

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013**SECTION 1. IDENTIFICATION**

Product name : KIT COBAS 4800 KRAS AMP/DET 24T RUO

Mat.-No./ Genisys-No. : 06496628190

Manufacturer or supplier's details

Company name of supplier : Roche Diagnostics

Address : 9115 Hague Road
46250 Indianapolis IN

Telephone : 1-800-428-5074

Emergency telephone number:

In case of emergencies: : CHEMTREC 1-800-424-9300 (U.S. or Canada)
1-703-527-3887 (International)**Recommended use of the chemical and restrictions on use**

Restrictions on use : For professional users only.

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

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

GHS Label element

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**KRAS MIX****GHS Classification**

Not a hazardous substance or mixture.

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
glycerol	56-81-5	>= 30 - < 50
dimethyl sulfoxide	67-68-5	>= 1 - < 5

MGAC / Mg 2+**GHS Classification**

Not a hazardous substance or mixture.

KIT COBAS 4800 KRAS AMP/DET 24T RUO

Version
1.4

Revision Date:
04-24-2015

Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

Hazardous components

No hazardous ingredients

KRAS 12/13 OM**GHS Classification**

Not a hazardous substance or mixture.

Hazardous components

No hazardous ingredients

KRAS 61 OM**GHS Classification**

Not a hazardous substance or mixture.

Hazardous components

No hazardous ingredients

KRAS MC**GHS Classification**

Not a hazardous substance or mixture.

Hazardous components

No hazardous ingredients

KRAS CAL**GHS Classification**

Not a hazardous substance or mixture.

Hazardous components

No hazardous ingredients

DNA SD/EB**GHS Classification**

Not a hazardous substance or mixture.

Hazardous components

No hazardous ingredients

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Move to fresh air.
If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

In case of skin contact	: If on skin, rinse well with water.
In case of eye contact	: Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	: Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: No information available.
Notes to physician	: The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5. FIREFIGHTING MEASURES

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

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

KIT COBAS 4800 KRAS AMP/DET 24T RUO
Version
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013
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 vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
KRAS MIX
Components with workplace control parameters

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

MGAC / Mg 2+
Components with workplace control parameters

Contains no substances with occupational exposure limit values.

KRAS 12/13 OM
Components with workplace control parameters

Contains no substances with occupational exposure limit values.

KRAS 61 OM

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

KRAS MC**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

KRAS CAL**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

DNA SD/EB**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

Personal protective equipment

Hand protection

Material : Protective gloves

Remarks : The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. This recommendation is only valid for the product mentioned in the safety data sheet and provided by us and for the application specified by us. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles

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

Hygiene measures : Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**KRAS MIX**

Appearance : liquid

Colour : yellow

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/range : No data available

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

Boiling point/boiling range	: No data available
Flash point	: does not flash
Evaporation rate	: No data available
Flammability (solid, gas)	: The product is not flammable.
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1.155 g/cm ³
Solubility(ies)	
Water solubility	: completely miscible
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

MGAC / Mg 2+

Appearance	: liquid
Colour	: colourless
Odour	: No data available
Odour Threshold	: No data available
pH	: No data available
Melting point/range	: No data available
Boiling point/boiling range	: No data available
Flash point	: does not flash
Evaporation rate	: No data available
Flammability (solid, gas)	: The product is not flammable.
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1.0 g/cm ³

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

Solubility(ies)
Water solubility : completely miscible

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

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity : No data available

Explosive properties : No data available

Oxidizing properties : The substance or mixture is not classified as oxidizing.

KRAS 12/13 OM

Appearance : liquid

Colour : blue

Odour : No data available

Odour Threshold : No data available

pH : 8

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : does not flash

Evaporation rate : No data available

Flammability (solid, gas) : The product is not flammable.

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 1.006 g/cm³

Solubility(ies)
Water solubility : completely miscible

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

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity : No data available

Explosive properties : No data available

Oxidizing properties : The substance or mixture is not classified as oxidizing.

