Local lymph node assay (LLNA) : Species 1 Mouse Assessment Does not cause skin sensitization. ÷ **OECD Test Guideline 429** Method 5 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-: Test Type Direct Peptide Reactivity Assay (DPRA) Assessment Does not cause skin sensitization. 2 GLP 2 yes Based on data from similar materials Remarks ÷ Expert judgment Test Type 2 **Buehler Test** Guinea pig Species 1 Method **OECD** Test Guideline 406 2 GLP 1 no Remarks Based on data from similar materials 1 Test Type Intracutaneous test : Species Guinea pig 1 GLP 1 no Remarks Based on data from similar materials :

### Germ cell mutagenicity

Not classified based on available information.

### **Components:**

glycerol:

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



Version	Revision Date:	Date of last issue: 10-11-2021
2.0	03-25-2022	Date of first issue: 05-17-2016

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

Genotoxicity in vitro :	Test Type: Microbial mutagenesis assay (Ames test) Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: No information available.
	Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative GLP: No information available.
	Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 479 Result: negative GLP: No information available.
Genotoxicity in vivo :	Test Type: In vivo micronucleus test Species: Rat (male and female) Cell type: Bone marrow Application Route: Intraperitoneal injection Dose: 200, 1000, 5000 mg/kg/d Method: OECD Test Guideline 474 GLP: yes
Methanaminium, N,N,N-trimeth	nyl-, chloride (1:1):
Genotoxicity in vitro :	Test Type: Microbial mutagenesis assay (Ames test) Test system: Salmonella typhimurium Result: negative
	Test Type: Microbial mutagenesis assay (Ames test) Test system: Escherichia coli Result: negative
1,3-Propanediol, 2-amino-2-(h	/droxymethyl)-:
Genotoxicity in vitro :	Test Type: Chromosome aberration test in vitro Test system: Chinese hamster lung cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative GLP: yes
	Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476



Version 2.0 Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-17-2016

Result: negative GLP: yes

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

### Carcinogenicity

Not classified based on available information.

### Components:

glycerol:					
Species Application Ro Exposure time GLP Remarks		Rat, male and female Oral 2 Years No information available. 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		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		nis product present at levels greater than or equal to 0.1% is own or anticipated carcinogen by NTP.			
Reproductive Not classified Components	based on available	information.			
glycerol:	<u>-</u>				
Effects on fert	ility :	Test Type: Two-generation study Species: Rat, male and female Application Route: Oral Dose: 2000 mg/kg bw/day Fertility: NOAEL: 2,000 mg/kg body weight GLP: no			
Effects on feta	al development :	Species: Rabbit, female Application Route: Oral Dose: 11.8, 54.8, 254.5, 1180 mg/kg bw/day Duration of Single Treatment: 29 d Developmental Toxicity: NOAEL: 1,180 mg/kg bw/day GLP: no			



Version 2.0	Revision Date: 03-25-2022	Date of last issue: 10-11-2021 Date of first issue: 05-17-2016
<b>Methane, 1,1'-sulfin</b> Effects on fertility	: Species: F Applicatio Dose: 100 Fertility: N	Rat, male and female n Route: Oral , 300, 1000 mg/kg bw/day OAEL: 1,000 mg/kg body weight DECD Test Guideline 421
Effects on fetal develo	Applicatio Dose: 200 Duration o Developm	Rat, female n Route: Oral , 1000, 5000 milligram per kilogram of Single Treatment: 10 d ental Toxicity: NOAEL: 1,000 mg/kg body weight DECD Test Guideline 414
1,3-Propanediol, 2-a	mino-2-(hydroxymeth	yl)-:
Effects on fertility	Species: F Applicatio Dose: 100 General T General T Method: C	: reproductive and developmental toxicity study Rat, male and female n Route: Oral , 300, 1000 mg/kg bw/day oxicity Parent: NOAEL: > 1,000 mg/kg body weight oxicity F1: NOAEL: > 1,000 mg/kg body weight DECD Test Guideline 421 imal testing did not show any effects on fertility.
Effects on fetal develo	Species: F Strain: wis Applicatio Dose: 100 General T weight Developm Method: C Result: No GLP: yes	: Pre-natal Rat, female star n Route: Oral , 300, 1000 mg/kg bw/day oxicity Maternal: NOAEL: > 1,000 mg/kg body ental Toxicity: NOAEL: 1,000 mg/kg body weight DECD Test Guideline 414 o effects on fetal development. Based on data from similar materials
STOT-single exposu	ıre	
Causes damage to or	gans.	
Components:		
Methanaminium, N,I	N,N-trimethyl-, chlorid	e (1:1):
Routes of exposure	: Ingestion	
Target Organs Assessment		ervous system amage to organs.