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013**KRAS 61 OM**

Appearance	: liquid
Colour	: blue
Odour	: No data available
Odour Threshold	: No data available
pH	: 8
Melting point/range	: No data available
Boiling point/boiling range	: No data available
Flash point	: does not flash
Evaporation rate	: No data available
Flammability (solid, gas)	: The product is not flammable.
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1.006 g/cm ³
Solubility(ies)	
Water solubility	: completely miscible
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

KRAS MC

Appearance	: liquid
Colour	: colourless
Odour	: odourless
Odour Threshold	: No data available
pH	: 8
Melting point/range	: No data available
Boiling point/boiling range	: No data available

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

Flash point	: does not flash
Evaporation rate	: No data available
Flammability (solid, gas)	: The product is not flammable.
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1.006 g/cm ³
Solubility(ies)	
Water solubility	: completely miscible
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

KRAS CAL

Appearance	: liquid
Colour	: colourless
Odour	: odourless
Odour Threshold	: No data available
pH	: 8
Melting point/range	: No data available
Boiling point/boiling range	: No data available
Flash point	: does not flash
Evaporation rate	: No data available
Flammability (solid, gas)	: The product is not flammable.
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1.006 g/cm ³

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

Solubility(ies)
Water solubility : completely miscible

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

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity : No data available

Explosive properties : No data available

Oxidizing properties : The substance or mixture is not classified as oxidizing.

DNA SD/EB

Appearance : liquid

Colour : colourless

Odour : odourless

Odour Threshold : No data available

pH : 8.7

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : does not flash

Evaporation rate : No data available

Flammability (solid, gas) : The product is not flammable.

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 1 g/cm³

Solubility(ies)
Water solubility : completely miscible

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

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity : No data available

Explosive properties : No data available

Oxidizing properties : The substance or mixture is not classified as oxidizing.

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013**SECTION 10. STABILITY AND REACTIVITY**

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

SECTION 11. TOXICOLOGICAL INFORMATION***KRAS MIX*****Acute toxicity**

Not classified based on available information.

Product:

Acute oral toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
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Components:**glycerol:**

Acute oral toxicity	: LD50 Oral (Rat): 12,600 mg/kg LD50 Oral (Mouse): 4,090 mg/kg
Acute inhalation toxicity	: Acute toxicity estimate: > 30 mg/l Method: Expert judgement
Acute dermal toxicity	: LD50 Dermal (Rabbit): 10,000 mg/kg

dimethyl sulfoxide:

Acute oral toxicity	: LD50 Oral (Rat): 14,500 mg/kg LD50 Oral (Mouse): 7,920 mg/kg
Acute inhalation toxicity	: Acute toxicity estimate: > 30 mg/l Test atmosphere: vapour Method: Expert judgement
Acute dermal toxicity	: LD50 Dermal (Rat): 40,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks: May cause skin irritation and/or dermatitis.

KIT COBAS 4800 KRAS AMP/DET 24T RUO

Version
1.4

Revision Date:
04-24-2015

Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

Components:**dimethyl sulfoxide:**

Remarks: This information is not available.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

Components:**dimethyl sulfoxide:**

Remarks: This information is not available.

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Product:

Remarks: Causes sensitisation.

Components:**glycerol:**

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

dimethyl sulfoxide:

Species: Guinea pig

Result: Does not cause skin sensitisation.

Assessment: Mild eye irritation, Mild skin irritation

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC

No component 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 identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component 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.

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013**STOT - single exposure**

Not classified based on available information.

Components:**dimethyl sulfoxide:**

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:**dimethyl sulfoxide:**

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

Components:**glycerol:**Repeated dose toxicity - : Mild eye irritant, Mild respiratory irritant, No skin irritation
Assessment**dimethyl sulfoxide:**Repeated dose toxicity - : Mild eye irritation, Mild skin irritation
Assessment**Aspiration toxicity**

Not classified based on available information.

Components:**dimethyl sulfoxide:**

No data available

MGAC / Mg 2+**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 sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC

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

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013**OSHA**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component 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.

KRAS 12/13 OM**Acute toxicity**

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Product:

Remarks: Causes sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC

No component of this product present at levels greater than or

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

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 identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component 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.

KRAS 61 OM**Acute toxicity**

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Product:

Remarks: Causes sensitisation.

Germ cell mutagenicity

Not classified based on available information.

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013**Carcinogenicity**

Not classified based on available information.

IARC

No component 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 identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component 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.

KRAS MC**Acute toxicity**

Not classified based on available information.

Product:Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method**Skin corrosion/irritation**

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC

No component 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 identified as a carcinogen or potential carcinogen by OSHA.

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013**NTP**

No component 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.

KRAS CAL**Acute toxicity**

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC

No component 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 identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component 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.

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013**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.

DNA SD/EB**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 sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC

No component 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 identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component 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.

SECTION 12. ECOLOGICAL INFORMATION**KRAS MIX**

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013**Ecotoxicity****Product:**

Ecotoxicology Assessment

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

Other organisms relevant to
the environment : No data available**Components:****glycerol:**Toxicity to fish : LC50: > 100 mg/l
Exposure time: 96 hToxicity to algae : EC0 (Scenedesmus quadricauda (Green algae)): > 10,000
mg/l
Exposure time: 7 dToxicity to fish (Chronic tox-
icity) : > 1 mg/lToxicity to bacteria : EC0 (Pseudomonas putida): > 10,000 mg/l
Exposure time: 16 hEcotoxicology 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**dimethyl sulfoxide:**Toxicity to fish : LC50 (Fish): 32,500 mg/l
Exposure time: 96 hToxicity to daphnia and other
aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 24,600 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202Toxicity to bacteria : EC50 (Photobacterium phosphoreum): ca. 70,000 mg/l
Exposure time: 0.25 hEcotoxicology Assessment
Toxicity Data on Soil : Not expected to adsorb on soil.Other organisms relevant to
the environment : No data available**Persistence and degradability****Components:****glycerol:**

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

Biodegradability : Remarks: The product is miscible in water and readily biodegradable in both water and soil. Accumulation is not expected.

dimethyl sulfoxide:

Biodegradability : Biodegradation: 4 %
Exposure time: 1 d

Biodegradation: 6 %
Exposure time: 8 d

Biodegradation: 29 %
Exposure time: 15 d

Biodegradation: 90 %
Exposure time: 28 d
Method: OECD Test Guideline 302

Bioaccumulative potential**Components:****glycerol:**

Partition coefficient: n-octanol/water : log Pow: -2.66

dimethyl sulfoxide:

Partition coefficient: n-octanol/water : log Pow: -1.35

Mobility in soil

No data available

Other adverse effects**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks: 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).

MGAC / Mg 2+**Ecotoxicity****Product:**

Ecotoxicology Assessment
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

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013**Bioaccumulative potential**

No data available

Mobility in soil

No data available

Other adverse effects**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: 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).

KRAS 12/13 OM**Ecotoxicity****Product:**

Ecotoxicology Assessment
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

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: 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).

KRAS 61 OM**Ecotoxicity****Product:**

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

Other organisms relevant to the environment : No data available

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013**Persistence and degradability**

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: 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).

KRAS MC**Ecotoxicity****Product:**

Ecotoxicology Assessment
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

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: 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).

KRAS CAL**Ecotoxicity****Product:**

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

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

Other organisms relevant to the environment : No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: 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).

DNA SD/EB**Ecotoxicity****Product:**

Ecotoxicology Assessment
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

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: 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).

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

Waste from residues : Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
Can be disposed as waste water, when in compliance with local regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**International Regulation****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 for product as supplied.