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

- Assessment
- : The substance or mixture is not classified as specific target



Version 2.0 Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-17-2016

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 2 organ toxicant, repeated exposure. Repeated dose toxicity **Components:** glycerol: **Species** Rat, male and female 1 NOAEL 4580 mg/kg 1 NOAEL 4,580 mg/kg 1 **Application Route** : Oral 90 d Exposure time 1 Number of exposures daily 1 Dose 4580 - 25,800 mg/kg/day : GLP : no Rat, male and female **Species** 2 Application Route : Inhalation Test atmosphere : dust/mist Exposure time 13 Weeks 2 Number of exposures : 6 hours/day, 5 days/week 33, 165 and 660 mg/m3 Dose : GLP : No information available. Species 2 Rat NOAEL 5040 mg/kg : NOAEL 5,040 mg/kg : dermal Application Route : 45 Weeks Exposure time 1 Number of exposures : 8 hours/day, 5 days/week Dose : 0.5-4.0 ml/kg GLP : no Repeated dose toxicity -: Mild eye irritant, Mild respiratory irritant, No skin irritation Assessment Methane, 1,1'-sulfinylbis-: **Species** 1 Monkey, male and female NOAEL 5 2970 mg/kg NOAEL : 2,970 mg/kg **Application Route** : Oral Exposure time : 87 Weeks Dose 2 990, 2970, 8910 mg/kg Method **OECD Test Guideline 452** ÷



Version 2.0	Revision Date: 03-25-2022	Date of last issue: 10-11-2021 Date of first issue: 05-17-2016
GLP	: no	
Species NOAEC Application Rout Test atmosphere Exposure time Dose Method GLP	: 2783 mg/l e : Inhalation e : vapor : 13 Weeks : 0.310, 0.9	
Species NOAEL NOAEL Application Rout Exposure time Dose Method GLP	: > 8910 mg : > 8,910 m : Dermal : 18 Months : 990, 2970	ig/kg
Repeated dose t Assessment	oxicity - : Mild eye in	rritation, Mild skin irritation
Methanaminiun	n, N,N,N-trimethyl-, chlorid	le (1:1):
Species NOAEL Application Rout Method GLP		st Guideline 421
1,3-Propanedio	I, 2-amino-2-(hydroxymeth	ıyl)-:
Species NOAEL LOAEL Application Rout Exposure time Number of expose Dose Method GLP Remarks	: Rat, male : 250 mg/kg : 1,000 mg/ : 0ral : 90 d sures : 62.5, 250, : 0ECD Te : yes	and female
Aspiration toxic	city	
Not classified ba	sed on available information	).

### Components:

### DNA-dependent DNA polymerase:

No data available



Version 2.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-17-2016

### **Further information**

**Components:** 

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

Remarks : Other dangerous properties can not be excluded.

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

### KAPA hgDNA Quantification Primer Premixes (10X)

Ecotoxicity No data available Persistence and degradability No data available Bioaccumulative potential No data available Mobility in soil No data available Other adverse effects

### KAPA hgDNA Quantification Standards

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 SYBR Fast ABI Prism qPCR Master Mix (2X)

Ecotoxicity	
Components:	
<b>glycerol:</b> Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 54,000 mg/l
	End point: mortality Exposure time: 96 h Test Type: static test GLP: no



Vers 2.0	ion	Revision 03-25-202		Date of last issue: 10-11-2021 Date of first issue: 05-17-2016	
	Toxicity to daphnia and aquatic invertebrates	d other :	LC50 (Daphnia r End point: morta Exposure time: 4 Test Type: static Analytical monito GLP: no	l8 h test	
	Toxicity to algae/aquat plants	tic :	(Scenedesmus End point: Grown Exposure time: & Test Type: static GLP: no	3 d	10,000 mg/l
	Toxicity to microorgan	isms :	EC50 (Pseudom End point: Grow Exposure time: 1 Test Type: static GLP: No informa	6 h test	
	Ecotoxicology Asses	ssment			
	Acute aquatic toxicity	:	This product has	no known ecotoxicological effe	cts.
	Chronic aquatic toxicit	у :	This product has	no known ecotoxicological effe	cts.
	Toxicity Data on Soil	:	Not expected to	adsorb on soil.	
	Other organisms relev the environment	ant to :	No data availabl	e	
	<b>Methane, 1,1'-sulfiny</b> Toxicity to fish	lbis-: :	End point: morta Exposure time: 9 Test Type: static Analytical monito	96 h e test	
	Toxicity to daphnia and aquatic invertebrates	d other :	Exposure time: 4 Test Type: static Analytical monito	test pring: yes Fest Guideline 202	ı/I
	Toxicity to algae/aquat plants	tic :	mg/l End point: Grown Exposure time: 7 Test Type: static Analytical monito	72 h e test	lgae)): 17,000