National Regulations**49 CFR**

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION**KRAS MIX**

TSCA list : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know Act**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 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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

KIT COBAS 4800 KRAS AMP/DET 24T RUO
Version
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

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 12 (40 CFR 61).

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

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

glycerol	56-81-5	35.05 %
dimethyl sulfoxide	67-68-5	4.76 %

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

Massachusetts Right To Know

glycerol	56-81-5	30 - 50 %
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Pennsylvania Right To Know

water	7732-18-5	30 - 50 %
glycerol	56-81-5	30 - 50 %
N-(tri(hydroxymethyl)methyl)glycine	5704-04-1	5 - 10 %
dimethyl sulfoxide	67-68-5	1 - 5 %

New Jersey Right To Know

water	7732-18-5	30 - 50 %
glycerol	56-81-5	30 - 50 %
N-(tri(hydroxymethyl)methyl)glycine	5704-04-1	5 - 10 %
dimethyl sulfoxide	67-68-5	1 - 5 %
potassium acetate	127-08-2	1 - 5 %

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

REACH	: Not in compliance with the inventory
	: glycerol
	: N-(tri(hydroxymethyl)methyl)glycine
	: dimethyl sulfoxide
	: potassium acetate
	: Guanosine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
	: 2'-Deoxycytidine 5'-triphosphate disodium salt

KIT COBAS 4800 KRAS AMP/DET 24T RUO
Version
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

CH INV

TSCA

- : 2'-deoxyadenosine 5'-(tetrahydrogen triphosphate)
- : dTTP
- : Glycols
- : Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
- : sodium chloride
- : potassium chloride
- : 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
- : trometamol
- : (R*,R*)-1,4-dimercaptobutane-2,3-diol
- : disodium dihydrogen ethylenediaminetetraacetate
- : Uracil DNA Glycosylase
- : Modified alkyl carboxylate
- : Tween 20
- : mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)
- : Edetic acid disodium salt dihydrate (EDTA-2Na-2H₂O)
- : Not in compliance with the inventory
- : 2'-Deoxycytidine 5'-triphosphate disodium salt
- : dTTP
- : Glycols
- : Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
- : Uracil DNA Glycosylase
- : Modified alkyl carboxylate
- : mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)
- : Not On TSCA Inventory
- : Guanosine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

- : 2'-Deoxycytidine 5'-triphosphate disodium salt
 - : 2'-deoxyadenosine 5'-(tetrahydrogen triphosphate)
 - : dTTP
 - : Glycols
 - : Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
 - : Uracil DNA Glycosylase
 - : Modified alkyl carboxylate
 - : mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)
- DSL
- : This product contains the following components that are not on the Canadian DSL nor NDSL.
 - : Guanosine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
 - : 2'-Deoxycytidine 5'-triphosphate disodium salt
 - : 2'-deoxyadenosine 5'-(tetrahydrogen triphosphate)
 - : dTTP
 - : Glycols
 - : Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
 - : Uracil DNA Glycosylase
 - : Modified alkyl carboxylate
- AICS
- : Not in compliance with the inventory
 - : Guanosine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
 - : 2'-Deoxycytidine 5'-triphosphate disodium salt
 - : 2'-deoxyadenosine 5'-(tetrahydrogen triphosphate)
 - : dTTP
 - : Glycols
 - : Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt

KIT COBAS 4800 KRAS AMP/DET 24T RUO

 Version
1.4

 Revision Date:
04-24-2015

 Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

	: Uracil DNA Glycosylase
	: Modified alkyl carboxylate
	: mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)
NZloC	: Not in compliance with the inventory
	: Modified alkyl carboxylate
ENCS	: Not in compliance with the inventory
	: water
	: N-(tri(hydroxymethyl)methyl)glycine
	: Guanosine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
	: 2'-Deoxycytidine 5'-triphosphate disodium salt
	: 2'-deoxyadenosine 5'-(tetrahydrogen triphosphate)
	: dTTP
	: Glycols
	: Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
	: 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
	: (R*,R*)-1,4-dimercaptobutane-2,3-diol
	: Uracil DNA Glycosylase
	: Modified alkyl carboxylate
ISHL	: Not in compliance with the inventory
	: water
	: N-(tri(hydroxymethyl)methyl)glycine
	: Guanosine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
	: 2'-Deoxycytidine 5'-triphosphate disodium salt
	: 2'-deoxyadenosine 5'-(tetrahydrogen triphosphate)
	: dTTP
	: Glycols

KIT COBAS 4800 KRAS AMP/DET 24T RUO
Version
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

	: Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
	: 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
	: (R*,R*)-1,4-dimercaptobutane-2,3-diol
	: Uracil DNA Glycosylase
	: Modified alkyl carboxylate
KECI	: Not in compliance with the inventory
	: N-(tri(hydroxymethyl)methyl)glycine
	: 2'-Deoxycytidine 5'-triphosphate disodium salt
	: 2'-deoxyadenosine 5'-(tetrahydrogen triphosphate)
	: dTTP
	: Glycols
	: Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
	: (R*,R*)-1,4-dimercaptobutane-2,3-diol
	: Uracil DNA Glycosylase
	: Modified alkyl carboxylate
PICCS	: Not in compliance with the inventory
	: N-(tri(hydroxymethyl)methyl)glycine
	: Guanosine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
	: 2'-Deoxycytidine 5'-triphosphate disodium salt
	: 2'-deoxyadenosine 5'-(tetrahydrogen triphosphate)
	: dTTP
	: Glycols
	: Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
	: Uracil DNA Glycosylase
	: Modified alkyl carboxylate
IECSC	: Not in compliance with the inventory

KIT COBAS 4800 KRAS AMP/DET 24T RUO
Version
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

- : Guanosine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
- : 2'-Deoxycytidine 5'-triphosphate disodium salt
- : 2'-deoxyadenosine 5'-(tetrahydrogen triphosphate)
- : dTTP
- : Glycols
- : Uridine 5'-(tetrahydrogen triphosphate), 2'-deoxy-, trisodium salt
- : Uracil DNA Glycosylase
- : Modified alkyl carboxylate

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

MGAC / Mg 2+

TSCA list : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know Act**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium azide	26628-22-8	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium azide	26628-22-8	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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).

KIT COBAS 4800 KRAS AMP/DET 24T RUO
Version
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

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

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

Clean Water Act

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

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

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

Massachusetts Right To Know

sodium azide	26628-22-8	0 - 0.1 %
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Pennsylvania Right To Know

water	7732-18-5	90 - 100 %
sodium azide	26628-22-8	0 - 0.1 %

New Jersey Right To Know

water	7732-18-5	90 - 100 %
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California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

REACH : Not in compliance with the inventory

: Magnesium di(acetate)Tetrahydrate

: sodium azide

CH INV : Not in compliance with the inventory

: Magnesium di(acetate)Tetrahydrate

TSCA : Not On TSCA Inventory

: Magnesium di(acetate)Tetrahydrate

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

: Magnesium di(acetate)Tetrahydrate

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

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

ENCS : Not in compliance with the inventory

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

	: water
	: Magnesium di(acetate)Tetrahydrate
ISHL	: Not in compliance with the inventory
	: water
	: Magnesium di(acetate)Tetrahydrate
KECI	: Not in compliance with the inventory
	: Magnesium di(acetate)Tetrahydrate
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

KRAS 12/13 OM

TSCA list : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know Act**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 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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 12 (40 CFR 61).