Versi 2.0	on	Revision 03-25-20			Date of last issue: 10-11-2021 Date of first issue: 05-17-2016
	Toxicity to microorgani	isms :		EC50 (activated s Exposure time: 0. Analytical monito Method: ISO 819 GLP: No informat	ring: no 2
	Ecotoxicology Asses	sment			
	Toxicity Data on Soil		:	Not expected to a	idsorb on soil.
	Other organisms relevent the environment	ant to :		No data available	
	Methanaminium, N,N Toxicity to fish	, <b>N-trimet</b> :	:	LC50 (Pimephale Exposure time: 9	s promelas (fathead minnow)): 462 mg/l
	Toxicity to daphnia and aquatic invertebrates	d other :		EC50 (Daphnia m Exposure time: 1 GLP: yes	nagna (Water flea)): 0.16 mg/l 1 d
				NOEC (Daphnia Exposure time: 1 GLP: yes	magna (Water flea)): 0.03 mg/l 1 d
				LC50 (Daphnia m Exposure time: 4 GLP: yes	agna (Water flea)): 1.86 mg/l 3 h
	Toxicity to algae/aquat plants	ic :		mg/l Exposure time: 72	rchneriella subcapitata (green algae)): 115 2 h est Guideline 201
	Ecotoxicology Asses	sment			
	Chronic aquatic toxicity		:	Toxic to aquatic li	fe with long lasting effects.
	Toxicity Data on Soil	:	:	Not expected to a	idsorb on soil.
	Other organisms relev the environment	ant to :	:	No data available	
	1,3-Propanediol, 2-ar	nino-2-(h	iyd	roxymethyl)-:	
	Toxicity to fish	:	:	LC50 (Fish): > 4,0 Exposure time: 90 Test Type: static Analytical monito Method: DIN 384	6 h test ring: no

GLP: no



Version 2.0	Revision 03-25-202		Date of last issue: 10-11-2021 Date of first issue: 05-17-2016
Toxicity to daphnia aquatic invertebrate		End point: Exposure to Test Type: Analytical r	
Toxicity to algae/ac plants	juatic :	mg/l End point: Exposure ti Test Type: Analytical r Method: Ol	
Toxicity to microor	janisms :	End point: Exposure to Test Type: Analytical r	
Ecotoxicology As Toxicity Data on So		Not expect	ed to adsorb on soil.
Other organisms re the environment	elevant to :	No data av	ailable
DNA-dependent D	NA polymera	ise:	
Ecotoxicology As Toxicity Data on So		Not expect	ed to adsorb on soil.
Other organisms re the environment	elevant to :	No data av	ailable
Persistence and d	legradability		
Components:			
<b>glycerol:</b> Biodegradability	:	Concentrat Result: Rea	activated sludge ion: 226 mg/l adily biodegradable. ation: 94 % me: 24 h



	3117			
Vers 2.0	Version Revision I 2.0 03-25-202			Date of last issue: 10-11-2021 Date of first issue: 05-17-2016
	Methane, 1,1'-sulfiny	lbis-:		
	Biodegradability	:	Biodegradation: Exposure time: 2	2 mg/l ily biodegradable. 31 %
	Methanaminium, N,N	I,N-trimethy	/I-, chloride (1:1)	):
	Biodegradability	:		ted to be biodegradable
	1,3-Propanediol, 2-a	mino-2-(hyd	droxymethyl)-:	
	Biodegradability	:	aerobic Inoculum: activa Result: Readily I Biodegradation: Exposure time: 2 Method: OECD GLP: yes	biodegradable. 100 %
	Bioaccumulative potential			
	Components:			
	glycerol:			
	Partition coefficient: n octanol/water	- :	log Pow: -1.75 ( pH: 7.4 Method: OECD GLP: no	77 °F / 25 °C) Test Guideline 107
	Methane, 1,1'-sulfiny	lbis-:		
	Partition coefficient: n octanol/water		log Pow: -1.35 (i pH: 7 GLP: No informa	
	Methanaminium, N,N	I,N-trimethy	/I-, chloride (1:1)	):
	Partition coefficient: n octanol/water	- :	Remarks: No da	ta available
	1,3-Propanediol, 2-a	mino-2-(hyd	droxymethyl)-:	
	Bioaccumulation	:	Remarks: Due to	o the distribution coefficient n-octanol/water, organisms is not expected.
	Partition coefficient: n octanol/water	- :	log Pow: -2.31 ( Method: OECD GLP: no	68 °F / 20 °C) Test Guideline 107