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

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

Clean Water Act

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

SAFETY DATA SHEET



KIT COBAS 4800 KRAS AMP/DET 24T RUO

Version
1.4

Revision Date:
04-24-2015

Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

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

Massachusetts Right To Know

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

Pennsylvania Right To Know

water	7732-18-5	90 - 100 %
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New Jersey Right To Know

water	7732-18-5	90 - 100 %
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California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

REACH	: Not in compliance with the inventory
	: Glycols
	: 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
	: trometamol
	: Modified alkyl carboxylate
	: Edetic acid disodium salt dihydrate (EDTA-2Na-2H ₂ O)
	: mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)
	: Ribonucleic acids
CH INV	: Not in compliance with the inventory
	: Glycols
	: Modified alkyl carboxylate
	: mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)
	: Ribonucleic acids
TSCA	: Not On TSCA Inventory
	: Glycols
	: Modified alkyl carboxylate

KIT COBAS 4800 KRAS AMP/DET 24T RUO
Version
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

	: mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)
DSL	: This product contains the following components that are not on the Canadian DSL nor NDSL.
	: Glycols
	: Modified alkyl carboxylate
AICS	: Not in compliance with the inventory
	: Glycols
	: Modified alkyl carboxylate
	: mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
	: water
	: Glycols
	: 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
	: Modified alkyl carboxylate
	: Ribonucleic acids
ISHL	: Not in compliance with the inventory
	: water
	: Glycols
	: 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
	: Modified alkyl carboxylate
	: Ribonucleic acids
KECI	: Not in compliance with the inventory
	: Glycols
	: Modified alkyl carboxylate
	: Ribonucleic acids
PICCS	: Not in compliance with the inventory

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

- : Glycols
- : Modified alkyl carboxylate
- IECSC : Not in compliance with the inventory
- : Glycols
- : Modified alkyl carboxylate

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

KRAS 61 OM

TSCA list : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know Act**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 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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 12 (40 CFR 61).

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

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

Clean Water Act

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

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

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

Massachusetts Right To Know

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

KIT COBAS 4800 KRAS AMP/DET 24T RUO
Version
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013**Pennsylvania Right To Know**

water

7732-18-5

90 - 100 %

New Jersey Right To Know

water

7732-18-5

90 - 100 %

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

REACH

- : Not in compliance with the inventory
- : Glycols
- : 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
- : trometamol
- : Modified alkyl carboxylate
- : Edetic acid disodium salt dihydrate (EDTA-2Na-2H₂O)
- : mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)
- : Ribonucleic acids

CH INV

- : Not in compliance with the inventory
- : Glycols
- : Modified alkyl carboxylate
- : mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)
- : Ribonucleic acids

TSCA

- : Not On TSCA Inventory
- : Glycols
- : Modified alkyl carboxylate
- : mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

DSL

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

KIT COBAS 4800 KRAS AMP/DET 24T RUO
Version
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

	: Modified alkyl carboxylate
AICS	: Not in compliance with the inventory
	: Glycols
	: Modified alkyl carboxylate
	: mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
	: water
	: Glycols
	: 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
	: Modified alkyl carboxylate
	: Ribonucleic acids
ISHL	: Not in compliance with the inventory
	: water
	: Glycols
	: 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
	: Modified alkyl carboxylate
	: Ribonucleic acids
KECI	: Not in compliance with the inventory
	: Glycols
	: Modified alkyl carboxylate
	: Ribonucleic acids
PICCS	: Not in compliance with the inventory
	: Glycols
	: Modified alkyl carboxylate
IECSC	: Not in compliance with the inventory
	: Glycols

SAFETY DATA SHEET



KIT COBAS 4800 KRAS AMP/DET 24T RUO

Version
1.4

Revision Date:
04-24-2015

Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

: Modified alkyl carboxylate

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

KRAS MC

TSCA list : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium azide	26628-22-8	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium azide	26628-22-8	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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 12 (40 CFR 61).

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

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

Clean Water Act

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

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

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

Massachusetts Right To Know

sodium azide

26628-22-8

0 - 0.1 %

KIT COBAS 4800 KRAS AMP/DET 24T RUO
Version
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013**Pennsylvania Right To Know**

sodium azide

26628-22-8

0 - 0.1 %

New Jersey Right To Know

water

7732-18-5

1 - 5 %

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

REACH

- : Not in compliance with the inventory
- : Ribonucleic acids
- : 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
- : trometamol
- : sodium azide
- : Edetic acid disodium salt dihydrate (EDTA-2Na-2H₂O)

CH INV

- : Not in compliance with the inventory
- : Ribonucleic acids

TSCA

- : On TSCA Inventory

DSL

- : All components of this product are on the Canadian DSL.

AICS

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

NZIoC

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

ENCS

- : Not in compliance with the inventory
- : water
- : Ribonucleic acids
- : 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride

ISHL

- : Not in compliance with the inventory
- : water
- : Ribonucleic acids
- : 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride

KECI

- : Not in compliance with the inventory
- : Ribonucleic acids

PICCS

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

KIT COBAS 4800 KRAS AMP/DET 24T RUOVersion
1.4Revision Date:
04-24-2015Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

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

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

KRAS CAL

TSCA list : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know Act**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium azide	26628-22-8	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium azide	26628-22-8	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.**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 12 (40 CFR 61).

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

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

Clean Water Act

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

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

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

Massachusetts Right To Know

SAFETY DATA SHEET



KIT COBAS 4800 KRAS AMP/DET 24T RUO

Version
1.4

Revision Date:
04-24-2015

Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

sodium azide	26628-22-8	0 - 0.1 %
Pennsylvania Right To Know		
sodium azide	26628-22-8	0 - 0.1 %
New Jersey Right To Know		
water	7732-18-5	1 - 5 %

California Prop 65 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

REACH	: Not in compliance with the inventory
	: Ribonucleic acids
	: 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
	: trometamol
	: sodium azide
	: Edetic acid disodium salt dihydrate (EDTA-2Na-2H ₂ O)
CH INV	: Not in compliance with the inventory
	: Ribonucleic acids
TSCA	: On TSCA Inventory
DSL	: All components of this product are on the Canadian DSL.
AICS	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
	: water
	: Ribonucleic acids
	: 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
ISHL	: Not in compliance with the inventory
	: water
	: Ribonucleic acids
	: 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
KECI	: Not in compliance with the inventory

SAFETY DATA SHEET



KIT COBAS 4800 KRAS AMP/DET 24T RUO

Version
1.4

Revision Date:
04-24-2015

Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

: Ribonucleic acids

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

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

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

DNA SD/EB

TSCA list : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium azide	26628-22-8	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium azide	26628-22-8	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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 12 (40 CFR 61).

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

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

Clean Water Act

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

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

SAFETY DATA SHEET



KIT COBAS 4800 KRAS AMP/DET 24T RUO

Version
1.4

Revision Date:
04-24-2015

Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

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

Massachusetts Right To Know

sodium azide	26628-22-8	0 - 0.1 %
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Pennsylvania Right To Know

water	7732-18-5	90 - 100 %
sodium azide	26628-22-8	0 - 0.1 %

New Jersey Right To Know

water	7732-18-5	90 - 100 %
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California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

REACH	: Not in compliance with the inventory
	: trometamol
	: sodium azide
	: 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
CH INV	: On the inventory, or in compliance with the inventory
TSCA	: On TSCA Inventory
DSL	: All components of this product are on the Canadian DSL.
AICS	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
	: water
	: 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
ISHL	: Not in compliance with the inventory
	: water
	: 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory

Inventories

KIT COBAS 4800 KRAS AMP/DET 24T RUO

Version
1.4

Revision Date:
04-24-2015

Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

KRAS MIX**GHS Label element**

Not a hazardous substance or mixture.

MGAC / Mg 2+**GHS Label element**

Not a hazardous substance or mixture.