**DNA-dependent DNA polymerase:** 



	Revision Date: 03-25-2022	Date of last issue: 10-11-2021 Date of first issue: 05-17-2016
Partition coefficient: n- octanol/water	: Remarks: I	No data available
<b>Mobility in soil</b> No data available		
Other adverse effects		
SECTION 13. DISPOSAL C	ONSIDERATIONS	
<b>Disposal methods</b> Waste from residues		taminate ponds, waterways or ditches with chemi
-	cal or used Send to a l	container. icensed waste management company. posed as waste water, when in compliance with

### **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

### Demonstration and still

### 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

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

### KAPA hgDNA Quantification Primer Premixes (10X)

:



Version 2.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-17-2016

7732-18-5

### **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	kno	is material does not contain any chemical components with own CAS numbers that exceed the threshold (De Minimis) porting 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 Righ	nt To Know
-------------------	------------

Water

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.



Version 2.0	Revision Date: 03-25-2022	Date of last issue: 10-11-2021 Date of first issue: 05-17-2016
	Primer / Oli	gonucleotide / Probe
NZIoC	: On the inve	ntory, or in compliance with the inventory
ENCS	: Not in comp	bliance with the inventory
ISHL	: Not in comp	bliance with the inventory
KECI	: Not in comp	bliance with the inventory
PICCS	: Not in comp	bliance with the inventory
IECSC	: Not in comp	bliance with the inventory
TCSI	: Not in comp	bliance with the inventory
TSCA	: Product cor	ntains substance(s) not listed on TSCA invent
TECI	: Not in comp	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 hgDNA Quantification Standards

### **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 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).



Version 2.0	Revision Date 03-25-2022	e: Date of last issue: 10-11-2021 Date of first issue: 05-17-2016		
	uct does not contain any ch ntermediate or Final VOC's (	in any chemicals listed under the U.S. Clean Air Act Section 111 I VOC's (40 CFR 60.489).		
Clean Wa	ater Act			
The follow ble 116.4		s are listed under the U.S. CleanWater Act, Section 311, Ta-		
The follow 117.3:	Hydrochloric acid ving Hazardous Chemicals	7647-01-0 $>= 0 - < 0.1 \%$ emicals are listed under the U.S. CleanWater Act, Section 311, Table		
This prod 307	Hydrochloric acid uct does not contain any to	7647-01-0 $>= 0 - < 0.1 \%$ kic pollutants listed under the U.S. Clean Water Act Section		
This prod	uct does not contain any pri	iority pollutants related to the U.S. Clean Water Act		
US State	Regulations			
Massach	usetts Right To Know			
	Hydrochloric acid	7647-01-0		
Pennsylv	<b>/ania Right To Know</b> Water	7722 19 5		
	Hydrochloric acid	7732-18-5 7647-01-0		
Maine Ch				
	Product does not contain a	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	-	n the inventory, or in compliance with the inventory		
DSL	: All	components of this product are on the Canadian DSL		
NZIoC	: Or	n the inventory, or in compliance with the inventory		
ENCS	: No	ot in compliance with the inventory		
ISHL	: No	ot in compliance with the inventory		
KECI	: Or	n the inventory, or in compliance with the inventory		
PICCS	: Or	n the inventory, or in compliance with the inventory		
IECSC	: Or	n the inventory, or in compliance with the inventory		
TCSI	: Or	n the inventory, or in compliance with the inventory		
TSCA	: All	substances listed as active on the TSCA inventory		
TECI	: No	ot in compliance with the inventory		



Version 2.0 Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-17-2016

### **TSCA** list

No substances are subject to a Significant New Use Rule.