KRAS 12/13 OM**GHS Label element**

Not a hazardous substance or mixture.

KRAS 61 OM**GHS Label element**

Not a hazardous substance or mixture.

KRAS MC**GHS Label element**

Not a hazardous substance or mixture.

KRAS CAL**GHS Label element**

Not a hazardous substance or mixture.

DNA SD/EB**GHS Label element**

Not a hazardous substance or mixture.

SECTION 16. OTHER INFORMATION**Further information*****KRAS MIX***

SAFETY DATA SHEET



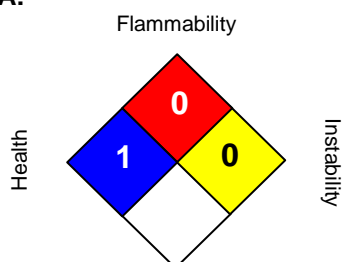
KIT COBAS 4800 KRAS AMP/DET 24T RUO

Version
1.4

Revision Date:
04-24-2015

Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

NFPA:



Special hazard.

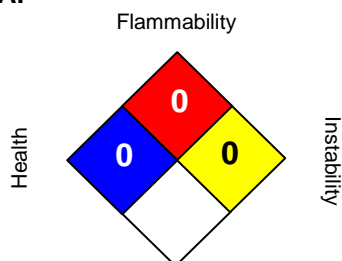
HMIS III:

HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

MGAC / Mg 2+

NFPA:



Special hazard.

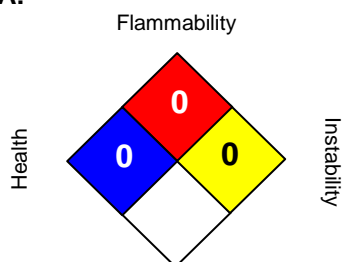
HMIS III:

HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

KRAS 12/13 OM

NFPA:



Special hazard.

HMIS III:

HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

KRAS 61 OM

SAFETY DATA SHEET

Roche

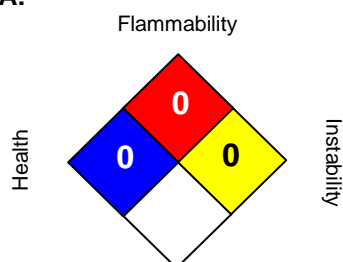
KIT COBAS 4800 KRAS AMP/DET 24T RUO

Version
1.4

Revision Date:
04-24-2015

Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

NFPA:



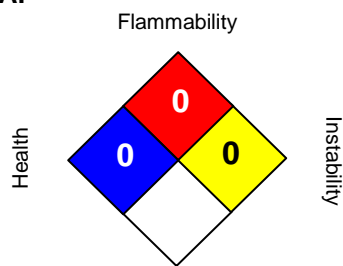
HMIS III:

HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

KRAS MC

NFPA:



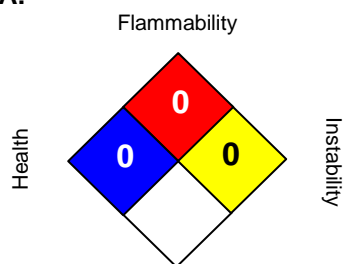
HMIS III:

HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

KRAS CAL

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

DNA SD/EB

SAFETY DATA SHEET



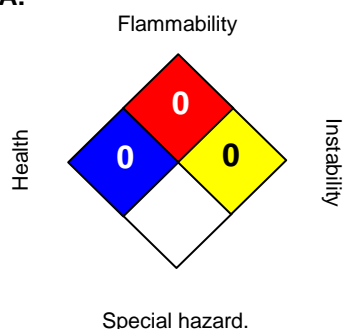
KIT COBAS 4800 KRAS AMP/DET 24T RUO

Version
1.4

Revision Date:
04-24-2015

Date of last issue: 09-18-2014
Date of first issue: 01-18-2013

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date : 04-24-2015

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

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