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

### KAPA SYBR Fast ABI Prism qPCR Master Mix (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

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

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

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

SARA 311/312 Hazards	:	Specific target organ toxicity (single or repeated exposure)
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	>= 10 - < 20 %
Methane, 1,1'-sulfinylbis-	67-68-5	>= 5 - < 10 %

#### **Clean Water Act**

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

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

(carbox)	vm	ethv	/l)-	

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



# KAPA Human Genomic DNA Quantification and QC Kit (ABI<br/>Prism)Version<br/>2.0Revision Date:<br/>03-25-2022Date of last issue: 10-11-2021<br/>Date of first issue: 05-17-2016

2.0		03-25-20	JZ.	2 Date of first	it Issue: 05-17-2016
	gl	ycerol			56-81-5
	Pennsylvan	ia Right To Know			
	W	/ater ycerol ethane, 1,1'-sulfinyl	lbis	<u>}-</u>	7732-18-5 56-81-5 67-68-5
		nicals of High Con		<b>rn</b> n any listed chemicals	
		nemicals of High C		-	
		-		n any listed chemicals	
	Washingtor	n Chemicals of Hig	Jh	Concern	
	P	roduct does not con	itai	n any listed chemicals	
		-	ure	E Limits for Chemical Conta	
	•	ycerol	- 4		56-81-5
	AllC	•	Ct :	are reported in the followin Not in compliance with the ir	•
	DSL	:		This product contains the fol on the Canadian DSL nor N	owing components that are not DSL.
				Guanosine 5'-(tetrahydroger	triphosphate), 2'-deoxy-
				Adenosine 5'-(tetrahydrogen	triphosphate), 2'-deoxy-
				thymidine 5'-(tetrahydrogen	riphosphate)
				Cytidine 5'-(tetrahydrogen tr	phosphate), 2'-deoxy-
				MAB / PAB	
				SYBR Green I nucleic acid g	el stain
				6-Carboxy-X-rhodamine	
				DNA-dependent DNA polym	erase
	NZIoC	:	:	Not in compliance with the ir	ventory
	ENCS	:	:	Not in compliance with the ir	ventory
	ISHL	:	:	Not in compliance with the ir	ventory
	KECI	:	:	Not in compliance with the ir	ventory
	PICCS	:	:	Not in compliance with the ir	ventory
	IECSC	:	:	Not in compliance with the ir	ventory
	TCSI	:	:	Not in compliance with the ir	ventory
	TSCA	:	•	Product contains substance	s) not listed on TSCA inventory.



Version 2.0 Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-17-2016

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 hgDNA Quantification Primer Premixes (10X)

### **GHS** label elements

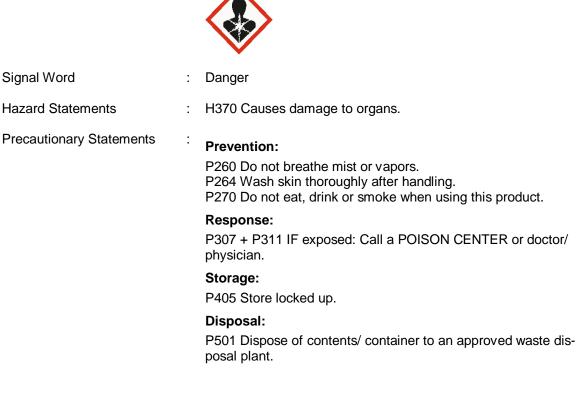
Not a hazardous substance or mixture. KAPA hgDNA Quantification Standards

### **GHS** label elements

Not a hazardous substance or mixture. KAPA SYBR Fast ABI Prism qPCR Master Mix (2X)

### **GHS** label elements

Hazard pictograms





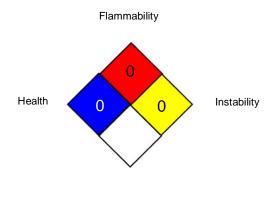
Version 2.0 Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-17-2016

### SECTION 16. OTHER INFORMATION

### **Further information**



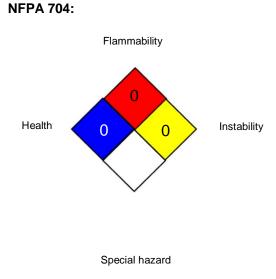


Special hazard

### 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.

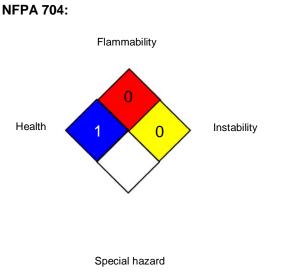


### HMIS® IV:



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

2.0



### KAPA Human Genomic DNA Quantification and QC Kit (ABI Prism)

Revision Date:

03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-17-2016 Roche

### 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.

### Full text of other abbreviations

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



Version 2.0

Revision Date: 03-25-2022

Date of last issue: 10-11-2021 Date of first issue: 05-17-2016

**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